

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Trade name	: RADIACID 0610
IUPAC name	: Decanoic acid
EC no.	: 206-376-4
CAS No.	: 334-48-5
REACH registration No.	: 01-2120139722-58
C&L notification reference no	: 02-2119692939-12-0000
Label name	: Capric acid

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category	: Industrial use
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Title	Life cycle stage	Use descriptors
Specific uses FA C10	Industrial	SU5, PC9a, PC9b, PC9c, PC18, PC20, PC23, PC32, PC34, PC35, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15, PROC17, PROC21, ERC4, ERC5, ERC6a, ERC6b, ERC6c
Specific uses FA C10	Professional	SU0, SU1, PC1, PC8, PC9a, PC12, PC16, PC24, PC25, PC27, PC31, PC35, PC39, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC15, PROC17, PROC18, PROC19, PROC20, ERC8a, ERC8c, ERC8d, ERC8e, ERC8f, ERC9a, ERC9b
Specific uses FA C10	Consumer	PC1, PC3, PC8, PC9a, PC9b, PC9c, PC12, PC16, PC24, PC25, PC27, PC31, PC35, PC39, ERC8a, ERC8c, ERC8d, ERC8e, ERC8f, ERC9a, ERC9b
Specific uses FA C10	Manufacture	PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15, ERC1
Specific uses FA C10	Formulation	PC3, PC8, PC9a, PC9b, PC9c, PC12, PC16, PC18, PC20, PC23, PC24, PC25, PC26, PC28, PC32, PC34, PC39, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC12, PROC13, PROC14, PROC15, PROC21, PROC24, ERC2, ERC3
Exposure Scenario FA C10 (Association ref code: FAC Exposure Scenario FA C10)		

Full text of use descriptors: see section 16

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

OLEON N.V.
Assenedestraat 2

BE 9940 Ertvelde
Belgium
T +32 9 341 10 11, F +32 9 341 10 00
sds@oleon.com, www.oleon.com

1.4. Emergency telephone number

Emergency number : 24/7 EMERGENCY NUMBER (SGS ERS; Oleon contract nr 76858)
+32 3 575 55 55 (worldwide); +1 888 765 6554 (USA tollfree)

Country	Organisation/Company	Address	Emergency number	Comment
	World directory of poisons centres (Yellow Tox) WHO-OMS	Website	http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS07

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H412 - Harmful to aquatic life with long lasting effects.
: P264 - Wash hands, forearms and face thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear face protection, protective clothing, protective gloves.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 - Dispose of contents/container to an approved waste disposal plant.

Precautionary statements (CLP)

2.3. Other hazards

Other hazards which do not result in classification : None under normal conditions.

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Decanoic acid	CAS No.: 334-48-5 EC no.: 206-376-4 REACH-no: 01-2120139722-58	> 98	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 3, H412

Full text of H- and EUH-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation	: Remove victim to fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Wash off immediately with soap and plenty of water. Continue to rinse for at least 15 minutes.
First-aid measures after eye contact	: Rinse immediately with plenty of water for 15 minutes. Consult an ophthalmologist if irritation persists. Do not apply (chemical) neutralizing agents.
First-aid measures after ingestion	: Rinse mouth out with water. Ingestion of large quantities: immediately to hospital. Call a poison center (www.who.int/ipcs/poisons/centre/directory/en).

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: No supplementary information available.
Symptoms/effects after inhalation	: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/effects after skin contact	: Tingling/irritation of the skin.
Symptoms/effects after eye contact	: Irritation of the eye tissue.

4.3. Indication of any immediate medical attention and special treatment needed

No supplementary information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : AFFF foam. BC-powder. Carbon dioxide. Dry sand. Dry chemical powder. Use the extinguishing media recommended for the burning materials and fire situation.
- Unsuitable extinguishing media : Solid water jet ineffective as extinguishing medium.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : DIRECT FIRE HAZARD: Combustible. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard.
- Explosion hazard : DIRECT EXPLOSION HAZARD: Fine dust dispersed in air may ignite. INDIRECT EXPLOSION HAZARD: Dust cloud can be ignited by a spark.
- Reactivity in case of fire : On burning: release of carbon monoxide/carbon dioxide.

5.3. Advice for firefighters

- Other information : No supplementary information available.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows. In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. In case of dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment. Wash contaminated clothing before reuse.

6.1.1. For non-emergency personnel

- Protective equipment : See "Material-Handling" to select protective clothing.

6.1.2. For emergency responders

- Protective equipment : Use protective measures listed in Section 8.

6.2. Environmental precautions

Prevent soil and water pollution.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Clean contaminated surfaces with a soap solution. Flush/dilute with water. Take up liquid spill into inert absorbent material, e.g.: sand, earth, vermiculite, powdered limestone.
- Other information : No supplementary information available.

6.4. Reference to other sections

Handle waste materials in accordance with the provisions of Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Handling temperature : $\geq 10\text{ }^{\circ}\text{C}$ above melting point

7.2. Conditions for safe storage, including any incompatibilities

Information on mixed storage	: KEEP AWAY FROM: oxidizing agents. reducing agents. (strong) bases.
Storage area	: Store in a dry area. Meet the legal requirements. Store at room temperature.
Special rules on packaging	: Store in a closed container. Suitably labelled. Meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: Stainless steel. aluminium. glass. steel with plastic inner lining.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Face shield. Protective clothing. In case of dust production: protective goggles. Dust production: dust mask with filter type P2.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

No additional information available

8.2.2.2. Skin protection

Other skin protection

Materials for protective clothing:

Good resistance: rubber

8.2.2.3. Respiratory protection

No additional information available

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: White.
Appearance (room temperature)	: Crystalline solid. Powder. Needles.
Molecular mass	: 172.27 g/mol
Odour	: Strong odour. Unpleasant odour.
Odour threshold	: Not available
Melting point	: 32 °C (Literature)
Freezing point	: Not available
Boiling point	: 269 °C (Literature)
HMIS Flammability	: Not available
Explosive properties	: Product is not explosive.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: 148 °C (Literature)
Auto-ignition temperature	: > 300 °C
Decomposition temperature	: 300 °C
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: 6.7 mm ² /s (40°C) 5.6 mm ² /s (50°C)
Viscosity, dynamic	: 6 mPa·s (40°C) 4.9 mPa·s (50°C)
Solubility	: Water: 0.015 g/100ml (25°C)
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: 4.09 (Experimental value)
Vapour pressure	: No supplementary information available
Vapour pressure at 50 °C	: Not available
Density	: 885 kg/m ³ (40°C) 878 kg/m ³ (50°C)
Relative density	: Not available
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content : < 0.1 % (1999/13/EC; 2004/42/EC; 2010/75/EU; SR 814.018)
Other properties : Insoluble in water, Soluble in ethanol, Soluble in ether, Soluble in acetone, Soluble in chloroform, Soluble in ethylacetate, Soluble in methanol, Soluble in carbondisulfide

SECTION 10: Stability and reactivity

10.1. Reactivity

No supplementary information available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No supplementary information available.

10.5. Incompatible materials

No supplementary information available.

10.6. Hazardous decomposition products

No supplementary information available.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

RADIACID 0610 (334-48-5)

LD50 oral rat	> 10000 mg/kg (Lit.).
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

RADIACID 0610 (334-48-5)

Viscosity, kinematic	6.7 mm ² /s (40°C)
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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The substance/mixture has no endocrine disrupting properties.

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: No supplementary information available.
Ecology - air	: Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: No supplementary information available
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

RADIACID 0610 (334-48-5)

LC50 - Fish [1]	20 mg/l (96 h, Oryzias latipes, Fresh water, Literature study)
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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

RADIACID 0610 (334-48-5)

Partition coefficient n-octanol/water (Log Pow)	4.09 (Experimental value)
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal	: Stop dust cloud by humidifying, Powdered: do not use compressed air for pumping over spills, Scoop solid spill into closing containers, See "Material-handling" for suitable container materials, Clean contaminated surfaces with an excess of water, Wash clothing and equipment after handling
Regional waste regulation	: No supplementary information available.
Ecological information	: Wastes not otherwise specified. Hazardous waste (91/689/EEC). Remove to an authorized incinerator equipped with an. afterburner and a flue gas scrubber.
European List of Waste (LoW, EC 2000/532)	: No supplementary information available
HP Code	: HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye. HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR	
Transport hazard class(es) (ADR)	: Not applicable
IMDG	
Transport hazard class(es) (IMDG)	: -
IATA	
Transport hazard class(es) (IATA)	: Not applicable
ADN	
Transport hazard class(es) (ADN)	: Not applicable
RID	
Transport hazard class(es) (RID)	: Not applicable

14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

Overland transport

Transport regulations (ADR)	: Not subject
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Transport by sea

Transport regulations (IMDG)	: Not subject
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Air transport

Transport regulations (IATA)	: Not subject
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Inland waterway transport

No data available

Rail transport

Transport regulations (RID)	: Not subject
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14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

VOC Directive (2004/42)

VOC content : < 0.1 % (1999/13/EC; 2004/42/EC; 2010/75/EU; SR 814.018)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Chemical inventories	: Compliant with AIIIC, DSL, EAEU, ECST, ENCS, EU REACH, IECSC, INSQ, ISHL, KECL, NZIoC, PICCS, TECL_FDA, TSCA, VNCI
KKDIK number (Turkey)	: 05-0000212609-85-0000
K-REACH (Korea)	: not preregistered
UK-REACH (Great Britain)	: DUIN submitted
Swiss ChemO (SR 813.11)	: This substance is not subject to the obligation to register pursuant to art.61 of the Chemicals Ordinance (ChemO)

Germany

Water hazard class (WGK)	: WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 657).
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category	: A(3) - hazardous for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: The substance is not listed

15.2. Chemical safety assessment

The chemical safety assessment has been carried out, an exposure scenario is attached.

SECTION 16: Other information

Training advice : No supplementary information available.

Chem. inventories legend

: AIIC = Australian Inventory of Industrial Chemicals
 DSL = Canadian Domestic Substances List
 EAEU = Eurasian Economic Union Unified list of chemicals
 ECST = Existing Chemical Substances Inventory of Taiwan
 ENCS = Japanese Existing and New Chemicals Substances List
 EU REACH = European Union REACH Regulation 1907/2006
 IECSC = Inventory of Existing Chemicals Substances in China
 INSQ = Mexico National Inventory of Chemical Substance
 ISHL = Japanese Industrial Safety and Health Law Substances
 KECL = Korean Existing Chemical List
 NZIoC = New Zealand Inventory of Chemicals
 PICCS = Philippine Inventory of Chemicals and Chemical Substances
 TECL_FDA = Thailand Existing Chemicals Inventory - Food and Drug Administration List
 TSCA (Active) = USA Toxic Substances Control Act
 VNCI = Vietnam National Chemicals Inventory

SDS changed sections

: 11 - Toxicological information; 12 - Ecological information

SDS Reason for revision

: No supplementary information available

NFPA health hazard

: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

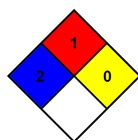
: 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.

NFPA image

:



Other information

: No supplementary information available.

Full text of H- and EUH-statements:

Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Full text of use descriptors

ERC1	Manufacture of the substance
ERC2	Formulation into mixture
ERC3	Formulation into solid matrix
ERC4	Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC5	Use at industrial site leading to inclusion into/onto article
ERC6a	Use of intermediate
ERC6b	Use of reactive processing aid at industrial site (no inclusion into or onto article)
ERC6c	Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)

Full text of use descriptors

ERC8a	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC8c	Widespread use leading to inclusion into/onto article (indoor)
ERC8d	Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
ERC8e	Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
ERC8f	Widespread use leading to inclusion into/onto article (outdoor)
ERC9a	Widespread use of functional fluid (indoor)
ERC9b	Widespread use of functional fluid (outdoor)
PC1	Adhesives, sealants
PC12	Fertilizers
PC16	Heat Transfer Fluids
PC18	Ink and Toners
PC20	Metal surface treatment products
PC23	Leather treatment products
PC24	Lubricants, greases, release products
PC25	Metal working fluids
PC26	Paper and board treatment products
PC27	Plant protection products
PC28	Perfumes, fragrances
PC3	Air care products
PC31	Polishes and wax blends
PC32	Polymer preparations and compounds
PC34	Textile dyes, and impregnating products
PC35	Washing and cleaning products
PC39	Cosmetics, personal care products
PC8	Biocidal products
PC9a	Coatings and paints, thinners, paint removers
PC9b	Fillers, putties, plasters, modelling clay
PC9c	Finger paints
PROC10	Roller application or brushing
PROC11	Non industrial spraying
PROC12	Use of blowing agents in manufacture of foam
PROC13	Treatment of articles by dipping and pouring
PROC14	Tabletting, compression, extrusion, pelettisation, granulation
PROC15	Use as laboratory reagent

Full text of use descriptors

PROC17	Lubrication at high energy conditions in metal working operations
PROC18	General greasing /lubrication at high kinetic energy conditions
PROC19	Manual activities involving hand contact
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC20	Use of functional fluids in small devices
PROC21	Low energy manipulation and handling of substances bound in/on materials or articles
PROC24	High (mechanical) energy work-up of substances bound in /on materials and/or articles
PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4	Chemical production where opportunity for exposure arises
PROC5	Mixing or blending in batch processes
PROC6	Calendering operations
PROC7	Industrial spraying
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
SU0	Other
SU1	Agriculture, forestry, fishery
SU5	Manufacture of textiles, leather, fur

SDS EU Oleon Annex II

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Annex to the safety data sheet

Product exposure scenario(s)

ES Type	ES title
Worker	FAC Exposure Scenario FA C10 - Version 1: Exposure Scenario FA C10

Table of contents of the Annex

Identified Uses	Es N°	Association ref code
Exposure Scenario FA C10	1	FAC Exposure Scenario FA C10

RADIACID 0610

Annex to the safety data sheet: Exposure scenario

CAS No.: 334-48-5 Product form: Substance Physical state: Solid Substance type: Mono-constituent

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition	: Mono-constituent substance
Product name	: octanoic acid
CAS number	: 124-07-2

Table of Content

Identified uses

ES001: Manufacture of substance - Industrial: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC15; ERC01

ES002: Formulation or re-packing - Formulation into mixture; washing, cleaning, maintenance and disinfecting products [AISE_F_001_v1]: PC03, PC08, PC31, PC35; PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14; ERC02

ES003: Use at industrial sites - washing, cleaning and disinfecting products [AISE_IS_001_v1]: PC08, PC35; PROC01, PROC02, PROC04, PROC07, PROC08b, PROC10, PROC13, PROC28; ERC04

ES004: Use at industrial sites - Metal surface treatment products [AISE_IS_002_v1]: SU17; PC14; PROC07, PROC08b, PROC10, PROC13, PROC21; ERC05

ES005: Widespread use by professional workers - washing, cleaning and disinfecting products [AISE_PW_001_v1]: PC08, PC35; PROC01, PROC03, PROC04, PROC08a, PROC10, PROC11, PROC13, PROC19; ERC08a

ES006: Widespread use by professional workers - Polishes and wax blends [AISE_PW_001_v1]: PC31; PROC01, PROC04, PROC08a, PROC10, PROC13, PROC19; ERC08a

ES007: Formulation or re-packing - Industrial formulation of lubricant additives, lubricants and greases. [ATIEL-ATC Group A [i]]: PC17, PC24, PC25; PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15; ERC02

ES008: Formulation or re-packing - Industrial handling and dilution of metalworking fluid concentrates [ATIEL-ATC Group E [i]]: PC25; PROC01, PROC02, PROC05, PROC08b, PROC28; ERC02

ES009: Use at industrial sites - General industrial use of lubricants and greases in vehicles or machinery [ATIEL-ATC Group B [i]]: PC16, PC17, PC24; PROC01, PROC02, PROC08b, PROC09; ERC04

ES010: Use at industrial sites - Industrial use of lubricants and greases in open systems [ATIEL-ATC Group C [i]]: PC24; PROC01, PROC02, PROC07, PROC08b, PROC09, PROC10, PROC13; ERC04

ES011: Use at industrial sites - Use of lubricants in high energy open processes [ATIEL-ATC Group F [i]]: PC24; PROC01, PROC02, PROC08b, PROC17, PROC18, PROC28; ERC04

ES012: Widespread use by professional workers - General professional use of lubricants and greases in vehicles or machinery [ATIEL-ATC Group B [p]]: PC16, PC17, PC24; PROC01, PROC02, PROC08a, PROC08b, PROC20; ERC09a, ERC09b

ES013: Widespread use by professional workers - Professional use of lubricants and greases in open systems [ATIEL-ATC Group C [p]]: PC24; PROC01, PROC02, PROC08a, PROC10, PROC11, PROC13; ERC08a, ERC08d

ES014: Widespread use by professional workers - Professional use of lubricants in high energy open processes [ATIEL-ATC Group F [p]]: PC24, PC25; PROC01, PROC02, PROC08a, PROC17, PROC18, PROC28; ERC08a

ES015: Formulation or re-packing - Industrial manufacture of powder coatings and inks [CEPE]: PC09a, PC09b, PC09c, PC18; PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09, PROC15, PROC28; ERC02

ES016: Formulation or re-packing - coatings and inks - Manufacture of organic solvent borne, water borne and solvent-free products [CEPE]: PC09a, PC09b, PC09c, PC18; PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC15, PROC28; ERC02

ES017: Use at industrial sites - Coatings and inks application [CEPE]: PC09a, PC09b, PC09c, PC18; PROC01, PROC02, PROC03, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC15; ERC04, ERC05

ES018: Widespread use by professional workers - Coatings and inks application [CEPE]: PC09a, PC09b, PC09c, PC18; PROC02, PROC03, PROC05, PROC08a, PROC10, PROC11, PROC15, PROC19; ERC08a, ERC08c, ERC08d, ERC08f

ES019: Formulation or re-packing - Manufacture of cosmetics. [CE1_sector_F_001_v1]: PC39; PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15; ERC02

ES020: Widespread use by professional workers - Hairdressing services [CE_PW_001_v1]: PC39; PROC05, PROC08a; ERC08a

ES021: Widespread use by professional workers - Use as a co-formulant in plant protection products, spray applications [ECPA_PPP_GES1]: SU01; PC27; PROC08a, PROC011; ERC08a, ERC08d

ES022: Widespread use by professional workers - Use as a co-formulant in plant protection products, seed and granular applications - [ECPA_PPP_GES2]: SU01; PC27; PROC08a, PROC08b; ERC08a, ERC08d

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ES023: Formulation or re-packing - Formulation of fertilizer products [FARM_FE_F_001_v1]: PC12; PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15, PROC28; ERC02
ES024: Formulation or re-packing - Formulation by incorporating fertilizers onto or into a matrix [FARM_FE_F_002_v1]: PC12; PROC02, PROC03, PROC04, PROC05, PROC13; ERC03
ES025: Use at industrial sites - Use as an intermediate [FARM_FE_IS_001_v1]: SU08; PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b; ERC06a
ES026: Use at industrial sites - Use of reactive processing aid in fertilizer manufacturing [FARM_FE_IS_002_v1]: SU08; PC20; PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b; ERC06b
ES027: Use at industrial sites - Use of monomers in polymer coating of fertilizers [FARM_FE_IS_003_v1]: SU08; PC32; PROC01, PROC02, PROC03, PROC08b; ERC06c
ES028: Widespread use by professional workers - Professional end-use as fertiliser [FARM_FE_PW_001_v1]: SU01; PC12; PROC05, PROC08a, PROC08b, PROC09, PROC11, PROC15; ERC08a, ERC08b, ERC08d, ERC08e
ES029: Widespread use by professional workers - Incorporation of ammonia into soil for fertilizing [FARM_FE_PW_002_v1]: SU01; PC12; PROC08a; ERC08e
ES030: Use at industrial sites - Automated industrial application of adhesives by roller or brushing application, Indoor [FEICA_IS_001]: PC01; PROC08b, PROC10; ERC04, ERC05
ES031: Use at industrial sites - Large-scale spray application of adhesives in containment [FEICA_IS_002]: PC01; PROC07, PROC08b; ERC04, ERC05
ES032: Use at industrial sites - Large scale spray application of adhesives in a spray booth [FEICA_IS_003]: PC01; PROC07, PROC08b; ERC04, ERC05
ES033: Use at industrial sites - Industrial application of reactive adhesives [FEICA_IS_004]: PC01; PROC05, PROC08b, PROC10; ERC04, ERC05
ES034: Use at industrial sites - Industrial application of reactive adhesives processed above 40°C [FEICA_IS_00]: PC01; PROC08b, PROC10; ERC04, ERC05
ES035: Use at industrial sites - Small scale application of adhesives, sealants or primers [FEICA_IS_006]: PC01; PROC10; ERC04, ERC05
ES036: Use at industrial sites - Manual industrial application of adhesives and sealants by roller or brushing application [FEICA_IS_007]: PC01; PROC08b, PROC10; ERC04, ERC05
ES037: Widespread use by professional workers - Low energy distribution of adhesives and primers on large areas outdoors by professionals [FEICA_PW_001]: PC01; PROC10; ERC08d, ERC08f
ES038: Widespread use by professional workers - Large scale bonding (e.g. floors) with water based and 1-component reactive adhesives indoors by professionals [FEICA_PW_002]: PC01; PROC10; ERC08a, ERC08c
ES039: Widespread use by professional workers - Large scale application of 2- or multi-component reactive adhesives [FEICA_PW_003]: PC01; PROC 05, PROC10; ERC08a, ERC08c, ERC08d, ERC08f
ES040: Widespread use by professional workers - Large scale application of cementitious based adhesives for tile bonding [FEICA_PW_004]: PC01; PROC 05, PROC10; ERC08c, ERC08f
ES041: Widespread use by professional workers - Small scale application of adhesives, sealants or primers [FEICA_PW_005]: PC01; PROC10; ERC08a, ERC08c, ERC08d, ERC08f
ES042: Widespread use by professional workers - Professional small scale application of reactive adhesives and sealant [FEICA_PW_006]: PC01; PROC10; ERC08a, ERC08c, ERC08d, ERC08f
ES043: Widespread use by professional workers - Professional application of reactive sealants [FEICA_PW_007]: PC01; PROC10; ERC08a, ERC08c, ERC08d, ERC08f
ES044: Use at industrial sites - Use in food and feed industry: PROC01, PROC02, PROC03, PROC05, PROC08b; ERC06a
ES045: Formulation or re-packing - Formulation of fragrance compounds [IFRA_GES1]: PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09, PROC15, PROC28; ERC02
ES046: Formulation or re-packing - Formulation of fragranced end-products [IFRA_GES2]: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15, PROC28; ERC02
ES047: Use at industrial sites - Washing and cleaning products [IFRA_GES3]: PC35; PROC02, PROC04, PROC07, PROC08b, PROC10, PROC13; ERC04
ES048: Widespread use by professional workers - Washing and cleaning products [IFRA_GES4]: PC35; PROC01, PROC03, PROC04, PROC08a, PROC10, PROC11, PROC13, PROC19; ERC08a
ES049: Widespread use by professional workers - Polishes and wax blends [IFRA_GES5]: PC31; PROC01, PROC04, PROC08a, PROC10, PROC13, PROC19; ERC08a
ES050: Use at industrial sites - Use as an intermediate/resale and trading/distribution: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC15; ERC06a
ES051: Formulation or re-packing - Paper and board treatment products: PC26; PROC02, PROC03, PROC05, PROC09; ERC02
ES052: Use at industrial sites - Paper and board treatment products: SU06b; PC26; PROC02, PROC05, PROC07, PROC13; ERC04
ES053: Formulation or re-packing - Use of additives in polymer production, MB production, compounds production [PlasticsEurope_GES1]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC03
ES054: Formulation or re-packing - Direct uses of additives by converters [PlasticsEurope_GES2]: PC32; PROC04,

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PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC14, PROC21, PROC24; ERC03
ES055: Formulation or re-packing - Use of additives in a plastic, masterbatch or compound in extrusion applications [PlasticsEurope_GES3]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC03
ES056: Formulation or re-packing - Use of additives in a plastic, masterbatch or compound in moulding applications [PlasticsEurope_GES4]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC03
ES057: Formulation or re-packing - Use of additives in a plastic, masterbatch or compound in calendering [PlasticsEurope_GES5]: PC32; PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC03
ES058: Formulation or re-packing - Use of additives in a plastic, masterbatch or compound in spread coating or dip coating [PlasticsEurope_GES6]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC21, PROC24; ERC03
ES059: Formulation or re-packing - Use of additives in a plastic, masterbatch or compound in foam production by steaming [PlasticsEurope_GES7]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC12, PROC21, PROC24; ERC03
ES060: Use at industrial sites - Use of additives in polymer production, MB production, compounds production [PlasticsEurope_GES1]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC05
ES061: Use at industrial sites - Direct uses of additives by converters [PlasticsEurope_GES2]: PC32; PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC14, PROC21, PROC24; ERC05
ES062: Use at industrial sites - Use of additives in a plastic, masterbatch or compound in extrusion applications [PlasticsEurope_GES3]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC05
ES063: Use at industrial sites - Use of additives in a plastic, masterbatch or compound in moulding applications [PlasticsEurope_GES4]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC05
ES064: Use at industrial sites - Use of additives in a plastic, masterbatch or compound in calendering [PlasticsEurope_GES5]: PC32; PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC05
ES065: Formulation or re-packing - Use of additives in a plastic, masterbatch or compound in spread coating or dip coating [PlasticsEurope_GES6]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC21, PROC24; ERC05
ES066: Use at industrial sites - Use of additives in a plastic, masterbatch or compound in foam production by steaming [PlasticsEurope_GES7]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC12, PROC21, PROC24; ERC05
ES067: Service life - Industrial - service life plastic articles [PlasticsEurope]: AC13; PROC21, PROC24; ERC12a, ERC12b
ES068: Service life - Professional - service life plastic articles [PlasticsEurope]: AC13; PROC21, PROC24; ERC10a, ERC11a
ES069: Use at industrial sites - Manufacture of pharmaceutical products.: PC29; PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09, PROC14; ERC06a
ES070: Formulation or re-packing - blending (textiles) [TEGEWA]: PC20, PC32, PC34; PROC05; ERC02, ERC03
ES071: Formulation or re-packing - blending (leather) [TEGEWA]: PC20, PC23, PC34; PROC05; ERC02
ES072: Use at industrial sites - Handling (Textiles.) [TEGEWA]: SU05; PC20, PC32, PC34; PROC08a, PROC08b, PROC09; ERC04, ERC05, ERC06b
ES073: Use at industrial sites - Textile application: calendering [TEGEWA]: SU05; PC34; PROC06; ERC05
ES074: Use at industrial sites - Textile application: dipping and pouring [TEGEWA]: SU05; PC20, PC34, PC35; PROC13; ERC04
ES075: Use at industrial sites - Textile application: dipping and pouring [TEGEWA]: SU05; PC08, PC18, PC20, PC32, PC34; PROC13; ERC05
ES076: Use at industrial sites - Textile application: dipping and pouring [TEGEWA]: SU05; PC34; PROC13; ERC06b
ES077: Use at industrial sites - textile coating [TEGEWA]: SU05; PC20, PC34; PROC10; ERC04
ES078: Use at industrial sites - textile coating [TEGEWA]: SU05; PC32, PC34; PROC10; ERC05
ES079: Use at industrial sites - textile coating [TEGEWA]: SU05; PC20, PC34; PROC10; ERC06b
ES080: Use at industrial sites - Handling (leather) [TEGEWA]: SU05; PC20, PC23, PC32; PROC08a, PROC08b, PROC09; ERC04, ERC05, ERC06b
ES081: Use at industrial sites - use in wet end [TEGEWA]: SU05; PC20, PC23; PROC13; ERC04, ERC05, ERC06b
ES082: Use at industrial sites - use for leather finishing [TEGEWA]: SU05; PC23, PC32; PROC10; ERC04, ERC05
ES083: Service life - Professional - exposure from textile articles [TEGEWA]: AC01, AC02; PROC21; ERC10a
ES084: Service life - Professional - exposure from textile articles [TEGEWA]: AC05; PROC21; ERC11a
ES085: Formulation or re-packing - Formulation of construction chemicals [EFCC]: PROC03, PROC05, PROC08b, PROC09; ERC02
ES086: Use at industrial sites - Use of construction chemicals; indoor, outdoor [EFCC]: PROC07, PROC08b,

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PROC10, PROC13, PROC14; ERC04, ERC05
ES087: Use at industrial sites - Use of construction chemicals; indoor, outdoor, without spraying [EFCC]: PROC08b, PROC10, PROC13, PROC14; ERC04, ERC05
ES088: Widespread use by professional workers - Use of construction chemicals; indoor [EFCC]: PROC08a, PROC10, PROC11, PROC13; ERC08a, ERC08c
ES089: Widespread use by professional workers - Use of construction chemicals; indoor, without spraying [EFCC]: PROC08a, PROC10, PROC13; ERC08a, ERC08c
ES090: Widespread use by professional workers - Use of construction chemicals; outdoor [EFCC]: PROC08a, PROC10, PROC11, PROC13; ERC08d, ERC08f
ES091: Widespread use by professional workers - Use of construction chemicals; outdoor, without spraying [EFCC]: PROC08a, PROC10, PROC13; ERC08d, ERC08f
ES092: Use at industrial sites - production of impregnated papers [VCI_Paper]: PROC05, PROC08b, PROC13, PROC15, PROC21; ERC05
ES093: Service life - Professional handling of impregnated packing paper [VCI_Paper]: AC08c; PROC21; ERC10b, ERC11b
ES094: Consumer use - Air care products [AISE_C_001_v1]: PC03; ERC08a
ES095: Consumer use - Washing and cleaning products [AISE_C_002_v1]: PC35; ERC08a
ES096: Consumer use - Polishes and wax blends [AISE_C_003_v1]: PC31; ERC08a
ES097: Consumer use - Biocidal products [AISE_C_004_v1]: PC08; ERC08a
ES098: General consumer use of lubricants and greases in vehicles or machinery [ATIEL-ATC Group B [c]]: PC24; ERC09a, ERC09b
ES099: Consumer use of lubricants and greases in open systems [ATIEL-ATC Group C [c]]: PC24; ERC08a, ERC08d
ES100: Consumer use - Consumer application of coatings [CEPE]: PC09a, PC09b, PC09c; ERC08a, ERC08c, ERC08d, ERC08f
ES101: Consumer use - End use of cosmetic products [CE_sector_C_001_v1]: PC39; ERC08a
ES102: Consumer use - Spray application of plant protection products containing co-formulants [ECPA_PPP_GES3]: PC027; ERC08a, ERC08d
ES103: Consumer use - Use as a co-formulant in plant protection products, seed and granular applications [ECPA_PPP_GES4]: PC027; ERC08a, ERC08d
ES104: Consumer use - Consumer end-use of fertilisers [FARM_FE_C_001_v1]: PC012; ERC08a, ERC08b, ERC08d, ERC08e
ES105: Consumer use - Washing and cleaning products [IFRA_GES6]: PC35; ERC08a, ERC08d
ES106: Consumer use - Air care products [IFRA_GES7]: PC03; ERC08a
ES107: Consumer use - Biocidal products [IFRA_GES8]: PC08; ERC08a, ERC08d
ES108: Consumer use - Polishes and wax blends [IFRA_GES9]: PC31; ERC08a
ES109: Consumer use - End use of cosmetic products [IFRA_GES10]: PC39; ERC08a
ES110: Service life - Consumers - service life plastic articles [IFRA_GES10]: PC39; ERC08a
ES111: Service life - Consumers - exposure from textile articles [TEGEWA]: AC01, AC02; ERC10a
ES112: Service life - Consumers - exposure from textile articles [TEGEWA]: AC05; ERC11a
ES113: Service life - Consumers - exposure from leather articles [TEGEWA]: AC06; ERC11a
ES114: Consumer use - Use of construction chemicals; indoor [EFCC]: PC01, PC09a, PC09b; ERC08a, ERC08c
ES115: Consumer use - Use of construction chemicals; outdoor [EFCC]: PC01, PC09a, PC09b; ERC08d, ERC08f

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Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Manufacture of substance

List of use descriptors : **Identified use name: ES001:** Manufacture of substance - Industrial: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC15; ERC01
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC15
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC01

Environmental contributing scenarios : **Manufacture of the substance - ERC01**

Health Contributing scenarios : **Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC01**
Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02
Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03
Chemical production where opportunity for exposure arises - PROC04
Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a
Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b
Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09
Use as laboratory reagent - PROC15

Number of the ES : 001

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for:

All Contributing scenarios: ERC01

Amounts used : Daily amount per site: ≤25.2 tonnes/day.
Annual amount per site: ≤2520 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.006% (EU TGD 2003).
air: 0.001% (EU TGD 2003).
Soil: 0.01% (ERC01).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 98%.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for:

All Contributing scenarios.

Organisational measures to prevent/limit releases, dispersion and exposure

- : - Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation**Personal protection**

- : - Substance/Task appropriate gloves.
- Skin coverage with appropriate barrier material based on potential for contact with the chemicals
- Substance/task appropriate respiratory protection.
- Optional face shield.
- Use suitable eye protection.

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: All Contributing scenarios****Exposure assessment (environment):**

: EUSES 2.1.2

Exposure estimation

: Freshwater: 0.012 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.601.

Freshwater sediment: 0.178 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.601.

Marine water: 0.0012 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.601.

Marine water sediment: 0.018 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.601.

Sewage Treatment Plant: 0.095 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.028 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.602.

Remark

: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: All Contributing scenarios**Exposure assessment (human):**

: Qualitative approach used to conclude safe use.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**General**

: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Various products (PC03, PC08, PC31, PC35)

List of use descriptors : **Identified use name: ES002:** Formulation or re-packing - Formulation into mixture; washing, cleaning, maintenance and disinfecting products [AISE_F_001_v1]: PC03, PC08, PC31, PC35; PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14; ERC02
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09

Subsequent service life relevant for that use: No.

Environmental Release Category: ERC02

Market sector by type of chemical product: PC03, PC08, PC31, PC35

Environmental contributing scenarios : **Formulation of Granular Detergents/Maintenance Products - Regular & Compact (large scale)** - ERC02
Formulation of Granular Detergents/Maintenance Products - Regular & Compact (medium scale) - ERC02
Formulation of Granular Detergents/Maintenance Products - Regular & Compact (small scale) - ERC02
Formulation of liquid Detergents/Maintenance Products: low viscosity (large scale) - ERC02
Formulation of liquid Detergents/Maintenance Products: low viscosity (medium scale) - ERC02
Formulation of liquid Detergents/Maintenance Products: low viscosity (small scale) - ERC02
Formulation of liquid detergents/maintenance products: high viscosity (large scale) - ERC02
Formulation of liquid Detergents/Maintenance Products: high viscosity (medium scale) - ERC02
Formulation of liquid Detergents/Maintenance Products: high viscosity (small scale) - ERC02

Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09

Number of the ES : 002

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Formulation of Granular Detergents/Maintenance Products - Regular & Compact (large scale)

Amounts used : Daily amount per site: ≤3.6 tonnes/day.
Annual amount per site: ≤910 tonnes/year.

Frequency and duration of use : Emission days: 250 days per year.

Other conditions affecting environmental exposure : Indoor use.
Trained staff, spill protection including waste reuse.

Release factor after on-site risk management:
water: 0.01% (AISE SPERC 2.1.a.v2).
air: 0% (AISE SPERC 2.1.a.v2).
Soil: 0% (AISE SPERC 2.1.a.v2).

octanoic acid		Exposure Scenario: 002	Formulation or re-packing; Various products (PC03, PC08, PC31, PC35)
Technical conditions and measures at process level (source) to prevent release	:	Granular detergents are obtained by drying liquid slurries. Residues of granular detergents recovered in cleaning steps at packaging or transfer lines are recycled into the slurries. Process optimised for highly efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	:	Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	:	Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 2: Formulation of Granular Detergents/ Maintenance Products - Regular & Compact (medium scale)			
Amounts used	:	Daily amount per site: ≤1.8 tonnes/day. Annual amount per site: ≤450 tonnes/year.	
Frequency and duration of use	:	Emission days: 250 days per year.	
Other conditions affecting environmental exposure	:	Indoor use. Release factor after on-site risk management: water: 0.1% (AISE SPERC 2.1.b.v2). air: 0% (AISE SPERC 2.1.b.v2). Soil: 0% (AISE SPERC 2.1.b.v2).	
Technical conditions and measures at process level (source) to prevent release	:	Granular detergents are obtained by drying liquid slurries. Residues of granular detergents recovered in cleaning steps at packaging or transfer lines are recycled into the slurries. Process optimised for efficient use of raw materials.	
Organisational measures to prevent/limit release from site	:	Trained staff, spill protection including waste reuse.	
Conditions and measures related to sewage treatment plant	:	Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	:	Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Formulation of Granular Detergents/ Maintenance Products - Regular & Compact (small scale)			
Amounts used	:	Daily amount per site: ≤0.36 tonnes/day. Annual amount per site: ≤91 tonnes/year.	
Frequency and duration of use	:	Emission days: 250 days per year.	
Other conditions affecting environmental exposure	:	Indoor use. Release factor after on-site risk management: water: 0.2% (AISE SPERC 2.1.c.v2). air: 0% (AISE SPERC 2.1.c.v2). Soil: 0% (AISE SPERC 2.1.c.v2).	
Technical conditions and measures at process level (source) to prevent release	:	Granular detergents are obtained by drying liquid slurries. Residues of granular detergents recovered in cleaning steps at packaging or transfer lines are recycled into the slurries. Process optimised for efficient use of raw materials.	
Organisational measures to prevent/limit release from site	:	Trained staff, spill protection including waste reuse.	
Conditions and measures related to sewage treatment plant	:	Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
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octanoic acid	Exposure Scenario: 002	Formulation or re-packing; Various products (PC03, PC08, PC31, PC35)
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Formulation of liquid Detergents/Maintenance Products: low viscosity (large scale)		
Amounts used	: Daily amount per site: ≤3.6 tonnes/day. Annual amount per site: ≤910 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.01% (AISE SPERC 2.1.g.v2). air: 0% (AISE SPERC 2.1.g.v2). Soil: 0% (AISE SPERC 2.1.g.v2).	
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Regular cleaning of equipment and work area. Process optimised for highly efficient use of raw materials.	
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 5: Formulation of liquid Detergents/Maintenance Products: low viscosity (medium scale)		
Amounts used	: Daily amount per site: ≤1.8 tonnes/day. Annual amount per site: ≤450 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.1% (AISE SPERC 2.1.h.v2). air: 0% (AISE SPERC 2.1.h.v2). Soil: 0% (AISE SPERC 2.1.h.v2).	
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Regular cleaning of equipment and work area. Process optimised for efficient use of raw materials.	
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	

octanoic acid	Exposure Scenario: 002	Formulation or re-packing; Various products (PC03, PC08, PC31, PC35)
Contributing scenario controlling environmental exposure for 6: Formulation of liquid Detergents/Maintenance Products: low viscosity (small scale)		
Amounts used	: Daily amount per site: ≤0.36 tonnes/day. Annual amount per site: ≤91 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.2% (AISE SPERC 2.1.i.v2). air: 0% (AISE SPERC 2.1.i.v2). Soil: 0% (AISE SPERC 2.1.i.v2).	
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Regular cleaning of equipment and work area. Process optimised for efficient use of raw materials.	
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 7: Formulation of liquid detergents/maintenance products: high viscosity (large scale)		
Amounts used	: Daily amount per site: ≤1.6 tonnes/day. Annual amount per site: ≤400 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.1% (AISE SPERC 2.1.j.v2). air: 0% (AISE SPERC 2.1.j.v2). Soil: 0% (AISE SPERC 2.1.j.v2).	
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Regular cleaning of equipment and work area. Process optimised for highly efficient use of raw materials.	
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 8: Formulation of liquid Detergents/Maintenance Products: high viscosity (medium scale)		
Amounts used	: Daily amount per site: ≤0.8 tonnes/day. Annual amount per site: ≤200 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
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octanoic acid		Exposure Scenario: 002	Formulation or re-packing; Various products (PC03, PC08, PC31, PC35)
Other conditions affecting environmental exposure : Indoor use. Release factor after on-site risk management: water: 0.2% (AISE SPERC 2.1.k.v2). air: 0% (AISE SPERC 2.1.k.v2). Soil: 0% (AISE SPERC 2.1.k.v2).			
Technical conditions and measures at process level (source) to prevent release : Substance applied in aqueous process solution with negligible volatilization. Regular cleaning of equipment and work area. Process optimised for efficient use of raw materials.			
Organisational measures to prevent/limit release from site : Trained staff, spill protection including waste reuse.			
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.			
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.			
Contributing scenario controlling environmental exposure for 9: Formulation of liquid Detergents/Maintenance Products: high viscosity (small scale)			
Amounts used : Daily amount per site: ≤0.36 tonnes/day. Annual amount per site: ≤91 tonnes/year.			
Frequency and duration of use : Emission days: 250 days per year.			
Other conditions affecting environmental exposure : Indoor use. Release factor after on-site risk management: water: 0.4% (AISE SPERC 2.1.l.v2). air: 0% (AISE SPERC 2.1.l.v2). Soil: 0% (AISE SPERC 2.1.l.v2).			
Technical conditions and measures at process level (source) to prevent release : Substance applied in aqueous process solution with negligible volatilization. Regular cleaning of equipment and work area. Process optimised for efficient use of raw materials.			
Organisational measures to prevent/limit release from site : Trained staff, spill protection including waste reuse.			
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.			
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.			
Contributing scenario controlling worker exposure for: All Contributing scenarios			
Organisational measures to prevent/limit releases, dispersion and exposure : - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.			
Conditions and measures related to personal protection, hygiene and health evaluation			
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octanoic acid	Exposure Scenario: 002	Formulation or re-packing; Various products (PC03, PC08, PC31, PC35)
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 10: Contributing scenarios CS10: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC01 CS11: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02 CS12: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03 CS13: Chemical production where opportunity for exposure arises - PROC04 CS14: Mixing or blending in batch processes - PROC05 CS15: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS16: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09 CS17: Tableting, compression, extrusion, pelletisation, granulation - PROC09		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Formulation of Granular Detergents/ Maintenance Products - Regular & Compact (large scale)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00483 mg/l. Risk characterisation ratio (PEC/PNEC): 0.242. Freshwater sediment: 0.071 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.242. Marine water: 0.000482 mg/l. Risk characterisation ratio (PEC/PNEC): 0.241. Marine water sediment: 0.00711 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.241. Sewage Treatment Plant: 0.023 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.011 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.227.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Formulation of Granular Detergents/ Maintenance Products - Regular & Compact (medium scale)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.014 mg/l. Risk characterisation ratio (PEC/PNEC): 0.698. Freshwater sediment: 0.206 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.698. Marine water: 0.00139 mg/l. Risk characterisation ratio (PEC/PNEC): 0.697. Marine water sediment: 0.021 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.698.

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octanoic acid	Exposure Scenario: 002	Formulation or re-packing; Various products (PC03, PC08, PC31, PC35)
	Sewage Treatment Plant: 0.114 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.033 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.703.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Formulation of Granular Detergents/ Maintenance Products - Regular & Compact (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00711 mg/l. Risk characterisation ratio (PEC/PNEC): 0.356. Freshwater sediment: 0.105 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.356. Marine water: 0.00071 mg/l. Risk characterisation ratio (PEC/PNEC): 0.355. Marine water sediment: 0.01 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.355. Sewage Treatment Plant: 0.046 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.016 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.346.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Formulation of liquid Detergents/ Maintenance Products: low viscosity (large scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00483 mg/l. Risk characterisation ratio (PEC/PNEC): 0.242. Freshwater sediment: 0.071 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.242. Marine water: 0.000482 mg/l. Risk characterisation ratio (PEC/PNEC): 0.241. Marine water sediment: 0.00711 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.241. Sewage Treatment Plant: 0.023 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.011 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.227.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 002	Formulation or re-packing; Various products (PC03, PC08, PC31, PC35)
Exposure estimation and reference to its source - Environment: 5: Formulation of liquid Detergents/ Maintenance Products: low viscosity (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.014 mg/l. Risk characterisation ratio (PEC/PNEC): 0.691.	
	Freshwater sediment: 0.204 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.691.	
	Marine water: 0.00138 mg/l. Risk characterisation ratio (PEC/PNEC): 0.691.	
	Marine water sediment: 0.02 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.691.	
	Sewage Treatment Plant: 0.113 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.033 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.696.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 6: Formulation of liquid Detergents/ Maintenance Products: low viscosity (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00711 mg/l. Risk characterisation ratio (PEC/PNEC): 0.356.	
	Freshwater sediment: 0.105 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.356.	
	Marine water: 0.00071 mg/l. Risk characterisation ratio (PEC/PNEC): 0.355.	
	Marine water sediment: 0.01 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.355.	
	Sewage Treatment Plant: 0.046 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.016 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.346.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 7: Formulation of liquid detergents/ maintenance products: high viscosity (large scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.013 mg/l. Risk characterisation ratio (PEC/PNEC): 0.629.	
	Freshwater sediment: 0.186 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.629.	
	Marine water: 0.00126 mg/l. Risk characterisation ratio (PEC/PNEC): 0.628.	
	Marine water sediment: 0.019 mg/kg dwt.	
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octanoic acid	Exposure Scenario: 002	Formulation or re-packing; Various products (PC03, PC08, PC31, PC35)
	Risk characterisation ratio (PEC/PNEC): 0.629. Sewage Treatment Plant: 0.1 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.03 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.631.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 8: Formulation of liquid Detergents/ Maintenance Products: high viscosity (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.013 mg/l. Risk characterisation ratio (PEC/PNEC): 0.629. Freshwater sediment: 0.186 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.629. Marine water: 0.00126 mg/l. Risk characterisation ratio (PEC/PNEC): 0.628. Marine water sediment: 0.019 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.629. Sewage Treatment Plant: 0.1 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.03 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.631.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 9: Formulation of liquid Detergents/ Maintenance Products: high viscosity (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.012 mg/l. Risk characterisation ratio (PEC/PNEC): 0.584. Freshwater sediment: 0.172 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.584. Marine water: 0.00071 mg/l. Risk characterisation ratio (PEC/PNEC): 0.583. Marine water sediment: 0.017 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.584. Sewage Treatment Plant: 0.091 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.028 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.584.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

<i>octanoic acid</i>	Exposure Scenario: 002	Formulation or re-packing; Various products (PC03, PC08, PC31, PC35)
Exposure estimation and reference to its source - Workers: 10: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Various products (PC08, PC35)

List of use descriptors : **Identified use name: ES003:** Use at industrial sites - washing, cleaning and disinfecting products [AISE_IS_001_v1]: PC08, PC35; PROC01, PROC02, PROC04, PROC007, PROC08b, PROC10, PROC13, PROC28; ERC04
Process Category: PROC01, PROC02, PROC04, PROC07, PROC08b, PROC10, PROC13, PROC28
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC08, PC35

Environmental contributing scenarios : **Use of non-reactive processing aid at industrial site (no inclusion into or onto article)** - ERC04

Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC04, PROC07, PROC08b, PROC10, PROC13, PROC28

Number of the ES : 003

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

Amounts used : Daily amount per site: ≤0.05 tonnes/day.
Annual amount per site: ≤11 tonnes/year.

Frequency and duration of use : Emission days: 220 days per year.

Other conditions affecting environmental exposure : Indoor use.
Spent process fluid discharged to wastewater for subsequent treatment.

Technical conditions and measures at process level (source) to prevent release : Release factor after on-site risk management:
water: 2% (AISE SPERC 4.1.v2).
air: 0% (AISE SPERC 4.1.v2).
Soil: 5% (ERC04).

Conditions and measures related to sewage treatment plant : Substance applied in aqueous process solution with negligible volatilization.
Process optimised for efficient use of raw materials.

Conditions and measures related to external treatment of waste for disposal : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 98%.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios**Organisational measures to prevent/limit releases, dispersion and exposure**

- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation**Personal protection**

- Substance/Task appropriate gloves.
- Skin coverage with appropriate barrier material based on potential for contact with the chemicals
- Substance/task appropriate respiratory protection.
- Optional face shield.
- Use suitable eye protection.

Contributing scenario controlling worker exposure for 2: Contributing scenarios

CS02: Transfer and dilution of concentrated product by using dedicated dosing system; medium RMM - PROC08b
 CS03: Transfer and dilution of concentrated product by using dedicated dosing system; no RMM - PROC08b
 CS04: Industrial use; Use in closed process - PROC01
 CS05: Industrial use; Use in closed process - PROC02
 CS06: Industrial use; Automated task; Semi-automated task; Dedicated equipment; no RMM - PROC04
 CS07: Industrial use; Automated task; Semi-automated task; Dedicated equipment; medium RMM - PROC04
 CS08: Industrial spraying; Automated task; Open systems; Long term; with Local exhaust ventilation - PROC07
 CS09: Industrial spraying; diluted product; Automated task; Open systems; Long term; high RMM - PROC07
 CS10: Industrial spraying; Automated task; Open systems; Short term; medium RMM - PROC07
 CS11: Industrial spraying; Automated task; Open systems; Long term; medium RMM - PROC07
 CS12: Industrial spraying; Automated task; Open systems; Long term; no RMM - PROC07
 CS13: Brushing; Automated task; medium RMM - PROC10
 CS14: Brushing; Automated task; no RMM - PROC10
 CS15: Industrial use; Treatment of articles by dipping and pouring; with Local exhaust ventilation - PROC13
 CS16: Industrial use; Treatment of articles by dipping and pouring; high RMM - PROC13
 CS17: Industrial use; Treatment of articles by dipping and pouring; medium RMM - PROC13
 CS18: Industrial use; Treatment of articles by dipping and pouring; no RMM - PROC13
 CS19: Equipment maintenance - PROC28

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: 1: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)****Exposure assessment (environment):**

: EUSES 2.1.2

Exposure estimation

: Freshwater: 0.00882 mg/l.
 Risk characterisation ratio (PEC/PNEC): 0.441.

Freshwater sediment: 0.13 mg/kg dwt.
 Risk characterisation ratio (PEC/PNEC): 0.441.

Marine water: 0.00088 mg/l.
 Risk characterisation ratio (PEC/PNEC): 0.440.

Marine water sediment: 0.013 mg/kg dwt.
 Risk characterisation ratio (PEC/PNEC): 0.441.

Sewage Treatment Plant: 0.063 mg/l.
 Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.021 mg/kg dwt.

octanoic acid	Exposure Scenario: 003	Use at industrial sites; Various products (PC08, PC35)
Risk characterisation ratio (PEC/PNEC): 0.434.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment (SU17); Metal surface treatment products (PC14)
List of use descriptors : **Identified use name: ES004:** Use at industrial sites - Metal surface treatment products [AISE_IS_002_v1]: SU17; PC14; PROC07, PROC08b, PROC10, PROC13, PROC21; ERC05
Process Category: PROC07, PROC08b, PROC10, PROC13, PROC21
Sector of end use: SU17
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC14
Environmental contributing scenarios : **Use at industrial site leading to inclusion into/onto article** - ERC05
Health Contributing scenarios : **Contributing scenarios** - PROC07, PROC08b, PROC10, PROC13, PROC21

Number of the ES : 004

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use at industrial site leading to inclusion into/onto article

Amounts used : Daily amount per site: ≤0.05 tonnes/day.
Annual amount per site: ≤11 tonnes/year.
Frequency and duration of use : Emission days: 220 days per year.
Other conditions affecting environmental exposure : Indoor use.
Spent process fluid discharged to wastewater for subsequent treatment.

Release factor after on-site risk management :
water: 0.25% (AISE SPERC 5.1a.v2).
air: 0% (AISE SPERC 5.1a.v2).
Soil: 0% (AISE SPERC 5.1a.v2).
Waste: 95%.
Technical conditions and measures at process level (source) to prevent release : Process optimised for efficient use of raw materials.
Granular detergents are obtained by drying liquid slurries.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 95%.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 004	Use at industrial sites; General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment (SU17); Metal surface treatment products (PC14)
Contributing scenario controlling environmental exposure for 2: Use at industrial site leading to inclusion into/ onto article		
Amounts used	: Daily amount per site: ≤0.05 tonnes/day. Annual amount per site: ≤11 tonnes/year.	
Frequency and duration of use	: Emission days: 220 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Spent process fluid discharged to wastewater for subsequent treatment. Release factor after on-site risk management : water: 1% (AISE SPERC 5.1b.v2). air: 0% (AISE SPERC 5.1b.v2). Soil: 0% (AISE SPERC 5.1b.v2). Waste: 99%.	
Technical conditions and measures at process level (source) to prevent release	: Process optimised for efficient use of raw materials. Substance applied in aqueous process solution with negligible volatilization.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes. Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 99%.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 3: Contributing scenarios		
CS03: Transfer and dilution of concentrated product by using dedicated dosing system; medium RMM - PROC08b		
CS04: Brushing; Automated task; medium RMM - PROC10		
CS05: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21		
CS06: Industrial uses; Treatment of articles by dipping and pouring; medium RMM - PROC13		
CS07: Industrial spraying; Automated task; Open systems; Long term; with Local exhaust ventilation - PROC07		
CS08: Industrial spraying; Automated task; Open systems; Long term; high RMM - PROC07		

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: 1: Use at industrial site leading to inclusion into/ onto article**

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00333 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.167.

Freshwater sediment: 0.049 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.167.

Marine water: 0.000332 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.166.

Marine water sediment: 0.0049 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.166.

Sewage Treatment Plant: 0.00783 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00703 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.149.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Use at industrial site leading to inclusion into/ onto article

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00568 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.284.

Freshwater sediment: 0.084 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.284.

Marine water: 0.000567 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.284.

Marine water sediment: 0.00837 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.284.

Sewage Treatment Plant: 0.031 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.013 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.271.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 3: Contributing scenarios

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 004	<i>Use at industrial sites; General manufacturing, e. g. machinery, equipment, vehicles, other transport equipment (SU17); Metal surface treatment products (PC14)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Various products (PC08, PC35)
List of use descriptors : **Identified use name: ES005:** Widespread use by professional workers - washing, cleaning and disinfecting products [AISE_PW_001_v1]: PC08, PC35; PROC01, PROC03, PROC04, PROC08a, PROC10, PROC11, PROC13, PROC19; ERC08a
Process Category: PROC01, PROC03, PROC04, PROC08a, PROC10, PROC11, PROC13, PROC19
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC08, PC35
Environmental contributing scenarios : **Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)** - ERC08a
Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC03, PROC04, PROC08a, PROC10, PROC11, PROC13, PROC19

Number of the ES : 005

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

Amounts used : Daily local widespread use amount: ≤0.00033 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Indoor use/ Outdoor use.
Spent process fluid discharged to wastewater for subsequent treatment.

Release factor after on-site risk management :
water: 100% (AISE SPERC 8a.1.a.v2).
air: 0% (AISE SPERC 8a.1.a.v2).
Soil: 0% (AISE SPERC 8a.1.a.v2).
Technical conditions and measures at process level (source) to prevent release : Substance applied in aqueous process solution with negligible volatilization.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios**Organisational measures to prevent/limit releases, dispersion and exposure**

- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation**Personal protection**

- Substance/Task appropriate gloves.
- Skin coverage with appropriate barrier material based on potential for contact with the chemicals.
- Substance/task appropriate respiratory protection.
- Optional face shield.
- Use suitable eye protection.

Contributing scenario controlling worker exposure for 2: Contributing scenarios

CS02: Transfer of professional product to a container (Bottle/Bucket/Machines); medium RMM - PROC08a
 CS03: Transfer of professional product via a dedicated system (Bottle/Machines); no RMM - PROC08a
 CS04: Professional uses; Use in closed process - PROC01
 CS05: Professional uses; Use in closed process; Occasional exposure - PROC03
 CS06: Professional uses; Semi-closed system - PROC04
 CS07: Professional uses; (trigger) spraying; no RMM - PROC11
 CS08: Professional uses; (trigger) spraying; medium RMM - PROC11
 CS09: Professional uses; Spraying; medium RMM - PROC11
 CS10: Professional uses; Spraying; no RMM - PROC11
 CS11: Professional uses; Brushing after trigger spraying or brushing with tools; no RMM - PROC10
 CS12: Professional uses; Brushing after trigger spraying or brushing with tools; medium RMM - PROC10
 CS13: Professional uses; Manual application; no RMM - PROC19
 CS14: Professional uses; Manual application; medium RMM - PROC19
 CS15: Professional uses; Treatment of articles by dipping, soaking or pouring; medium RMM - PROC13
 CS16: Professional uses; Treatment of articles by dipping, soaking or pouring; no RMM - PROC13
 CS17: Professional uses; Treatment of articles by dipping, soaking or pouring; Short term; medium RMM - PROC13

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: 1: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)****Exposure assessment (environment):**

: EUSES 2.1.2

Exposure estimation

: Freshwater: 0.0046 mg/l.
 Risk characterisation ratio (PEC/PNEC): 0.23.

Freshwater sediment: 0.068 mg/kg dwt.
 Risk characterisation ratio (PEC/PNEC): 0.23.

Marine water: 0.000459 mg/l.
 Risk characterisation ratio (PEC/PNEC): 0.23.

Marine water sediment: 0.00678 mg/kg dwt.
 Risk characterisation ratio (PEC/PNEC): 0.23.

Sewage Treatment Plant: 0.021 mg/l.
 Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.01 mg/kg dwt.
 Risk characterisation ratio (PEC/PNEC): 0.215.

octanoic acid	Exposure Scenario: 005	Widespread use by professional workers; Various products (PC08, PC35)
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Polishes and wax blends (PC31)
List of use descriptors : **Identified use name: ES002:** Widespread use by professional workers - Polishes and wax blends [AISE_PW_001_v1]: PC31; PROC01, PROC04, PROC08a, PROC10, PROC13, PROC19; ERC08a
Process Category: PROC01, PROC04, PROC08a, PROC10, PROC13, PROC19
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC31
Environmental contributing scenarios : **Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - ERC08a**
Health Contributing scenarios : **Contributing scenarios -** PROC01, PROC04, PROC08a, PROC10, PROC13, PROC19

Number of the ES : 006

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

Amounts used : Daily local widespread use amount: ≤0.00033 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Indoor use/Outdoor use.
Spent process fluid discharged to wastewater for subsequent treatment.

Release factor after on-site risk management :
water: 100% (AISE SPERC 8a.1.a.v2).
air: 0% (AISE SPERC 8a.1.a.v2).
Soil: 0% (AISE SPERC 8a.1.a.v2).
Technical conditions and measures at process level (source) to prevent release : Substance applied in aqueous process solution with negligible volatilization.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 006	Widespread use by professional workers; Polishes and wax blends (PC31)
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	- Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	- Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Transfer of professional product to a container (Bottle/Bucket/Machines); medium RMM - PROC08a		
CS03: Transfer of professional product via a dedicated system (Bottle/Machines); no RMM - PROC08a		
CS04: Professional uses; Fully closed equipment - PROC01		
CS05: Professional use; Semi-closed system - PROC04		
CS06: Professional use; Brushing; no RMM - PROC10		
CS07: Professional use; Brushing; medium RMM - PROC10		
CS08: Professional use; Manual application; no RMM - PROC19		
CS09: Professional use; Manual application; medium RMM - PROC19		
CS10: Professional use; Treatment of articles by dipping, soaking or pouring; medium RMM - PROC13		
CS11: Professional use; Treatment of articles by dipping, soaking or pouring; no RMM - PROC13		
CS12: Professional use; Treatment of articles by dipping, soaking or pouring; Short term; medium RMM - PROC13		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.0046 mg/l. Risk characterisation ratio (PEC/PNEC): 0.23. Freshwater sediment: 0.068 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.23. Marine water: 0.000459 mg/l. Risk characterisation ratio (PEC/PNEC): 0.23. Marine water sediment: 0.00678 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.23. Sewage Treatment Plant: 0.021 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.01 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.215.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General : The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Various products (PC17, PC24, PC25)

List of use descriptors : **Identified use name: ES007:** Formulation or re-packing - Industrial formulation of lubricant additives, lubricants and greases. [ATIEL-ATC GroupA [i]]: PC17, PC24, PC25; PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15; ERC02
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15, PROC28
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC17, PC24, PC25

Environmental contributing scenarios : **Industrial formulation of lubricant additives, lubricants and greases. ATIEL-ATC GroupA [i] (Ai-add pack)** - ERC02
Industrial formulation of lubricant additives, lubricants and greases. ATIEL-ATC GroupA [i] (Ai-lubes) - ERC02

Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15, PROC28

Number of the ES : 007

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Industrial formulation of lubricant additives, lubricants and greases. ATIEL-ATC GroupA [i] (Ai-add pack)

Amounts used : Daily amount per site: ≤0.52 tonnes/day.
Annual amount per site: ≤155 tonnes/year.

Frequency and duration of use : Emission days: ≥300 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow : ≥18000 m³/d.
Negligible wastewater emissions as process operates without water contact.

Release factor after on-site risk management:
water: 0.00000002% (ATIEL-ATC SPERC 2.Ai-a.v1).
air: 0.00005% (ATIEL-ATC SPERC 2.Ai-a.v1).
Soil: 0% (Estimated release factor).

Technical conditions and measures at process level (source) to prevent release : Process optimised for efficient use of raw materials.

Conditions and measures related to sewage treatment plant : Oil-water separation.

Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Industrial formulation of lubricant additives, lubricants and greases. ATIEL-ATC GroupA [i] (Ai-lubes)	
Amounts used	: Daily amount per site: ≤0.52 tonnes/day. Annual amount per site: ≤155 tonnes/year.
Frequency and duration of use	: Emission days: ≥300 days per year.
Other conditions affecting environmental exposure	: Receiving surface water flow : ≥18000 m³/d. Negligible wastewater emissions as process operates without water contact. Release factor after on-site risk management: water: 0.000000002% (ATIEL-ATC SPERC 2.Ai-l.v1). air: 0.005% (ATIEL-ATC SPERC 2.Ai-l.v1). Soil: 0% (ATIEL-ATC SPERC 2.Ai-l.v1).
Technical conditions and measures at process level (source) to prevent release	: Process optimised for efficient use of raw materials.
Conditions and measures related to sewage treatment plant	: Oil-water separation. Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios	
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.

Contributing scenario controlling worker exposure for 3: Contributing scenarios
CS03: Closed continuous process at elevated temperature with sampling, including grease manufacture - PROC02 CS04: Batch closed process with sampling. Blending and filling processes (closed/dedicated). Includes both bulk and small quantity additions. May be at elevated temperatures, e.g. grease manufacture - PROC03 CS05: Batch open process. Blending and filling processes (open/non-dedicated) Includes addition of both bulk and small quantity additions, mixing operations. May be at elevated temperatures, e.g. grease manufacture - PROC04 CS06: Batch open process. Blending and filling processes (open/non-dedicated). Includes addition of both bulk and small quantity additions, mixing operations. May be at elevated temperatures, e.g. grease manufacture - PROC05 CS07: Sample collection of formulation - PROC04 CS08: Sample collection of incoming raw material - PROC08b CS09: Bulk transfer by fixed pipe or flexible hose - PROC08b CS10: Small pack (drum/bag) transfers - dedicated facility - PROC08b CS11: Small pack (drum/bag) transfers - non-dedicated facility - PROC08a CS12: Equipment cleaning and maintenance - PROC28 CS13: Top filling of bulk containers (road cars etc.) - PROC08b CS14: Filling of drums and small packages - PROC09

octanoic acid	Exposure Scenario: 007	Formulation or re-packing; Various products (PC17, PC24, PC25)
CS15: QC laboratory - PROC15 CS16: Material storage - PROC01, PROC02		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Industrial formulation of lubricant additives, lubricants and greases. ATIEL-ATC GroupA [i] (Ai-add pack)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000000648 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Environment: 2: Industrial formulation of lubricant additives, lubricants and greases. ATIEL-ATC GroupA [i] (Ai-lubes)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000000648 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 3: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

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octanoic acid	Exposure Scenario: 007	Formulation or re-packing; Various products (PC17, PC24, PC25)
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Metal working fluids (PC25)
List of use descriptors : **Identified use name: ES008:** Formulation or re-packing - Industrial handling and dilution of metalworking fluid concentrates [ATIEL-ATC Group E [i]]: PC25; PROC01, PROC02, PROC05, PROC08b, PROC28; ERC02
Process Category: PROC01, PROC02, PROC05, PROC08b, PROC28
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC25
Environmental contributing scenarios : **Industrial handling and dilution of metalworking fluid concentrates [ATIEL-ATC Group E [i]] - ERC02**
Health Contributing scenarios : **Contributing scenarios -** PROC01, PROC02, PROC05, PROC08b, PROC28

Number of the ES : 008

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Industrial handling and dilution of metalworking fluid concentrates [ATIEL-ATC Group E [i]]

Amounts used : Daily amount per site: ≤0.52 tonnes/day.
Annual amount per site: ≤154 tonnes/year.
Frequency and duration of use : Emission days: ≥300 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow : ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.000000002% (ATIEL-ATC SPERC 2.Ei.v1).
air: 0.005% (ATIEL-ATC SPERC 2.Ei.v1).
Soil: 0% (ATIEL-ATC SPERC 2.Ei.v1).
Technical conditions and measures at process level (source) to prevent release : Water-based or straight oil process.
Conditions and measures related to sewage treatment plant : Oil-water separation.
Sewage Treatment Plant : Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 008	Formulation or re-packing; Metal working fluids (PC25)
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	- Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	- Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Add concentrate to water tank by pouring from small container - PROC05		
CS03: Add concentrate to water tank by pouring from small container - PROC08b		
CS04: Add concentrate to water tank by pumping from drum or tank via mixer - PROC05		
CS05: Add concentrate to water tank by pumping from drum or tank via mixer - PROC08b		
CS06: Sample the solution to test concentration - PROC08b		
CS07: Equipment cleaning and maintenance - PROC28		
CS08: Material storage - PROC01, PROC02		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Industrial handling and dilution of metalworking fluid concentrates [ATIEL-ATC Group E [i]]	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.000000000648 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**General**

: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.

Environment

: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Various products (PC16, PC17, PC24)
List of use descriptors : **Identified use name: ES009:** Use at industrial sites - General industrial use of lubricants and greases in vehicles or machinery [ATIEL-ATC Group B [i]]: PC16, PC17, PC24; PROC01, PROC02, PROC08b, PROC09; ERC04
Process Category: PROC01, PROC02, PROC08b, PROC09
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC16, PC17, PC24
Environmental contributing scenarios : **General industrial use of lubricants and greases in vehicles or machinery [ATIEL-ATC Group B [i]] - ERC04**
Health Contributing scenarios : **Contributing scenarios - PROC01, PROC02, PROC08b, PROC09**

Number of the ES : 009

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General industrial use of lubricants and greases in vehicles or machinery [ATIEL-ATC Group B [i]]

Amounts used : Daily amount per site: ≤0.52 tonnes/day.
Annual amount per site: ≤155 tonnes/year.
Frequency and duration of use : Emission days: ≥300 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d
Negligible wastewater emissions as process operates without water contact..

Release factor after on-site risk management:
water: 0.000000002% (ATIEL-ATC SPERC 4.Bi.v1).
air: 0.005% (ATIEL-ATC SPERC 4.Bi.v1).
Soil: 0% (ATIEL-ATC SPERC 4.Bi.v1).
Conditions and measures related to sewage treatment plant : Oil-water separation.

Sewage Treatment Plant : Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.

octanoic acid	Exposure Scenario: 009	Use at industrial sites; Various products (PC16, PC17, PC24)
- Training for staff on good practice. - Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Initial factory fill from header tank; lubricating oil - PROC09 CS03: Initial factory fill by pouring from containers; lubricating oil - PROC08b CS04: Initial factory fill by injection of greases - PROC02, PROC09 CS05: Use as a lubricant/grease in a closed system - PROC01 CS06: Maintenance activities industrial settings. General exposure during maintenance work including draining, refilling and R&D (e.g. engine testing) - PROC08b CS07: Material storage - PROC01, PROC02		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: General industrial use of lubricants and greases in vehicles or machinery [ATIEL-ATC Group B [i]]		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.000000000648 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 009	<i>Use at industrial sites; Various products (PC16, PC17, PC24)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Lubricants, greases, release products (PC24)

List of use descriptors : **Identified use name: ES010:** Use at industrial sites - Industrial use of lubricants and greases in open systems [ATIEL-ATC Group C [i]]: PC24; PROC01, PROC02, PROC07, PROC08b, PROC09, PROC10, PROC13; ERC04
Process Category: PROC01, PROC02, PROC07, PROC08b, PROC09, PROC10, PROC13
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC24

Environmental contributing scenarios : **Industrial use of lubricants and greases in open systems [ATIEL-ATC Group C [i]]** - ERC04

Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC07, PROC08b, PROC09, PROC10, PROC13

Number of the ES : 010

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Industrial use of lubricants and greases in open systems [ATIEL-ATC Group C [i]]

Amounts used : Daily amount per site: ≤0.52 tonnes/day.
Annual amount per site: ≤155 tonnes/year.

Frequency and duration of use : Emission days: ≥300 days per year.

Other conditions affecting environmental exposure : Negligible wastewater emissions as process operates without water contact.
Receiving surface water flow: ≥18000 m³/d.

Conditions and measures related to sewage treatment plant : Release factor after on-site risk management:
water: 0.000000002% (ATIEL-ATC SPERC 4.Ci.v1).
air: 0.005% (ATIEL-ATC SPERC 4.Ci.v1).
Soil: 0% (ATIEL-ATC SPERC 4.Ci.v1).
Oil-water separation.

Conditions and measures related to external treatment of waste for disposal : Sewage Treatment Plant : Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure : - Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used

octanoic acid	Exposure Scenario: 010	Use at industrial sites; Lubricants, greases, release products (PC24)
correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Manual filling of lubricant container, i.e. bath or tank - PROC08b CS03: Automated filling of lubricant container, i.e. bath or tank - PROC09 CS04: Automated filling of lubricant container, i.e. bath or tank - PROC08b CS05: Roller application or brushing - PROC10 CS06: Industrial spraying - PROC07 CS07: Treatment of articles by dipping and pouring - PROC13 CS08: Draining, maintenance and cleaning of equipment - PROC08b CS09: Material storage - PROC01, PROC2		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Industrial use of lubricants and greases in open systems [ATIEL-ATC Group C [i]]	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.000000000648 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 010	<i>Use at industrial sites; Lubricants, greases, release products (PC24)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Lubricants, greases, release products (PC24)

List of use descriptors : **Identified use name: ES011:** Use at industrial sites - Use of lubricants in high energy open processes [ATIEL-ATC Group F [ij]]: PC24; PROC01, PROC02, PROC08b, PROC17, PROC18, PROC28; ERC04
Process Category: PROC01, PROC02, PROC08b, PROC17, PROC18, PROC28
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC24

Environmental contributing scenarios : **Use of lubricants in high energy open processes** - ERC04

Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC08b, PROC17, PROC18, PROC28

Number of the ES	: 011
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Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of lubricants in high energy open processes

Amounts used : Daily amount per site: ≤0.52 tonnes/day.
Annual amount per site: ≤155 tonnes/year.

Frequency and duration of use : Emission days: ≥300 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.000000002% (ATIEL-ATC SPERC 4.Fi.v1).
air: 0.005% (ATIEL-ATC SPERC 4.Fi.v1).
Soil: 0% (ATIEL-ATC SPERC 4.Fi.v1).

Technical conditions and measures at process level (source) to prevent release : Water-based or straight oil process.

Conditions and measures related to sewage treatment plant : Oil-water separation.

Sewage Treatment Plant : Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 011	Use at industrial sites; Lubricants, greases, release products (PC24)
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	- Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	- Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Fill bath with fluid - PROC08b		
CS03: Metal machining operations; e.g. drilling, grinding etc. (giving risk to mist) - PROC17		
CS04: Use of high speed machinery (not MWF uses) - Open systems giving rise to mist - PROC17		
CS05: Use of high speed machinery (not MWF uses) - Open systems giving rise to mist - PROC18		
CS06: Automated metal rolling/forming - PROC02		
CS07: Semi-automated metal rolling/forming - PROC17		
CS08: Draining, maintenance and cleaning of equipment - PROC28		
CS09: Material storage - PROC01, PROC2		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of lubricants in high energy open processes	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.000000000648 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.
Date of issue/Date of revision	: 09/09/2019
Version	: 1 / en 44/390

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**General**

: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.

Environment

: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Various products (PC16, PC17, PC24)

List of use descriptors : **Identified use name: ES012:** Widespread use by professional workers - General professional use of lubricants and greases in vehicles or machinery [ATIEL-ATC Group B [p]]: PC16, PC17, PC24; PROC01, PROC02, PROC08a, PROC08b, PROC20; ERC09a, ERC09b
Process Category: PROC01, PROC02, PROC08a, PROC08b, PROC20
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b
Market sector by type of chemical product: PC16, PC17, PC24

Environmental contributing scenarios : **General professional use of lubricants and greases in vehicles or machinery** - ERC09a, ERC09b

Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC08a, PROC08b, PROC20

Number of the ES : 012

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General professional use of lubricants and greases in vehicles or machinery

Amounts used : Daily local widespread use amount: ≤0.000055 tonnes/day.

Frequency and duration of use : Emission days: 365 days per year.

Other conditions affecting environmental exposure : Negligible wastewater emissions as process operates without water contact.

Release factor after on-site risk management :
water: 0.05% (ATIEL-ATC SPERC 9.Bp.v1).
air: 0.01% (ATIEL-ATC SPERC 9.Bp.v1).
Soil: 0.1% (ATIEL-ATC SPERC 9.Bp.v1).

Technical conditions and measures at process level (source) to prevent release : Professional use: limited emissions to air, limited disposal via wastewater.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.

octanoic acid	Exposure Scenario: 012	<i>Widespread use by professional workers; Various products (PC16, PC17, PC24)</i>
- Training for staff on good practice. - Good standard of personal hygiene.		
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Use as a lubricant/grease in a closed system - PROC01		
CS03: General exposure during maintenance work including draining, refilling - PROC08a		
CS04: General exposure during maintenance work including draining, refilling - PROC08b		
CS05: General exposure during maintenance work including draining, refilling - PROC20		
CS06: Material storage - PROC01, PROC02		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: General professional use of lubricants and greases in vehicles or machinery	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000293 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Lubricants, greases, release products (PC24)
List of use descriptors : **Identified use name: ES013:** Widespread use by professional workers - Professional use of lubricants and greases in open systems [ATIEL-ATC Group C [p]]: PC24; PROC01, PROC02, PROC08a, PROC10, PROC11, PROC13; ERC08a, ERC08d
Process Category: PROC01, PROC02, PROC08a, PROC10, PROC11, PROC13
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d
Market sector by type of chemical product: PC24
Environmental contributing scenarios : **Professional use of lubricants and greases in open systems [ATIEL-ATC Group C [p]]** - ERC08a, ERC08d
Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC08a, PROC10, PROC11, PROC13

Number of the ES : 013

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Professional use of lubricants and greases in open systems [ATIEL-ATC Group C [p]]

Amounts used : Daily local widespread use amount: ≤0.000055 tonnes/day.
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Negligible wastewater emissions as process operates without water contact.
Release factor after on-site risk management :
water: 0.05% (ATIEL-ATC SPERC 8.Cp.v1).
air: 0.01% (ATIEL-ATC SPERC 8.Cp.v1).
Soil: 0.1% (ATIEL-ATC SPERC 8.Cp.v1).
Technical conditions and measures at process level (source) to prevent release : Professional use: limited emissions to air, limited disposal via wastewater.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.

octanoic acid	Exposure Scenario: 013	Widespread use by professional workers; Lubricants, greases, release products (PC24)
- Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Manual filling of lubricant container, i.e. bath or tank - PROC08a CS03: Roller application or brushing - PROC10 CS04: Industrial spraying - PROC11 CS05: Treatment of articles by dipping and pouring - PROC13 CS06: Draining, maintenance and cleaning of equipment - PROC08a CS07: Material storage - PROC01, PROC02		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Professional use of lubricants and greases in open systems [ATIEL-ATC Group C [p]]	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000293 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Various products (PC24, PC25)
List of use descriptors : **Identified use name: ES014:** Widespread use by professional workers - Professional use of lubricants in high energy open processes [ATIEL-ATC Group F [p]]: PC24, PC25; PROC01, PROC02, PROC08a, PROC17, PROC18, PROC28; ERC08a
Process Category: PROC01, PROC02, PROC08a, PROC17, PROC18, PROC28
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC24, PC25
Environmental contributing scenarios : **Professional use of lubricants in high energy open processes [ATIEL-ATC Group F [p]] - ERC08a**
Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC08a, PROC17, PROC18, PROC28

Number of the ES : 014

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Professional use of lubricants in high energy open processes [ATIEL-ATC Group F [p]]

Amounts used : Daily local widespread use amount: ≤0.000055 tonnes/day.
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Release factor after on-site risk management:
water: 0.1% (ATIEL-ATC SPERC 8.Fp.v1).
air: 0.01% (ATIEL-ATC SPERC 8.Fp.v1).
Soil: 0.1% (ATIEL-ATC SPERC 8.Fp.v1).
Technical conditions and measures at process level (source) to prevent release : Water-based or straight oil process.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

octanoic acid	Exposure Scenario: 014	<i>Widespread use by professional workers; Various products (PC24, PC25)</i>
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Fill bath with fluid - PROC08a CS03: Metal machining operations; e.g. drilling, grinding etc. (giving risk to mist) - PROC17 CS04: Use of high speed machinery (not MWF uses) - Open systems giving rise to mist - PROC17 CS05: Use of high speed machinery (not MWF uses) - Open systems giving rise to mist - PROC18 CS06: Draining, maintenance and cleaning of equipment - PROC28 CS07: Material storage - PROC01, PROC2		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Professional use of lubricants in high energy open processes [ATIEL-ATC Group F [p]]	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000586 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Various products (PC09a, PC09b, PC09c, PC18)
List of use descriptors : **Identified use name: ES015:** Formulation or re-packing - Industrial manufacture of powder coatings and inks [CEPE]: PC09a, PC09b, PC09c, PC18; PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09, PROC15, PROC28; ERC02
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09, PROC15, PROC28
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC09a, PC09b, PC09c, PC18
Environmental contributing scenarios : **Industrial manufacture of powder coatings and inks - ERC02**
Health Contributing scenarios : **Contributing scenarios -** PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09, PROC15, PROC28

Number of the ES : 015

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Industrial manufacture of powder coatings and inks

Amounts used : Daily amount per site: ≤0.22 tonnes/day.
Annual amount per site: ≤50 tonnes/year.
Frequency and duration of use : Emission days: ≥225 days per year.
Other conditions affecting environmental exposure : Release factor after on-site risk management:
water: 0.5% (CEPE SPERC 2.3a.v1).
air: 0.000097% (CEPE SPERC 2.3a.v1).
Soil: 0% (CEPE SPERC 2.3a.v1).
Technical conditions and measures at process level (source) to prevent release : Granular detergents are obtained by drying liquid slurries.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.

octanoic acid	Exposure Scenario: 015	Formulation or re-packing; Various products (PC09a, PC09b, PC09c, PC18)
- Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Receipt and storage of raw materials - PROC08b CS03: Receipt and storage of raw materials - PROC03 CS04: Raw material assembly and charging - PROC01 CS05: Raw material assembly and charging - PROC08b CS06: Blending or dissolving or dispersion - PROC01 CS07: Blending or dissolving or dispersion - PROC02 CS08: Blending or dissolving or dispersion - PROC03 CS09: Blending or dissolving or dispersion - PROC05 CS10: Filtering and filling - PROC09 CS11: Manufacturing equipment cleaning - PROC02 CS12: Manufacturing equipment cleaning - PROC05 CS13: Manufacturing equipment cleaning - PROC28 CS14: Waste management - PROC08b CS15: Waste management - PROC03 CS16: Manufacturing equipment maintenance - PROC08b CS17: Manufacturing equipment maintenance - PROC28 CS18: Laboratory use - PROC05 CS19: Laboratory use - PROC15		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Industrial manufacture of powder coatings and inks	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00944 mg/l. Risk characterisation ratio (PEC/PNEC): 0.472. Freshwater sediment: 0.139 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.472. Marine water: 0.000943 mg/l. Risk characterisation ratio (PEC/PNEC): 0.472. Marine water sediment: 0.014 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.472. Sewage Treatment Plant: 0.069 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.022 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.467.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**General**

: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.

Environment

: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Various products (PC09a, PC09b, PC09c, PC18)

List of use descriptors : **Identified use name: ES016:** Formulation or re-packing - coatings and inks - Manufacture of organic solvent borne, water borne and solvent-free products [CEPE]: PC09a, PC09b, PC09c, PC18; PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC15, PROC28; ERC02
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC15, PROC28
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC09a, PC09b, PC09c, PC18

Environmental contributing scenarios : **Industrial manufacture of organic solvent borne liquid coatings and inks - ERC02**
Industrial manufacture of water borne liquid coatings and inks - ERC02
Industrial manufacture of organic solvent and water borne liquid coatings and inks - ERC02

Health Contributing scenarios : **Contributing scenarios -** PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC15, PROC28

Number of the ES	: 016
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Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Industrial manufacture of organic solvent borne liquid coatings and inks

Amounts used : Daily amount per site: ≤0.22 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥225 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0% (CEPE SPERC 2.1).
air: 5% (CEPE SPERC 2.1).
Soil: 0% (CEPE SPERC 2.1).

Technical conditions and measures at process level (source) to prevent release : Process optimised for highly efficient use of raw materials.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 016	Formulation or re-packing; Various products (PC09a, PC09b, PC09c, PC18)
Contributing scenario controlling environmental exposure for 2: Industrial manufacture of water borne liquid coatings and inks		
Amounts used	: Daily amount per site: ≤0.22 tonnes/day. Annual amount per site: ≤50 tonnes/year.	
Frequency and duration of use	: Emission days: ≥225 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Release factor after on-site risk management: water: 0% (CEPE SPERC 2.2). air: 5% (CEPE SPERC 2.2). Soil: 0% (CEPE SPERC 2.2).	
Technical conditions and measures at process level (source) to prevent release	: Process optimised for highly efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Industrial manufacture of organic solvent and water borne liquid coatings and inks		
Amounts used	: Daily amount per site: ≤0.22 tonnes/day. Annual amount per site: ≤50 tonnes/year.	
Frequency and duration of use	: Emission days: ≥225 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Release factor after on-site risk management: water: 0.5% (CEPE SPERC 2.4). air: 5% (CEPE SPERC 2.4). Soil: 0% (CEPE SPERC 2.4).	
Technical conditions and measures at process level (source) to prevent release	: Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
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octanoic acid	Exposure Scenario: 016	Formulation or re-packing; Various products (PC09a, PC09b, PC09c, PC18)
Personal protection	- Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 4: Contributing scenarios		
CS04: Receipt and storage of raw materials - PROC08b CS05: Receipt and storage of raw materials - PROC03 CS06: Raw material assembly and charging - PROC01 CS07: Raw material assembly and charging - PROC08b CS08: Blending or dissolving or dispersion - PROC02 CS09: Blending or dissolving or dispersion - PROC03 CS10: Blending or dissolving or dispersion - PROC05 CS11: Filtering and filling - PROC09 CS12: Filtering and filling - PROC08a CS13: Manufacturing equipment cleaning - PROC02 CS14: Manufacturing equipment cleaning - PROC05 CS15: Manufacturing equipment cleaning - PROC28 CS16: Waste management - PROC08b CS17: Waste management - PROC03 CS18: Manufacturing equipment maintenance - PROC08b CS19: Manufacturing equipment maintenance - PROC28 CS20: Laboratory use - PROC05 CS21: Laboratory use - PROC15		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Industrial manufacture of organic solvent borne liquid coatings and inks

Exposure assessment (environment): EUSES 2.1.2

Exposure estimation : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Marine water: 0.000254 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.

Marine water sediment: 0.00375 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.127.

Sewage Treatment Plant: 0 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00547 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.116.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Industrial manufacture of water borne liquid coatings and inks

Exposure assessment (environment): EUSES 2.1.2

octanoic acid		Exposure Scenario: 016	Formulation or re-packing; Various products (PC09a, PC09b, PC09c, PC18)
Exposure estimation	:	Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00547 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.116.	
Remark	:	Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Industrial manufacture of organic solvent and water borne liquid coatings and inks			
Exposure assessment (environment):	:	EUSES 2.1.2	
Exposure estimation	:	Freshwater: 0.00944 mg/l. Risk characterisation ratio (PEC/PNEC): 0.472. Freshwater sediment: 0.139 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.472. Marine water: 0.000943 mg/l. Risk characterisation ratio (PEC/PNEC): 0.472. Marine water sediment: 0.014 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.472. Sewage Treatment Plant: 0.069 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.022 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.467.	
Remark	:	Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 4: Contributing scenarios			
Exposure assessment (human):	:	Qualitative approach used to conclude safe use.	
Exposure estimation	:	Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	:	The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Various products (PC09a, PC09b, PC09c, PC18)

List of use descriptors : **Identified use name: ES017:** Use at industrial sites - Coatings and inks application [CEPE]: PC09a, PC09b, PC09c, PC18; PROC01, PROC02, PROC03, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC15; ERC04, ERC05
Process Category: PROC01, PROC02, PROC03, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC15
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05
Market sector by type of chemical product: PC09a, PC09b, PC09c, PC18

Environmental contributing scenarios : **Application - industrial - spraying - indoor use - incineration - volatiles - ERC04**
Application - industrial - spraying - indoor use - volatiles - ERC04
Application - industrial - spraying - indoor use - solids - ERC05
Application - industrial - spraying - indoor use - powder - ERC05

Health Contributing scenarios : **Contributing scenarios - PROC01, PROC02, PROC03, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC15**

Number of the ES : 017

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Application - industrial - spraying - indoor use - incineration - volatiles

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥225 days per year.

Other conditions affecting environmental exposure : Indoor use.

Release factor after on-site risk management:
water: 2% (CEPE SPERC 4.1a.v1).
air: 0.8% (CEPE SPERC 4.1a.v1).
Soil: 0% (CEPE SPERC 4.1a.v1).

Technical conditions and measures at process level (source) to prevent release : Exhaust air treatment: Incineration (On-site, CEPE SPERC 4.1a.v1). Treatment effectiveness: 99%.
Industrial product use leading to emissions to air.

Conditions and measures related to sewage treatment plant : Industrial product use leading to disposal via wastewater.
Receiving surface water flow: ≥18000 m³/d.

Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 017	Use at industrial sites; Various products (PC09a, PC09b, PC09c, PC18)
Contributing scenario controlling environmental exposure for 2: Application - industrial - spraying - indoor use - volatiles		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥225 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 2% (CEPE SPERC 4.1b.v1). air: 98% (CEPE SPERC 4.1b.v1). Soil: 0% (CEPE SPERC 4.1b.v1).	
Technical conditions and measures at process level (source) to prevent release	: Industrial product use leading to emissions to air.	
Conditions and measures related to sewage treatment plant	: Industrial product use leading to disposal via wastewater. Receiving surface water flow: ≥18000 m³/d. Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations	
Contributing scenario controlling environmental exposure for 3: Application - industrial - spraying - indoor use - solids		
Amounts used	: Daily amount per site: ≤0.22 tonnes/day. Annual amount per site: ≤50 tonnes/year.	
Frequency and duration of use	: Emission days: ≥225 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0% (CEPE SPERC 5.1a.v1). air: 2% (CEPE SPERC 5.1a.v1). Soil: 0% (CEPE SPERC 5.1a.v1).	
Technical conditions and measures at process level (source) to prevent release	: Industrial product use leading to emissions to air.	
Conditions and measures related to sewage treatment plant	: Industrial product use leading to disposal via wastewater. Receiving surface water flow: ≥18000 m³/d. Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Application - industrial - spraying - indoor use - powder		
Amounts used	: Daily amount per site: ≤0.22 tonnes/day. Annual amount per site: ≤50 tonnes/year.	
Frequency and duration of use	: Emission days: ≥225 days per year.	
Date of issue/Date of revision : 09/09/2019		
Version : 1 / en 60/390		

octanoic acid	Exposure Scenario: 017	Use at industrial sites; Various products (PC09a, PC09b, PC09c, PC18)
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0% (CEPE SPERC 5.2a.v1). air: 2% (CEPE SPERC 5.2a.v1). Soil: 0% (CEPE SPERC 5.2a.v1).	
Technical conditions and measures at process level (source) to prevent release	: Industrial product use leading to emissions to air.	
Conditions and measures related to sewage treatment plant	: Industrial product use leading to disposal via wastewater. Receiving surface water flow: ≥18000 m³/d. Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios		
CS05: Product delivery or storage - PROC08b CS06: Product delivery or storage - PROC03 CS07: Preparation of material for application - PROC01 CS08: Preparation of material for application - PROC02 CS09: Preparation of material for application - PROC05 CS10: Preparation of material for application - PROC08b CS11: Loading of application equipment - PROC01 CS12: Loading of application equipment - PROC02 CS13: Loading of application equipment - PROC08b CS14: Loading of application equipment - PROC08a CS15: Application(s) - PROC10 CS16: Application(s) - PROC07 CS17: Film formation - PROC02 CS18: Application equipment cleaning - PROC03 CS19: Application equipment cleaning - PROC05 CS20: Laboratory use - PROC05 CS21: Laboratory use - PROC15 CS22: Waste management - PROC03 CS23: Waste management - PROC08b		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Application - industrial - spraying - indoor use - incineration - volatiles

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.016 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.817.

Freshwater sediment: 0.241 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.817.

Marine water: 0.00163 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.816.

Marine water sediment: 0.024 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.817.

Sewage Treatment Plant: 0.138 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.039 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.827.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Application - industrial - spraying - indoor use - volatiles

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.016 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.817.

Freshwater sediment: 0.241 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.817.

Marine water: 0.00163 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.816.

Marine water sediment: 0.024 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.817.

Sewage Treatment Plant: 0.138 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.043 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.904.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 3: Application - industrial - spraying - indoor use - solids

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Marine water: 0.000254 mg/l.

octanoic acid	Exposure Scenario: 017	Use at industrial sites; Various products (PC09a, PC09b, PC09c, PC18)
	Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00524 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.111.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Application - industrial - spraying - indoor use - powder		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00524 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.111.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Professional use; Various products (PC09a, PC09b, PC09c, PC18)
List of use descriptors : **Identified use name: ES018:** Widespread use by professional workers - Coatings and inks application [CEPE]: PC09a, PC09b, PC09c, PC18; PROC02, PROC03, PROC05, PROC08a, PROC10, PROC11, PROC15, PROC19; ERC08a, ERC08c, ERC08d, ERC08f
Process Category: PROC02, PROC03, PROC05, PROC08a, PROC10, PROC11, PROC15, PROC19
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08c, ERC08d, ERC08f
Market sector by type of chemical product: PC09a, PC09b, PC09c, PC18
Environmental contributing scenarios : **Professional application of coatings and inks by spraying (VOCs)** - ERC08a, ERC08d
Professional application of coatings and inks by brush or roller (VOCs) - ERC08a, ERC08d
Professional application of coatings and inks by spraying (solids) - ERC08c
Professional application of coatings and inks by brush or roller (solids) - ERC08c
Professional application of coatings and inks by spraying (solids) - ERC08f
Professional application of coatings and inks by brush or roller (solids) - ERC08f
Health Contributing scenarios : **Contributing scenarios** - PROC02, PROC03, PROC05, PROC08a, PROC10, PROC11, PROC15, PROC19

Number of the ES : 018

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Professional application of coatings and inks by spraying (VOCs)

Amounts used : Daily local widespread use amount: ≤0.000036 tonnes/day.
Frequency and duration of use : Emission days: ≥365 days per year.
Other conditions affecting environmental exposure : Indoor use/ Outdoor use.
Release factor after on-site risk management:
water: 2% (CEPE SPERC 8a.3a.v1 + CEPE SPERC 8d.3a.v.1).
air: 98% (CEPE SPERC 8a.3a.v1 + CEPE SPERC 8d.3a.v.1).
Soil: 0% (CEPE SPERC 8a.3a.v1 + CEPE SPERC 8d.3a.v.1).
Technical conditions and measures at process level (source) to prevent release : Professional use: limited emissions to air, limited disposal via wastewater.
Professional product use with limited or no technical control of emission.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 018	Professional use; Various products (PC09a, PC09b, PC09c, PC18)
Contributing scenario controlling environmental exposure for 2: Professional application of coatings and inks by brush or roller (VOCs)		
Amounts used	: Daily local widespread use amount: ≤0.000036 tonnes/day.	
Frequency and duration of use	: Emission days: ≥365 days per year.	
Other conditions affecting environmental exposure	: Indoor use/ Outdoor use. Release factor after on-site risk management: water: 1% (CEPE SPERC 8a.2a.v1 + CEPE SPERC 8d.2a.v.1). air: 99% (CEPE SPERC 8a.2a.v1 + CEPE SPERC 8d.2a.v.1). Soil: 0.5% (CEPE SPERC 8a.2a.v1 + CEPE SPERC 8d.2a.v.1).	
Technical conditions and measures at process level (source) to prevent release	: Professional use: limited emissions to air, limited disposal via wastewater. Professional product use with limited or no technical control of emission.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Professional application of coatings and inks by spraying (solids)		
Amounts used	: Daily local widespread use amount: ≤0.000036 tonnes/day.	
Frequency and duration of use	: Emission days: ≥365 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0% (CEPE SPERC 8c.3a.v1). air: 2.2% (CEPE SPERC 8c.3a.v1). Soil: 0% (CEPE SPERC 8c.3a.v1).	
Technical conditions and measures at process level (source) to prevent release	: Professional use: limited emissions to air, limited disposal via wastewater. Professional product use with limited or no technical control of emission.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Professional application of coatings and inks by brush or roller (solids)		
Amounts used	: Daily local widespread use amount: ≤0.000036 tonnes/day.	
Frequency and duration of use	: Emission days: ≥365 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 1% (CEPE SPERC 8c.2a.v1). air: 0% (CEPE SPERC 8c.2a.v1). Soil: 0% (CEPE SPERC 8c.2a.v1).	
Technical conditions and measures at process level (source) to prevent release	: Professional use: limited emissions to air, limited disposal via wastewater. Professional product use with limited or no technical control of emission.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Date of issue/Date of revision : 09/09/2019		
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octanoic acid	Exposure Scenario: 018	Professional use; Various products (PC09a, PC09b, PC09c, PC18)
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 5: Professional application of coatings and inks by spraying (solids)		
Amounts used	: Daily local widespread use amount: ≤0.000036 tonnes/day.	
Frequency and duration of use	: Emission days: ≥365 days per year.	
Other conditions affecting environmental exposure	: Outdoor use. Release factor after on-site risk management: water: 2% (CEPE SPERC 8f.3a.v1). air: 2.2% (CEPE SPERC 8f.3a.v1). Soil: 0.5% (CEPE SPERC 8f.3a.v1).	
Technical conditions and measures at process level (source) to prevent release	: Professional use: limited emissions to air, limited disposal via wastewater. Professional product use with limited or no technical control of emission.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 6: Professional application of coatings and inks by brush or roller (solids)		
Amounts used	: Daily local widespread use amount: ≤0.000036 tonnes/day.	
Frequency and duration of use	: Emission days: ≥365 days per year.	
Other conditions affecting environmental exposure	: Outdoor use. Release factor after on-site risk management: water: 1% (CEPE SPERC 8f.2a.v1). air: 0% (CEPE SPERC 8f.2a.v1). Soil: 0.5% (CEPE SPERC 8f.2a.v1).	
Technical conditions and measures at process level (source) to prevent release	: Professional use: limited emissions to air, limited disposal via wastewater. Professional product use with limited or no technical control of emission.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Date of issue/Date of revision	: 09/09/2019	Version : 1 / en 66/390

octanoic acid	Exposure Scenario: 018	Professional use; Various products (PC09a, PC09b, PC09c, PC18)
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 7: Contributing scenarios CS07: Product delivery or storage - PROC08a CS08: Product delivery or storage - PROC03 CS09: Preparation of material for application - PROC03 CS10: Preparation of material for application - PROC05 CS11: Preparation of material for application - PROC08a CS12: Loading of application equipment - PROC02 CS13: Loading of application equipment - PROC05 CS14: Loading of application equipment - PROC08a CS15: Application(s) - PROC11 CS16: Application(s) - PROC10 CS17: Application(s) - PROC19 CS18: Film formation - PROC02 CS19: Application equipment cleaning - PROC05 CS20: Laboratory use - PROC05 CS21: Laboratory use - PROC15 CS22: Waste management - PROC03 CS23: Waste management - PROC08a		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Professional application of coatings and inks by spraying (VOCs)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000448 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Environment: 2: Professional application of coatings and inks by brush or roller (VOCs)	
Exposure assessment (environment):	: EUSES 2.1.2
Date of issue/Date of revision : 09/09/2019 Version : 1 / en 67/390	

octanoic acid		Exposure Scenario: 018	Professional use; Various products (PC09a, PC09b, PC09c, PC18)
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000224 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Environment: 3: Professional application of coatings and inks by spraying (solids)			
Exposure assessment (environment):	: EUSES 2.1.2		
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Environment: 4: Professional application of coatings and inks by brush or roller (solids)			
Exposure assessment (environment):	: EUSES 2.1.2		
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000224 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.		
Date of issue/Date of revision		: 09/09/2019	Version : 1 / en 68/390

octanoic acid	Exposure Scenario: 018	Professional use; Various products (PC09a, PC09b, PC09c, PC18)
	Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 5: Professional application of coatings and inks by spraying (solids)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0.0000448 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 6: Professional application of coatings and inks by brush or roller (solids)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0.0000224 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 7: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 018	<i>Professional use; Various products (PC09a, PC09b, PC09c, PC18)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Cosmetics, personal care products (PC39)

List of use descriptors : **Identified use name: ES019:** Formulation or re-packing - Manufacture of cosmetics. [CE1_sector_F_001_v1]: PC39; PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15; ERC02
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **Formulation of low viscosity liquids (large scale)** - ERC02
Formulation of low viscosity liquids (medium scale) - ERC02
Formulation of low viscosity liquids (small scale) - ERC02
Formulation of Fine Fragrances - Cleaning with Water - ERC02
Formulation of High Viscosity Body Care Products (medium scale) - ERC02
Formulation of High Viscosity Body Care Products (small scale) - ERC02
Formulation of Non-liquid Creams (large scale) - ERC02
Formulation of Non-liquid Creams (medium scale) - ERC02
Formulation of Non-liquid Creams (small scale) - ERC02
Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (large scale) - ERC02
Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (medium scale) - ERC02
Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (small scale) - ERC02
Formulation of solid cosmetic and home care products (large scale) - ERC02
Formulation of solid cosmetic and home care products (medium scale) - ERC02
Formulation of solid cosmetic and home care products (small scale) - ERC02

Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15

Number of the ES : 019

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Formulation of low viscosity liquids (large scale)

Amounts used : Daily amount per site: ≤0.32 tonnes/day.
Annual amount per site: ≤80 tonnes/year.

Frequency and duration of use : Emission days: 250 days per year.

Other conditions affecting environmental exposure : Indoor use.

Release factor after on-site risk management:
water: 0.1% (Cosmetics Europe SPERC 2.1.a.v2).
air: 0% (Cosmetics Europe SPERC 2.1.a.v2).
Soil: 0% (Cosmetics Europe SPERC 2.1.a.v2).

octanoic acid		Exposure Scenario: 019	Formulation or re-packing; Cosmetics, personal care products (PC39)
Technical conditions and measures at process level (source) to prevent release	:	Equipment cleaning with minimized emissions to wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for highly efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	:	Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	:	Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 2: Formulation of low viscosity liquids (medium scale)			
Amounts used	:	Daily amount per site: ≤0.32 tonnes/day. Annual amount per site: ≤80 tonnes/year.	
Frequency and duration of use	:	Emission days: 250 days per year.	
Other conditions affecting environmental exposure	:	Indoor use. Release factor after on-site risk management: water: 0.2% (Cosmetics Europe SPERC 2.1.b.v2). air: 0% (Cosmetics Europe SPERC 2.1.b.v2). Soil: 0% (Cosmetics Europe SPERC 2.1.b.v2).	
Technical conditions and measures at process level (source) to prevent release	:	Equipment cleaning with reduced emissions to wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	:	Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	:	Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Formulation of low viscosity liquids (small scale)			
Amounts used	:	Daily amount per site: ≤0.32 tonnes/day. Annual amount per site: ≤80 tonnes/year.	
Frequency and duration of use	:	Emission days: 250 days per year.	
Other conditions affecting environmental exposure	:	Indoor use. Release factor after on-site risk management: water: 0.4% (Cosmetics Europe SPERC 2.1.c.v2). air: 0% (Cosmetics Europe SPERC 2.1.c.v2). Soil: 0% (Cosmetics Europe SPERC 2.1.c.v2).	
Technical conditions and measures at process level (source) to prevent release	:	Equipment cleaned with water, washing disposed of with wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	:	Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	:	Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	

octanoic acid	Exposure Scenario: 019	Formulation or re-packing; Cosmetics, personal care products (PC39)
Contributing scenario controlling environmental exposure for 4: Formulation of Fine Fragrances - Cleaning with Water		
Amounts used	: Daily amount per site: ≤0.12 tonnes/day. Annual amount per site: ≤30 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 1.5% (Cosmetics Europe SPERC 2.1.d.v2). air: 0% (Cosmetics Europe SPERC 2.1.d.v2). Soil: 0% (Cosmetics Europe SPERC 2.1.d.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaning with reduced emissions to wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 5: Formulation of High Viscosity Body Care Products (medium scale)		
Amounts used	: Daily amount per site: ≤0.16 tonnes/day. Annual amount per site: ≤40 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 1% (Cosmetics Europe SPERC 2.1.f.v2). air: 0% (Cosmetics Europe SPERC 2.1.f.v2). Soil: 0% (Cosmetics Europe SPERC 2.1.f.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaning with reduced emissions to wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 6: Formulation of High Viscosity Body Care Products (small scale)		
Amounts used	: Daily amount per site: ≤0.032 tonnes/day. Annual amount per site: ≤8 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 2% (Cosmetics Europe SPERC 2.1.g.v2). air: 0% (Cosmetics Europe SPERC 2.1.g.v2). Soil: 0% (Cosmetics Europe SPERC 2.1.g.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with water, washing disposed of with wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
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octanoic acid	Exposure Scenario: 019	Formulation or re-packing; Cosmetics, personal care products (PC39)
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 4% (Cosmetics Europe SPERC 2.1.j.v2). air: 0% (Cosmetics Europe SPERC 2.1.j.v2). Soil: 0% (Cosmetics Europe SPERC 2.1.j.v2).	
Technical conditions and measures at process level (source) to prevent release	: Oil-water separation. Equipment cleaned with water, washing disposed of with wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 10: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (large scale)		
Amounts used	: Daily amount per site: ≤0.32 tonnes/day. Annual amount per site: ≤80 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0% (Cosmetics Europe SPERC 2.2.a.v2). air: 0% (Cosmetics Europe SPERC 2.2.a.v2). Soil: 0% (Cosmetics Europe SPERC 2.2.a.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Solvent-based process. Process optimised for highly efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 11: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (medium scale)		
Amounts used	: Daily amount per site: ≤0.32 tonnes/day. Annual amount per site: ≤80 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0% (Cosmetics Europe SPERC 2.2.b.v2). air: 0% (Cosmetics Europe SPERC 2.2.b.v2). Soil: 0% (Cosmetics Europe SPERC 2.2.b.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Solvent-based process. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
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octanoic acid	Exposure Scenario: 019	Formulation or re-packing; Cosmetics, personal care products (PC39)
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 12: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (small scale)		
Amounts used	: Daily amount per site: ≤0.32 tonnes/day. Annual amount per site: ≤80 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0% (Cosmetics Europe SPERC 2.2.c.v2). air: 0% (Cosmetics Europe SPERC 2.2.c.v2). Soil: 0% (Cosmetics Europe SPERC 2.2.c.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Solvent-based process. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 13: Formulation of solid cosmetic and home care products (large scale)		
Amounts used	: Daily amount per site: ≤0.32 tonnes/day. Annual amount per site: ≤80 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.05% (Cosmetics Europe / AISE SPERC 2.3.a.v2). air: 0% (Cosmetics Europe / AISE SPERC 2.3.a.v2). Soil: 0% (Cosmetics Europe / AISE SPERC 2.3.a.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaning with minimized emissions to wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for highly efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 14: Formulation of solid cosmetic and home care products (medium scale)		
Amounts used	: Daily amount per site: ≤0.32 tonnes/day. Annual amount per site: ≤80 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.1% (Cosmetics Europe / AISE SPERC 2.3.b.v2). air: 0% (Cosmetics Europe / AISE SPERC 2.3.b.v2). Soil: 0% (Cosmetics Europe / AISE SPERC 2.3.b.v2).	
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octanoic acid	Exposure Scenario: 019	Formulation or re-packing; Cosmetics, personal care products (PC39)
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaning with reduced emissions to wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations	
Contributing scenario controlling environmental exposure for 15: Formulation of solid cosmetic and home care products (small scale)		
Amounts used	: Daily amount per site: ≤0.32 tonnes/day. Annual amount per site: ≤80 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.2% (Cosmetics Europe / AISE SPERC 2.3.c.v2). air: 0% (Cosmetics Europe / AISE SPERC 2.3.c.v2). Soil: 0% (Cosmetics Europe / AISE SPERC 2.3.c.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with water, washing disposed of with wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 16: Contributing scenarios		
CS16: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC01		
CS17: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02		
CS18: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03		
CS19: Mixing or blending in batch processes - PROC05		
CS20: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a		
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octanoic acid	Exposure Scenario: 019	Formulation or re-packing; Cosmetics, personal care products (PC39)
CS21: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS22: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09 CS23: Tableting, compression, extrusion, pelletisation, granulation - PROC14 CS24: Use as laboratory reagent - PROC15		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Formulation of low viscosity liquids (large scale)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00455 mg/l. Risk characterisation ratio (PEC/PNEC): 0.228. Freshwater sediment: 0.067 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.228. Marine water: 0.000454 mg/l. Risk characterisation ratio (PEC/PNEC): 0.227. Marine water sediment: 0.0067 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.227. Sewage Treatment Plant: 0.02 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.01 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.212.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Environment: 2: Formulation of low viscosity liquids (medium scale)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00656 mg/l. Risk characterisation ratio (PEC/PNEC): 0.328. Freshwater sediment: 0.097 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.328. Marine water: 0.000655 mg/l. Risk characterisation ratio (PEC/PNEC): 0.327. Marine water sediment: 0.00966 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.328. Sewage Treatment Plant: 0.04 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.015 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.317.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

octanoic acid	Exposure Scenario: 019	Formulation or re-packing; Cosmetics, personal care products (PC39)
Exposure estimation and reference to its source - Environment: 3: Formulation of low viscosity liquids (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.011 mg/l. Risk characterisation ratio (PEC/PNEC): 0.529. Freshwater sediment: 0.156 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.529. Marine water: 0.00106 mg/l. Risk characterisation ratio (PEC/PNEC): 0.528. Marine water sediment: 0.016 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.528. Sewage Treatment Plant: 0.08 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.025 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.526.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Formulation of Fine Fragrances - Cleaning with Water		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.014 mg/l. Risk characterisation ratio (PEC/PNEC): 0.691. Freshwater sediment: 0.204 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.691. Marine water: 0.00138 mg/l. Risk characterisation ratio (PEC/PNEC): 0.691. Marine water sediment: 0.02 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.691. Sewage Treatment Plant: 0.113 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.033 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.696.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 5: Formulation of High Viscosity Body Care Products (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.013 mg/l. Risk characterisation ratio (PEC/PNEC): 0.629. Freshwater sediment: 0.186 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.629. Marine water: 0.00126 mg/l. Risk characterisation ratio (PEC/PNEC): 0.628. Marine water sediment: 0.019 mg/kg dwt.	
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octanoic acid	Exposure Scenario: 019	Formulation or re-packing; Cosmetics, personal care products (PC39)
	Risk characterisation ratio (PEC/PNEC): 0.629. Sewage Treatment Plant: 0.1 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.03 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.631.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 6: Formulation of High Viscosity Body Care Products (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00656 mg/l. Risk characterisation ratio (PEC/PNEC): 0.328. Freshwater sediment: 0.097 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.328. Marine water: 0.000655 mg/l. Risk characterisation ratio (PEC/PNEC): 0.327. Marine water sediment: 0.00966 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.328. Sewage Treatment Plant: 0.04 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.015 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.317.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 7: Formulation of Non-liquid Creams (large scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.013 mg/l. Risk characterisation ratio (PEC/PNEC): 0.629. Freshwater sediment: 0.186 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.629. Marine water: 0.00126 mg/l. Risk characterisation ratio (PEC/PNEC): 0.628. Marine water sediment: 0.019 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.629. Sewage Treatment Plant: 0.1 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.03 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.631.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 019	Formulation or re-packing; Cosmetics, personal care products (PC39)
Exposure estimation and reference to its source - Environment: 8: Formulation of Non-liquid Creams (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.013 mg/l. Risk characterisation ratio (PEC/PNEC): 0.629.	
	Freshwater sediment: 0.186 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.629.	
	Marine water: 0.00126 mg/l. Risk characterisation ratio (PEC/PNEC): 0.628.	
	Marine water sediment: 0.019 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.629.	
	Sewage Treatment Plant: 0.1 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.03 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.631.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 9: Formulation of Non-liquid Creams (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.011 mg/l. Risk characterisation ratio (PEC/PNEC): 0.529.	
	Freshwater sediment: 0.156 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.529.	
	Marine water: 0.00106 mg/l. Risk characterisation ratio (PEC/PNEC): 0.528.	
	Marine water sediment: 0.016 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.528.	
	Sewage Treatment Plant: 0.08 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.025 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.526.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 10: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (large scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
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octanoic acid	Exposure Scenario: 019	Formulation or re-packing; Cosmetics, personal care products (PC39)
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 11: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 12: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 019	Formulation or re-packing; Cosmetics, personal care products (PC39)
Exposure estimation and reference to its source - Environment: 13: Formulation of solid cosmetic and home care products (large scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00355 mg/l. Risk characterisation ratio (PEC/PNEC): 0.178. Freshwater sediment: 0.052 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.178. Marine water: 0.000354 mg/l. Risk characterisation ratio (PEC/PNEC): 0.177. Marine water sediment: 0.00523 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.177. Sewage Treatment Plant: 0.01 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00757 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.16.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 14: Formulation of solid cosmetic and home care products (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00455 mg/l. Risk characterisation ratio (PEC/PNEC): 0.228. Freshwater sediment: 0.067 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.228. Marine water: 0.000454 mg/l. Risk characterisation ratio (PEC/PNEC): 0.227. Marine water sediment: 0.0067 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.227. Sewage Treatment Plant: 0.02 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.01 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.212.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 15: Formulation of solid cosmetic and home care products (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00656 mg/l. Risk characterisation ratio (PEC/PNEC): 0.328. Freshwater sediment: 0.097 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.328. Marine water: 0.000655 mg/l. Risk characterisation ratio (PEC/PNEC): 0.327. Marine water sediment: 0.00966 mg/kg dwt.	
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octanoic acid	Exposure Scenario: 019	Formulation or re-packing; Cosmetics, personal care products (PC39)
	Risk characterisation ratio (PEC/PNEC): 0.328. Sewage Treatment Plant: 0.04 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.015 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.317.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 16: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Cosmetics, personal care products (PC39)
List of use descriptors : **Identified use name: ES020:** Widespread use by professional workers - Hairdressing services [CE_PW_001_v1]: PC39; PROC05, PROC08a; ERC08a
Process Category: PROC05, PROC08a
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC39
Environmental contributing scenarios : **Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals) - ERC08a**
Wide Dispersive Use in Aerosol products for hair and skin care (Propellants) - ERC08a
Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants) - ERC08a
Health Contributing scenarios : **Contributing scenarios - PROC05, PROC08a**

Number of the ES : 020

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals)

Amounts used : Daily local widespread use amount: ≤0.000076 tonnes/day (Cosmetics Europe SPERC 8a.1.a.v2).
Fraction of EU tonnage used in region: 0.053
Fraction of main source to local environment: 0.00075
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Indoor use.
Release factor after on-site risk management :
water: 100% (Cosmetics Europe SPERC 8a.1.a.v2).
air: 0% (Cosmetics Europe SPERC 8a.1.a.v2).
Soil: 0% (Cosmetics Europe SPERC 8a.1.a.v2).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Wide Dispersive Use in Aerosol products for hair and skin care (Propellants)

Amounts used : Daily local widespread use amount: ≤0.000076 tonnes/day (Cosmetics Europe SPERC 8a.1.b.v2).
Fraction of EU tonnage used in region: 0.053
Fraction of main source to local environment: 0.00075
Frequency and duration of use : Emission days: 365 days per year.

octanoic acid	Exposure Scenario: 020	Widespread use by professional workers; Cosmetics, personal care products (PC39)
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management : water: 0% (Cosmetics Europe SPERC 8a.1.b.v2). air: 100% (Cosmetics Europe SPERC 8a.1.b.v2). Soil: 0% (Cosmetics Europe SPERC 8a.1.b.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants)		
Amounts used	: Daily local widespread use amount: ≤0.000076 tonnes/day (Cosmetics Europe SPERC 8a.1.b.v2). Fraction of EU tonnage used in region: 0.053 Fraction of main source to local environment: 0.00075	
Frequency and duration of use	: Emission days: 365 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management : water: 100% (Cosmetics Europe SPERC 8a.1.c.v2). air: 0% (Cosmetics Europe SPERC 8a.1.c.v2). Soil: 0% (Cosmetics Europe SPERC 8a.1.c.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 4: Contributing scenarios		
CS04: Mixing or blending in batch processes - PROC05 CS05: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals)**Exposure assessment (environment):** : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00303 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.151.

Freshwater sediment: 0.045 mg/kg dw.
Risk characterisation ratio (PEC/PNEC): 0.151.

Marine water: 0.000301 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.151.

Marine water sediment: 0.00445 mg/kg dw.
Risk characterisation ratio (PEC/PNEC): 0.151.

Sewage Treatment Plant: 0.00477 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00627 mg/kg dw.
Risk characterisation ratio (PEC/PNEC): 0.133.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).**Exposure estimation and reference to its source - Environment: 2: Wide Dispersive Use in Aerosol products for hair and skin care (Propellants)****Exposure assessment (environment):** : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.

Freshwater sediment: 0.038 mg/kg dw.
Risk characterisation ratio (PEC/PNEC): 0.128.

Marine water: 0.000254 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.

Marine water sediment: 0.00375 mg/kg dw.
Risk characterisation ratio (PEC/PNEC): 0.127.

Sewage Treatment Plant: 0 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00509 mg/kg dw.
Risk characterisation ratio (PEC/PNEC): 0.108.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).**Exposure estimation and reference to its source - Environment: 3: Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants)****Exposure assessment (environment):** : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00303 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.151.

Freshwater sediment: 0.045 mg/kg dw.
Risk characterisation ratio (PEC/PNEC): 0.151.

Marine water: 0.000301 mg/l.

octanoic acid	Exposure Scenario: 020	Widespread use by professional workers; Cosmetics, personal care products (PC39)
	Risk characterisation ratio (PEC/PNEC): 0.151. Marine water sediment: 0.00445 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.151. Sewage Treatment Plant: 0.00477 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00627 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.133.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 4: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Agriculture, forestry, fishery (SU01); Plant protection products (PC27)
List of use descriptors : **Identified use name: ES021:** Widespread use by professional workers - Use as a co-formulant in plant protection products, spray applications [ECPA_PPP_GES1]: SU01; PC27; PROC08a, PROC011; ERC08a, ERC08d
Process Category: PROC08a, PROC11
Sector of end use: SU01
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d
Market sector by type of chemical product: PC27
Environmental contributing scenarios : **Spray application of plant protection products containing co-formulants (indoor or outdoor)** - ERC08a, ERC08d
Health Contributing scenarios : **Contributing scenarios** - PROC08a, PROC11

Number of the ES : 021

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Spray application of plant protection products containing co-formulants (indoor or outdoor)

Amounts used : Daily local widespread use amount: 0.00052 tonnes/day.
Other conditions affecting environmental exposure : Spray application of plant protection products.
Release factor after on-site risk management:
water: 0% (ECPA SPERC 8d.2.v2).
air: 100% (ECPA SPERC 8d.2.v2).
Soil: 0% (ECPA SPERC 8d.2.v2).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 021	<i>Widespread use by professional workers; Agriculture, forestry, fishery (SU01); Plant protection products (PC27)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing and loading of plant protection products into delivery equipment - PROC08a CS03: Delivery and dispersion of plant protection products - PROC11		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Spray application of plant protection products containing co-formulants (indoor or outdoor)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.018 mg/l. Risk characterisation ratio (PEC/PNEC): 0.903. Freshwater sediment: 0.046 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.157. Marine water: 0.0018 mg/l. Risk characterisation ratio (PEC/PNEC): 0.902. Marine water sediment: 0.00447 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.151. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00000509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Agriculture, forestry, fishery (SU01); Plant protection products (PC27)
List of use descriptors : **Identified use name: ES022:** Widespread use by professional workers - Use as a co-formulant in plant protection products, seed and granular applications - [ECPA_PPP_GES2]: SU01; PC27; PROC08a, PROC08b; ERC08a, ERC08d
Process Category: PROC08a, PROC11
Sector of end use: SU01
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d
Market sector by type of chemical product: PC27
Environmental contributing scenarios : **Direct application of plant protection products (e.g. granules or treated seeds) to soil** - ERC08a, ERC08d
Health Contributing scenarios : **Contributing scenarios** - PROC08a

Number of the ES : 022

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Direct application of plant protection products (e.g. granules or treated seeds) to soil

Amounts used : Daily local widespread use amount: 0.00052 tonnes/day
Other conditions affecting environmental exposure : Direct application of plant protection products (e.g. granules or treated seeds) to soil.
Release factor after on-site risk management:
water: 0% (ECPA SPERC 8d.1.v2).
air: 0% (ECPA SPERC 8d.1.v2).
Soil: 100% (ECPA SPERC 8d.1.v2).
Waste : 0.01% (OECD).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.
Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 022	<i>Widespread use by professional workers; Agriculture, forestry, fishery (SU01); Plant protection products (PC27)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing and loading of plant protection products into seed treatment or delivery equipment - PROC08a CS03: Transfer of treated seeds from batch treater into bags - PROC08b CS04: Delivery and dispersion of agrochemical plant protection products or treated seeds - PROC8a		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Direct application of plant protection products (e.g. granules or treated seeds) to soil	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00745 mg/l. Risk characterisation ratio (PEC/PNEC): 0.372. Freshwater sediment: 0.041 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.138. Marine water: 0.000744 mg/l. Risk characterisation ratio (PEC/PNEC): 0.372. Marine water sediment: 0.00392 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.133. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.043 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.905.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Fertilizers (PC12)

List of use descriptors : **Identified use name: ES023:** Formulation or re-packing - Formulation of fertilizer products [FARM_FE_F_001_v1]: PC12; PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15, PROC28; ERC02
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15, PROC28
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC12

Environmental contributing scenarios : **Formulation of fertilizer products - ERC02**

Health Contributing scenarios : **Contributing scenarios -** PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15, PROC28

Number of the ES : 023

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Formulation of fertilizer products

Amounts used : Daily amount per site: ≤0.88 tonnes/day.
Annual amount per site: ≤176 tonnes/year.

Frequency and duration of use : Emission days: ≥ 200 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management :
water: 0.2% (ERC02).
air: 2.5% (ERC02).
Soil: 0.01% (ERC02).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 90%.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.

octanoic acid	Exposure Scenario: 023	Formulation or re-packing; Fertilizers (PC12)
- Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC01 CS03: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02 CS04: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03 CS05: Chemical production where opportunity for exposure arises - PROC04 CS06: Process in stages with significant contact - PROC05 CS07: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS08: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS09: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09 CS10: Production of fertilizers by granulation or low-energy compression - PROC14 CS11: Use as laboratory reagent - PROC15 CS12: Manual maintenance (cleaning and repair) of machinery - PROC28		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Formulation of fertilizer products	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.014 mg/l. Risk characterisation ratio (PEC/PNEC): 0.679. Freshwater sediment: 0.2 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.679. Marine water: 0.00136 mg/l. Risk characterisation ratio (PEC/PNEC): 0.678. Marine water sediment: 0.02 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.679. Sewage Treatment Plant: 0.11 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.033 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.697.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 023	Formulation or re-packing; Fertilizers (PC12)
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Fertilizers (PC12)
List of use descriptors : **Identified use name: ES024:** Formulation or re-packing - Formulation by incorporating fertilizers onto or into a matrix [FARM_FE_F_002_v1]: PC12; PROC02, PROC03, PROC04, PROC05, PROC13; ERC03
Process Category: PROC02, PROC03, PROC04, PROC05, PROC13
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC03
Market sector by type of chemical product: PC12
Environmental contributing scenarios : **Formulation by incorporating fertilizers onto or into a matrix - ERC03**
Health Contributing scenarios : **Contributing scenarios - PROC02, PROC03, PROC04, PROC05, PROC13**

Number of the ES : 024

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Formulation by incorporating fertilizers onto or into a matrix

Amounts used : Daily amount per site: ≤0.88 tonnes/day.
Annual amount per site: ≤176 tonnes/year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management :
water: 0.2% (ERC03).
air: 30% (ERC03).
Soil: 0.1% (ERC03).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 024	Formulation or re-packing; Fertilizers (PC12)
Personal protection	- Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02 CS03: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03 CS04: Chemical production where opportunity for exposure arises - PROC04 CS05: Process in stages with significant contact - PROC05 CS06: Treatment of growth substrates or seeds by dipping and pouring - PROC13		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Formulation by incorporating fertilizers onto or into a matrix	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.014 mg/l. Risk characterisation ratio (PEC/PNEC): 0.679. Freshwater sediment: 0.2 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.679. Marine water: 0.00136 mg/l. Risk characterisation ratio (PEC/PNEC): 0.678. Marine water sediment: 0.02 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.679. Sewage Treatment Plant: 0.11 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.04 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.849.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of bulk, large scale chemicals (including petroleum products) (SU08)
List of use descriptors : **Identified use name: ES025:** Use at industrial sites - Use as an intermediate [FARM_FE_IS_001_v1]: SU08; PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b; ERC06a
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b
Sector of end use: SU08
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC06a
Environmental contributing scenarios : **Use as an intermediate** - ERC06a
Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b

Number of the ES : 025

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use as an intermediate

Amounts used : Daily amount per site: ≤0.88 tonnes/day.
Annual amount per site: ≤176 tonnes/year.
Frequency and duration of use : Emission days: ≥ 200 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.2% (ERC06a).
air: 5% (ERC06a).
Soil: 0.1% (ERC06a).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 90%.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.

octanoic acid	Exposure Scenario: 025	Use at industrial sites; Manufacture of bulk, large scale chemicals (including petroleum products) (SU08)
- Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC01 CS03: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02 CS04: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03 CS05: Chemical production where opportunity for exposure arises - PROC04 CS06: Process in stages with significant contact - PROC05 CS07: Feeding to process without exposure controls in place - PROC08a CS08: Feeding to process with exposure controls in place - PROC08b		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use as an intermediate	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.014 mg/l. Risk characterisation ratio (PEC/PNEC): 0.679. Freshwater sediment: 0.2 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.679. Marine water: 0.00136 mg/l. Risk characterisation ratio (PEC/PNEC): 0.678. Marine water sediment: 0.02 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.679. Sewage Treatment Plant: 0.11 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.034 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.711.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 025	<i>Use at industrial sites; Manufacture of bulk, large scale chemicals (including petroleum products) (SU08)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of bulk, large scale chemicals (including petroleum products) (SU08); Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents (PC20)

List of use descriptors : **Identified use name: ES026:** Use at industrial sites - Use of reactive processing aid in fertilizer manufacturing [FARM_FE_IS_002_v1]: SU08; PC20; PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b; ERC06b
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b
Sector of end use: SU08
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC06b

Environmental contributing scenarios : **Use of reactive processing aid in fertilizer manufacturing** - ERC06b

Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b

Number of the ES : 026

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of reactive processing aid in fertilizer manufacturing

Amounts used : Daily amount per site: ≤0.88 tonnes/day.
Annual amount per site: ≤176 tonnes/year.

Frequency and duration of use : Emission days: ≥200 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.1% (ERC06b).
air: 0.1% (ERC06b).
Soil: 0.025% (ERC06b).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 98%.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used

octanoic acid	Exposure Scenario: 026	Use at industrial sites; Manufacture of bulk, large scale chemicals (including petroleum products) (SU08); Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents (PC20)
correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC01 CS03: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02 CS04: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03 CS05: Chemical production where opportunity for exposure arises - PROC04 CS06: Process in stages with significant contact - PROC05 CS07: Feeding to process without exposure controls in place - PROC08a CS08: Feeding to process with exposure controls in place - PROC08b		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of reactive processing aid in fertilizer manufacturing	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00806 mg/l. Risk characterisation ratio (PEC/PNEC): 0.403. Freshwater sediment: 0.119 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.403. Marine water: 0.000805 mg/l. Risk characterisation ratio (PEC/PNEC): 0.403. Marine water sediment: 0.012 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.403. Sewage Treatment Plant: 0.055 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.019 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.396.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 026	<i>Use at industrial sites; Manufacture of bulk, large scale chemicals (including petroleum products) (SU08); Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents (PC20)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of bulk, large scale chemicals (including petroleum products) (SU08); Polymer preparations and compounds (PC32)
List of use descriptors : **Identified use name: ES027:** Use at industrial sites - Use of monomers in polymer coating of fertilizers [FARM_FE_IS_003_v1]: SU08; PC32; PROC01, PROC02, PROC03, PROC08b; ERC06c
Process Category: PROC01, PROC02, PROC03, PROC08b
Sector of end use: SU08
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC06c
Environmental contributing scenarios : **Use of reactive processing aid in fertilizer manufacturing** - ERC06c
Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC03, PROC08b

Number of the ES	: 027
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Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of reactive processing aid in fertilizer manufacturing

Amounts used : Daily amount per site: ≤0.88 tonnes/day.
Annual amount per site: ≤176 tonnes/year.
Frequency and duration of use : Emission days: ≥200 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.1% (ERC06c).
air: 5% (ERC06c).
Soil: 0% (ERC06c).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 98%.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.

octanoic acid	Exposure Scenario: 027	Use at industrial sites; Manufacture of bulk, large scale chemicals (including petroleum products) (SU08); Polymer preparations and compounds (PC32)
- Good standard of personal hygiene.		
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC01		
CS03: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02		
CS04: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03		
CS05: Feeding to process with exposure controls in place - PROC08b		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of reactive processing aid in fertilizer manufacturing	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00806 mg/l. Risk characterisation ratio (PEC/PNEC): 0.403. Freshwater sediment: 0.119 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.403. Marine water: 0.000805 mg/l. Risk characterisation ratio (PEC/PNEC): 0.403. Marine water sediment: 0.012 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.403. Sewage Treatment Plant: 0.055 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.02 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.423.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 027	<i>Use at industrial sites; Manufacture of bulk, large scale chemicals (including petroleum products) (SU08); Polymer preparations and compounds (PC32)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Agriculture, forestry, fishery (SU01); Fertilizers (PC12)
List of use descriptors : **Identified use name: ES028:** Widespread use by professional workers - Professional end-use as fertiliser [FARM_FE_PW_001_v1]: SU01; PC12; PROC05, PROC08a, PROC08b, PROC09, PROC11, PROC15; ERC08a, ERC08b, ERC08d, ERC08e
Process Category: PROC05, PROC08a, PROC08b, PROC09, PROC11, PROC15
Sector of end use: SU01
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08b, ERC08d, ERC08e
Environmental contributing scenarios : **Professional end-use as fertiliser** - ERC08a, ERC08d
Professional end-use as fertiliser - ERC08b, ERC08e
Health Contributing scenarios : **Contributing scenarios** - PROC05, PROC08a, PROC08b, PROC09, PROC11, PROC15

Number of the ES : 028

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Professional end-use as fertiliser

Amounts used : Daily local widespread use amount: ≤0.000082 tonnes/day.
Other conditions affecting environmental exposure : Release factor after on-site risk management:
water: 5% (EU TGD 2003).
air: 0% (EU TGD 2003).
Soil: 95% (EU TGD 2003).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Professional end-use as fertiliser

Amounts used : Daily local widespread use amount: ≤0.000082 tonnes/day.
Other conditions affecting environmental exposure : Release factor after on-site risk management:
water: 2% (ERC08e)
air: 0.1% (ERC08e)
Soil: 95% (EU TGD 2003).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions.
Low risk assumed for waste life stage.
Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios**Organisational measures to prevent/limit releases, dispersion and exposure**

- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation**Personal protection**

- Substance/Task appropriate gloves.
- Skin coverage with appropriate barrier material based on potential for contact with the chemicals
- Substance/task appropriate respiratory protection.
- Optional face shield.
- Use suitable eye protection.

Contributing scenario controlling worker exposure for 3: Contributing scenarios

CS03: Handling of fertilizer in stages with significant contact - PROC05

CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a

CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b

CS06: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09

CS07: Air-dispersive application of liquid fertilisers or powders - PROC11

CS08: Chemical analysis - PROC15

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: 1: Professional end-use as fertiliser****Exposure assessment (environment):**

: EUSES 2.1.2

Exposure estimation

: Freshwater: 0.00258 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.129.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.129.

Marine water: 0.000256 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.

Marine water sediment: 0.00378 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Sewage Treatment Plant: 0.000259 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00516 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.109.

Remark

: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

octanoic acid	Exposure Scenario: 028	Widespread use by professional workers; Agriculture, forestry, fishery (SU01); Fertilizers (PC12)
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Exposure estimation and reference to its source - Environment: 2: Professional end-use as fertiliser

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00256 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Marine water: 0.000255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.

Marine water sediment: 0.00376 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Sewage Treatment Plant: 0.000103 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00512 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.108.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 3: Contributing scenarios

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Agriculture, forestry, fishery (SU01); Fertilizers (PC12)
List of use descriptors : **Identified use name: ES029:** Widespread use by professional workers - Incorporation of ammonia into soil for fertilizing [FARM_FE_PW_002_v1]: SU01; PC12; PROC08a; ERC08e
Process Category: PROC08a
Sector of end use: SU01
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08e
Environmental contributing scenarios : **Incorporation of ammonia into soil for fertilizing - ERC08e**
Health Contributing scenarios : **Soil injection of ammonia for fertilizing without exposure controls in place - PROC08a**

Number of the ES : 029

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Incorporation of ammonia into soil for fertilizing

Amounts used : Daily local widespread use amount: ≤0.000082 tonnes/day.
Other conditions affecting environmental exposure : Release factor after on-site risk management:
water: 2% (ERC08e).
air: 0.1% (ERC08e).
Soil: 95% (EU TGD 2003).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions.
Low risk assumed for waste life stage.
Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.
Conditions and measures related to personal protection, hygiene and health evaluation
Personal protection :
- Substance/Task appropriate gloves.
- Skin coverage with appropriate barrier material based on potential for contact with the chemicals
- Substance/task appropriate respiratory protection.
- Optional face shield.
- Use suitable eye protection.

octanoic acid	Exposure Scenario: 029	Widespread use by professional workers; Agriculture, forestry, fishery (SU01); Fertilizers (PC12)
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Contributing scenario controlling worker exposure for 2: Soil injection of ammonia for fertilizing without exposure controls in place

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Incorporation of ammonia into soil for fertilizing

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00256 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Marine water: 0.000255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.

Marine water sediment: 0.00376 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Sewage Treatment Plant: 0.000103 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00512 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.108.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Soil injection of ammonia for fertilizing without exposure controls in place

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Adhesives, sealants (PC01)

List of use descriptors : **Identified use name: ES030:** Use at industrial sites - Automated industrial application of adhesives by roller or brushing application, Indoor [FEICA_IS_001]: PC01; PROC08b, PROC10; ERC04, ERC05
Process Category: PROC08b, PROC10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **Use of solvents in water-borne adhesives/sealants** - ERC04
Use of solvents in adhesives/sealants - ERC04
Use of substances other than solvents in adhesives/sealants - ERC05
Use of adhesives by roller and brushing application with machine equipment indoor - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC08b, PROC10

Number of the ES : 030

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of solvents in water-borne adhesives/sealants

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Indoor use/ Outdoor use.

Technical conditions and measures at process level (source) to prevent release : Release factor after on-site risk management:
water: 0% (FEICA SPERC 4.2a.v2).
air: 98.5% (FEICA SPERC 4.2a.v2).
Soil: 0% (FEICA SPERC 4.2a.v2).
Solvent-based process.
Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.
Process with efficient use of raw materials.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 030	Use at industrial sites; Adhesives, sealants (PC01)
Contributing scenario controlling environmental exposure for 2: Use of solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use. Release factor after on-site risk management: water: 0% (FEICA SPERC 4.2b.v2). air: 98.5% (FEICA SPERC 4.2b.v2). Soil: 0% (FEICA SPERC 4.2b.v2).	
Technical conditions and measures at process level (source) to prevent release	: Solvent-based process. Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of substances other than solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use. Release factor after on-site risk management: water: 0% (FEICA SPERC 5.1a.v2). air: 1.7% (FEICA SPERC 5.1a.v2). Soil: 0% (FEICA SPERC 5.1a.v2).	
Technical conditions and measures at process level (source) to prevent release	: Dry process (no water used in process). Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Use of adhesives by roller and brushing application with machine equipment indoor		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use. Release factor after on-site risk management: water: 0.3% (FEICA SPERC 5.1c.v2). air: 0% (FEICA SPERC 5.1c.v2). Soil: 1% (FEICA SPERC 5.1c.v2).	
Date of issue/Date of revision : 09/09/2019		
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octanoic acid	Exposure Scenario: 030	Use at industrial sites; Adhesives, sealants (PC01)
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaned with water, washing disposed of with wastewater. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios		
CS05: Changing of containers, drums or buckets for industrial application equipment - PROC08b		
CS06: Roller application or brushing - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of solvents in water-borne adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l . Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt . Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l . Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: $0.00375 \text{ mg/kg dwt}$. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l . Risk characterisation ratio (PEC/PNEC): <0.01 . Soil: $0.00876 \text{ mg/kg dwt}$. Risk characterisation ratio (PEC/PNEC): 0.185.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 030	Use at industrial sites; Adhesives, sealants (PC01)
Exposure estimation and reference to its source - Environment: 2: Use of solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00876 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.185.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Use of substances other than solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00516 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.109.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Use of adhesives by roller and brushing application with machine equipment indoor		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00469 mg/l. Risk characterisation ratio (PEC/PNEC): 0.235.	
	Freshwater sediment: 0.069 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.235.	
	Marine water: 0.000468 mg/l. Risk characterisation ratio (PEC/PNEC): 0.234.	
	Marine water sediment: 0.00691 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.234.	
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octanoic acid	Exposure Scenario: 030	Use at industrial sites; Adhesives, sealants (PC01)
	Sewage Treatment Plant: 0.021 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.01 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.22.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Adhesives, sealants (PC01)

List of use descriptors : **Identified use name: ES031:** Use at industrial sites - Large-scale spray application of adhesives in containment [FEICA_IS_002]: PC01; PROC07, PROC08b; ERC04, ERC05
Process Category: PROC07, PROC08b
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **Use of solvents in water-borne adhesives/sealants** - ERC04
Use of solvents in adhesives/sealants - ERC04
Use of substances other than solvents in adhesives/sealants - ERC05
Use of substances other than solvents in water-borne adhesives/sealants - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC07, PROC08b

Number of the ES : 031

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of solvents in water-borne adhesives/sealants

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Indoor use/ Outdoor use.

Technical conditions and measures at process level (source) to prevent release : Release factor after on-site risk management:
water: 0% (FEICA SPERC 4.2a.v2).
air: 98.5% (FEICA SPERC 4.2a.v2).
Soil: 0% (FEICA SPERC 4.2a.v2).
Solvent-based process.
Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.
Process with efficient use of raw materials.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 031	Use at industrial sites; Adhesives, sealants (PC01)
Contributing scenario controlling environmental exposure for 2: Use of solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use. Release factor after on-site risk management: water: 0% (FEICA SPERC 4.2b.v2). air: 98.5% (FEICA SPERC 4.2b.v2). Soil: 0% (FEICA SPERC 4.2b.v2).	
Technical conditions and measures at process level (source) to prevent release	: Solvent-based process. Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of substances other than solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use. Release factor after on-site risk management: water: 0% (FEICA SPERC 5.1a.v2). air: 1.7% (FEICA SPERC 5.1a.v2). Soil: 0% (FEICA SPERC 5.1a.v2).	
Technical conditions and measures at process level (source) to prevent release	: Dry process (no water used in process). Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Use of substances other than solvents in water-borne adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use. Release factor after on-site risk management: water: 0.3% (FEICA SPERC 5.1c.v2). air: 0% (FEICA SPERC 5.1c.v2). Soil: 1% (FEICA SPERC 5.1c.v2).	
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octanoic acid	Exposure Scenario: 031	Use at industrial sites; Adhesives, sealants (PC01)
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaned with water, washing disposed of with wastewater. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios		
CS05: Changing of containers, drums or buckets for industrial application equipment - PROC08b		
CS06: Industrial spraying, Indoor - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of solvents in water-borne adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00876 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.185.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 031	Use at industrial sites; Adhesives, sealants (PC01)
Exposure estimation and reference to its source - Environment: 2: Use of solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00876 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.185.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Use of substances other than solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00516 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.109.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Use of substances other than solvents in water-borne adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00469 mg/l. Risk characterisation ratio (PEC/PNEC): 0.235.	
	Freshwater sediment: 0.069 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.235.	
	Marine water: 0.000468 mg/l. Risk characterisation ratio (PEC/PNEC): 0.234.	
	Marine water sediment: 0.00691 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.234.	
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octanoic acid	Exposure Scenario: 031	Use at industrial sites; Adhesives, sealants (PC01)
	Sewage Treatment Plant: 0.021 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.01 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.22.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Adhesives, sealants (PC01)

List of use descriptors : **Identified use name: ES032:** Use at industrial sites - Large scale spray application of adhesives in a spray booth [FEICA_IS_003]: PC01; PROC07, PROC08b; ERC04, ERC05
Process Category: PROC07, PROC08b
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **Use of solvents in water-borne adhesives/sealants** - ERC04
Use of solvents in adhesives/sealants - ERC04
Use of substances other than solvents in adhesives/sealants - ERC05
Use of substances other than solvents in water-borne adhesives/sealants - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC07, PROC08b

Number of the ES : 032

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of solvents in water-borne adhesives/sealants

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Indoor use/ Outdoor use.

Technical conditions and measures at process level (source) to prevent release : Release factor after on-site risk management:
water: 0% (FEICA SPERC 4.2a.v2).
air: 98.5% (FEICA SPERC 4.2a.v2).
Soil: 0% (FEICA SPERC 4.2a.v2).
Solvent-based process.
Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.
Process with efficient use of raw materials.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 032	Use at industrial sites; Adhesives, sealants (PC01)
Contributing scenario controlling environmental exposure for 2: Use of solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use.	
	Release factor after on-site risk management: water: 0% (FEICA SPERC 4.2b.v2). air: 98.5% (FEICA SPERC 4.2b.v2). Soil: 0% (FEICA SPERC 4.2b.v2).	
Technical conditions and measures at process level (source) to prevent release	: Process with efficient use of raw materials. Solvent-based process . Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of substances other than solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use.	
	Release factor after on-site risk management: water: 0% (FEICA SPERC 5.1a.v2). air: 1.7% (FEICA SPERC 5.1a.v2). Soil: 0% (FEICA SPERC 5.1a.v2).	
Technical conditions and measures at process level (source) to prevent release	: Dry process (no water used in process). Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Use of substances other than solvents in water-borne adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use.	
	Release factor after on-site risk management: water: 0.3% (FEICA SPERC 5.1c.v2). air: 0% (FEICA SPERC 5.1c.v2). Soil: 1% (FEICA SPERC 5.1c.v2).	
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Version : 1 / en 123/390		

octanoic acid	Exposure Scenario: 032	Use at industrial sites; Adhesives, sealants (PC01)
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaned with water, washing disposed of with wastewater. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios		
CS05: Changing of containers, drums or buckets for industrial application equipment - PROC08b		
CS06: Industrial spraying, Indoor - PROC07		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of solvents in water-borne adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00876 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.185.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 032	Use at industrial sites; Adhesives, sealants (PC01)
Exposure estimation and reference to its source - Environment: 2: Use of solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00876 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.185.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Use of substances other than solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00516 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.109.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Use of substances other than solvents in water-borne adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00469 mg/l. Risk characterisation ratio (PEC/PNEC): 0.235.	
	Freshwater sediment: 0.069 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.235.	
	Marine water: 0.000468 mg/l. Risk characterisation ratio (PEC/PNEC): 0.234.	
	Marine water sediment: 0.00691 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.234.	
Date of issue/Date of revision : 09/09/2019		
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octanoic acid	Exposure Scenario: 032	Use at industrial sites; Adhesives, sealants (PC01)
	Sewage Treatment Plant: 0.021 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.01 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.22.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Adhesives, sealants (PC01)

List of use descriptors : **Identified use name: ES033:** Use at industrial sites - Industrial application of reactive adhesives [FEICA_IS_004]: PC01; PROC05, PROC08b, PROC10; ERC04, ERC05
Process Category: PROC05, PROC08b, PROC10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **Use of solvents in water-borne adhesives/sealants** - ERC04
Use of solvents in adhesives/sealants - ERC04
Use of substances other than solvents in adhesives/sealants - ERC05
Use of substances other than solvents in water-borne adhesives/sealants - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC05, PROC08b, PROC10

Number of the ES : 033

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of solvents in water-borne adhesives/sealants

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Indoor use/ Outdoor use.

Technical conditions and measures at process level (source) to prevent release : Release factor after on-site risk management:
water: 0% (FEICA SPERC 4.2a.v2).
air: 98.5% (FEICA SPERC 4.2a.v2).
Soil: 0% (FEICA SPERC 4.2a.v2).
: Solvent-based process.
Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.
Process with efficient use of raw materials.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 033	Use at industrial sites; Adhesives, sealants (PC01)
Contributing scenario controlling environmental exposure for 2: Use of solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use. Release factor after on-site risk management: water: 0% (FEICA SPERC 4.2b.v2). air: 98.5% (FEICA SPERC 4.2b.v2). Soil: 0% (FEICA SPERC 4.2b.v2).	
Technical conditions and measures at process level (source) to prevent release	: Process with efficient use of raw materials. Solvent-based process . Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of substances other than solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use. Release factor after on-site risk management: water: 0% (FEICA SPERC 5.1a.v2). air: 1.7% (FEICA SPERC 5.1a.v2). Soil: 0% (FEICA SPERC 5.1a.v2).	
Technical conditions and measures at process level (source) to prevent release	: Dry process (no water used in process). Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Use of substances other than solvents in water-borne adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use. Release factor after on-site risk management: water: 0.3% (FEICA SPERC 5.1c.v2). air: 0% (FEICA SPERC 5.1c.v2). Soil: 1% (FEICA SPERC 5.1c.v2).	
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octanoic acid	Exposure Scenario: 033	Use at industrial sites; Adhesives, sealants (PC01)
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaned with water, washing disposed of with wastewater. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios		
CS05: Changing of containers, drums or buckets for industrial application equipment - PROC08b		
CS06: Mixing or blending in batch processes - PROC05		
CS07: Large scale use of adhesives by low energy distribution, Indoor - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of solvents in water-borne adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l . Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt . Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l . Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: $0.00375 \text{ mg/kg dwt}$. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l . Risk characterisation ratio (PEC/PNEC): <0.01 . Soil: $0.00876 \text{ mg/kg dwt}$. Risk characterisation ratio (PEC/PNEC): 0.185.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 033	Use at industrial sites; Adhesives, sealants (PC01)
Exposure estimation and reference to its source - Environment: 2: Use of solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00876 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.185.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Use of substances other than solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00516 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.109.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Use of substances other than solvents in water-borne adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00469 mg/l. Risk characterisation ratio (PEC/PNEC): 0.235.	
	Freshwater sediment: 0.069 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.235.	
	Marine water: 0.000468 mg/l. Risk characterisation ratio (PEC/PNEC): 0.234.	
	Marine water sediment: 0.00691 mg/kg dw. Risk characterisation ratio (PEC/PNEC): 0.234.	
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octanoic acid	Exposure Scenario: 033	Use at industrial sites; Adhesives, sealants (PC01)
	Sewage Treatment Plant: 0.021 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.01 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.22.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Adhesives, sealants (PC01)

List of use descriptors : **Identified use name: ES034:** Use at industrial sites - Industrial application of reactive adhesives processed above 40°C [FEICA_IS_00]: PC01; PROC08b, PROC10; ERC04, ERC05
Process Category: PROC08b, PROC10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **Use of solvents in water-borne adhesives/sealants** - ERC04
Use of solvents in adhesives/sealants - ERC04
Use of substances other than solvents in adhesives/sealants - ERC05
Use of substances other than solvents in water-borne adhesives/sealants - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC08b, PROC10

Number of the ES : 034

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of solvents in water-borne adhesives/sealants

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Indoor use/ Outdoor use.

Technical conditions and measures at process level (source) to prevent release : Release factor after on-site risk management:
water: 0% (FEICA SPERC 4.2a.v2).
air: 98.5% (FEICA SPERC 4.2a.v2).
Soil: 0% (FEICA SPERC 4.2a.v2).
Solvent-based process.
Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.
Process with efficient use of raw materials.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 034	Use at industrial sites; Adhesives, sealants (PC01)
Contributing scenario controlling environmental exposure for 2: Use of solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use.	
Technical conditions and measures at process level (source) to prevent release	Release factor after on-site risk management: water: 0% (FEICA SPERC 4.2b.v2). air: 98.5% (FEICA SPERC 4.2b.v2). Soil: 0% (FEICA SPERC 4.2b.v2).	
	: Process with efficient use of raw materials. Solvent-based process . Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of substances other than solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use.	
Technical conditions and measures at process level (source) to prevent release	Release factor after on-site risk management: water: 0% (FEICA SPERC 5.1a.v2). air: 1.7% (FEICA SPERC 5.1a.v2). Soil: 0% (FEICA SPERC 5.1a.v2).	
	: Dry process (no water used in process). Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Use of substances other than solvents in water-borne adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use.	
	Release factor after on-site risk management: water: 0.3% (FEICA SPERC 5.1c.v2). air: 0% (FEICA SPERC 5.1c.v2). Soil: 1% (FEICA SPERC 5.1c.v2).	
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octanoic acid	Exposure Scenario: 034	Use at industrial sites; Adhesives, sealants (PC01)
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaned with water, washing disposed of with wastewater. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios		
CS05: Changing of containers, drums or buckets for industrial application equipment - PROC08b		
CS06: Large scale use of adhesives by low energy distribution, Indoor - PROC10		
CS07: Large scale use of adhesives by low energy distribution, Elevated temperature, Indoor - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of solvents in water-borne adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00876 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.185.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 034	Use at industrial sites; Adhesives, sealants (PC01)
Exposure estimation and reference to its source - Environment: 2: Use of solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00876 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.185.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Use of substances other than solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00516 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.109.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Use of substances other than solvents in water-borne adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00469 mg/l. Risk characterisation ratio (PEC/PNEC): 0.235.	
	Freshwater sediment: 0.069 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.235.	
	Marine water: 0.000468 mg/l. Risk characterisation ratio (PEC/PNEC): 0.234.	
	Marine water sediment: 0.00691 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.234.	
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octanoic acid	Exposure Scenario: 034	Use at industrial sites; Adhesives, sealants (PC01)
	Sewage Treatment Plant: 0.021 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.01 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.22.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Adhesives, sealants (PC01)

List of use descriptors : **Identified use name: ES035:** Use at industrial sites - Small scale application of adhesives, sealants or primers [FEICA_IS_006]: PC01; PROC10; ERC04, ERC05
Process Category: PROC10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **Use of solvents in water-borne adhesives/sealants** - ERC04
Use of solvents in adhesives/sealants - ERC04
Use of substances other than solvents in adhesives/sealants - ERC05
Use of substances other than solvents in water-borne adhesives/sealants - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC10

Number of the ES : 035

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of solvents in water-borne adhesives/sealants

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Indoor use/ Outdoor use.

Technical conditions and measures at process level (source) to prevent release : Release factor after on-site risk management:
water: 0% (FEICA SPERC 4.2a.v2).
air: 98.5% (FEICA SPERC 4.2a.v2).
Soil: 0% (FEICA SPERC 4.2a.v2).
Solvent-based process.
Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.
Process with efficient use of raw materials.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 035	Use at industrial sites; Adhesives, sealants (PC01)
Contributing scenario controlling environmental exposure for 2: Use of solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use. Release factor after on-site risk management: water: 0% (FEICA SPERC 4.2b.v2). air: 98.5% (FEICA SPERC 4.2b.v2). Soil: 0% (FEICA SPERC 4.2b.v2).	
Technical conditions and measures at process level (source) to prevent release	: Process with efficient use of raw materials. Solvent-based process . Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of substances other than solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use. Release factor after on-site risk management: water: 0% (FEICA SPERC 5.1a.v2). air: 1.7% (FEICA SPERC 5.1a.v2). Soil: 0% (FEICA SPERC 5.1a.v2).	
Technical conditions and measures at process level (source) to prevent release	: Dry process (no water used in process). Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Use of substances other than solvents in water-borne adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use. Release factor after on-site risk management: water: 0.3% (FEICA SPERC 5.1c.v2). air: 0% (FEICA SPERC 5.1c.v2). Soil: 1% (FEICA SPERC 5.1c.v2).	
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octanoic acid	Exposure Scenario: 035	Use at industrial sites; Adhesives, sealants (PC01)
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaned with water, washing disposed of with wastewater. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios		
CS05: Small scale application of adhesives, sealants or primers - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of solvents in water-borne adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00876 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.185.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 035	Use at industrial sites; Adhesives, sealants (PC01)
Exposure estimation and reference to its source - Environment: 2: Use of solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00876 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.185.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Use of substances other than solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00516 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.109.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Use of substances other than solvents in water-borne adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00469 mg/l. Risk characterisation ratio (PEC/PNEC): 0.235.	
	Freshwater sediment: 0.069 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.235.	
	Marine water: 0.000468 mg/l. Risk characterisation ratio (PEC/PNEC): 0.234.	
	Marine water sediment: 0.00691 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.234.	
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octanoic acid	Exposure Scenario: 035	Use at industrial sites; Adhesives, sealants (PC01)
	Sewage Treatment Plant: 0.021 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.01 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.22.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Adhesives, sealants (PC01)

List of use descriptors : **Identified use name: ES036:** Use at industrial sites - Manual industrial application of adhesives and sealants by roller or brushing application [FEICA_IS_007]: PC01; PROC08b, PROC10; ERC04, ERC05
Process Category: PROC08b, PROC10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **Use of solvents in water-borne adhesives/sealants** - ERC04
Use of solvents in adhesives/sealants - ERC04
Use of substances other than solvents in adhesives/sealants - ERC05
Use of substances other than solvents in water-borne adhesives/sealants - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC08b, PROC10

Number of the ES : 036

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of solvents in water-borne adhesives/sealants

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Indoor use/ Outdoor use.

Technical conditions and measures at process level (source) to prevent release : Release factor after on-site risk management:
water: 0% (FEICA SPERC 4.2a.v2).
air: 98.5% (FEICA SPERC 4.2a.v2).
Soil: 0% (FEICA SPERC 4.2a.v2).
: Solvent-based process.
Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.
Process with efficient use of raw materials.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 036	Use at industrial sites; Adhesives, sealants (PC01)
Contributing scenario controlling environmental exposure for 2: Use of solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use.	
Technical conditions and measures at process level (source) to prevent release	Release factor after on-site risk management: water: 0% (FEICA SPERC 4.2b.v2). air: 98.5% (FEICA SPERC 4.2b.v2). Soil: 0% (FEICA SPERC 4.2b.v2).	
	: Process with efficient use of raw materials. Solvent-based process . Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of substances other than solvents in adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use.	
Technical conditions and measures at process level (source) to prevent release	Release factor after on-site risk management: water: 0% (FEICA SPERC 5.1a.v2). air: 1.7% (FEICA SPERC 5.1a.v2). Soil: 0% (FEICA SPERC 5.1a.v2).	
	: Dry process (no water used in process). Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Use of substances other than solvents in water-borne adhesives/sealants		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use/ Outdoor use.	
	Release factor after on-site risk management: water: 0.3% (FEICA SPERC 5.1c.v2). air: 0% (FEICA SPERC 5.1c.v2). Soil: 1% (FEICA SPERC 5.1c.v2).	
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octanoic acid	Exposure Scenario: 036	Use at industrial sites; Adhesives, sealants (PC01)
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaned with water, washing disposed of with wastewater. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios		
CS05: Changing of containers, drums or buckets for industrial application equipment - PROC08b		
CS06: Manual industrial application of adhesives and sealants by roller or brushing application, Indoor, with LEV - PROC10		
CS07: Manual industrial application of adhesives and sealants by roller or brushing application, Indoor, without LEV - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of solvents in water-borne adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l . Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt . Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l . Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: $0.00375 \text{ mg/kg dwt}$. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l . Risk characterisation ratio (PEC/PNEC): <0.01 . Soil: $0.00876 \text{ mg/kg dwt}$. Risk characterisation ratio (PEC/PNEC): 0.185.	
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octanoic acid		Exposure Scenario: 036	Use at industrial sites; Adhesives, sealants (PC01)
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Environment: 2: Use of solvents in adhesives/sealants			
Exposure assessment (environment):	: EUSES 2.1.2		
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00876 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.185.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Environment: 3: Use of substances other than solvents in adhesives/sealants			
Exposure assessment (environment):	: EUSES 2.1.2		
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00516 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.109.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Environment: 4: Use of substances other than solvents in water-borne adhesives/sealants			
Exposure assessment (environment):	: EUSES 2.1.2		
Exposure estimation	: Freshwater: 0.00469 mg/l. Risk characterisation ratio (PEC/PNEC): 0.235. Freshwater sediment: 0.069 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.235. Marine water: 0.000468 mg/l. Risk characterisation ratio (PEC/PNEC): 0.234.		
Date of issue/Date of revision		: 09/09/2019	Version : 1 / en 145/390

octanoic acid	Exposure Scenario: 036	Use at industrial sites; Adhesives, sealants (PC01)
	Marine water sediment: 0.00691 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.234. Sewage Treatment Plant: 0.021 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.01 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.22.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Adhesives, sealants (PC01)
List of use descriptors : **Identified use name: ES037:** Widespread use by professional workers - Low energy distribution of adhesives and primers on large areas outdoors by professionals
[FEICA_PW_001]: PC01; PROC10; ERC08d, ERC08f
Process Category: PROC10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08d, ERC08f
Market sector by type of chemical product: PC01
Environmental contributing scenarios : **Use of volatile substances in adhesives/sealants** - ERC08d
Use of non-volatile substances in adhesives/sealants - ERC08f
Health Contributing scenarios : **Contributing scenarios** - PROC10

Number of the ES : 037

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of volatile substances in adhesives/sealants

Amounts used : Daily local widespread use amount: ≤0.000028 tonnes/day.
Other conditions affecting environmental exposure : Outdoor use.
Release factor after on-site risk management:
water: 1% (EFCC SPERC 8D.1a.v1).
air: 98% (EFCC SPERC 8D.1a.v1).
Soil: 0% (EFCC SPERC 8D.1a.v1).
Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to emission of volatiles to air.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions.
Low risk assumed for waste life stage.
Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of non-volatile substances in adhesives/sealants

Amounts used : Daily local widespread use amount: ≤0.000028 tonnes/day.
Other conditions affecting environmental exposure : Outdoor use.
Release factor after on-site risk management:
water: 1% (EFCC SPERC 8F.1a.v1).
air: 0% (EFCC SPERC 8F.1a.v1).
Soil: 0% (EFCC SPERC 8F.1a.v1).
Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to embedding substances into a matrix.
Upon curing, substances are included into matrix without intended release to the environment.

octanoic acid	Exposure Scenario: 037	Widespread use by professional workers; Adhesives, sealants (PC01)
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 3: Contributing scenarios		
CS03: Low energy distribution of adhesives and primers on large areas outdoors by professionals - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of volatile substances in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000172 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 037	Widespread use by professional workers; Adhesives, sealants (PC01)
Exposure estimation and reference to its source - Environment: 2: Use of non-volatile substances in adhesives/ sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0.0000172 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 3: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Adhesives, sealants (PC01)
List of use descriptors : **Identified use name: ES038:** Widespread use by professional workers - Large scale bonding (e.g. floors) with water based and 1-component reactive adhesives indoors by professionals [FEICA_PW_002]: PC01; PROC10; ERC08a, ERC08c
Process Category: PROC10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08c
Market sector by type of chemical product: PC01
Environmental contributing scenarios : **Use of solvents in adhesives/sealants** - ERC08a
Use of substances other than solvents in adhesives/sealants - ERC08c
Health Contributing scenarios : **Contributing scenarios** - PROC10

Number of the ES : 038

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of solvents in adhesives/sealants

Amounts used : Daily local widespread use amount: ≤0.000028 tonnes/day.
Frequency and duration of use : Emission days: ≥220 days per year.
Other conditions affecting environmental exposure : Indoor use/Outdoor use.
Release factor after on-site risk management:
water: 1.5% (FEICA SPERC 8a.3.v2).
air: 98% (FEICA SPERC 8a.3.v2).
Soil: 0% (FEICA SPERC 8a.3.v2).
Technical conditions and measures at process level (source) to prevent release : Process with efficient use of raw materials.
Application of solvent-borne or water-borne products.
Equipment cleaned with water, washing disposed of with wastewater.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of substances other than solvents in adhesives/sealants

Amounts used : Daily local widespread use amount: ≤0.000028 tonnes/day.
Other conditions affecting environmental exposure : Outdoor use.
Release factor after on-site risk management:
water: 1.5% (FEICA SPERC 8c.3.v2).
air: 0% (FEICA SPERC 8c.3.v2).
Soil: 0% (FEICA SPERC 8c.3.v2).
Technical conditions and measures at process level (source) to prevent release : Process with efficient use of raw materials.
Application of solvent-borne or water-borne products.
Equipment cleaned with water, washing disposed of with wastewater.

octanoic acid	Exposure Scenario: 038	Widespread use by professional workers; Adhesives, sealants (PC01)
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 3: Contributing scenarios		
CS03: Large scale use of adhesives by low energy distribution - Indoor - PROC10		
CS04: Large scale use of adhesives by low energy distribution - Outdoor - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000259 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 038	Widespread use by professional workers; Adhesives, sealants (PC01)
Exposure estimation and reference to its source - Environment: 2: Use of substances other than solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000259 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 3: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Adhesives, sealants (PC01)

List of use descriptors : **Identified use name: ES039:** Widespread use by professional workers - Large scale application of 2- or multi-component reactive adhesives [FEICA_PW_003]: PC01; PROC 05, PROC10; ERC08a, ERC08c, ERC08d, ERC08f
Process Category: PROC05, PROC10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08c, ERC08d, ERC08f
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **Wide dispersive use of solvents in adhesives and sealants - indoor** - ERC08a
Use of volatile substances in adhesives/sealants - ERC08d
Use of substances other than solvents in adhesives/sealants - ERC08c
Use of non-volatile substances in adhesives/sealants - ERC08f

Health Contributing scenarios : **Contributing scenarios** - PROC05, PROC10

Number of the ES : 039

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Wide dispersive use of solvents in adhesives and sealants - indoor

Amounts used : Daily local widespread use amount: ≤0.000028 tonnes/day.

Other conditions affecting environmental exposure : Indoor use/Outdoor use.

Release factor after on-site risk management:
water: 1.5% (FEICA SPERC 8a.3.v2).
air: 98% (FEICA SPERC 8a.3.v2).
Soil: 0% (FEICA SPERC 8a.3.v2).

Technical conditions and measures at process level (source) to prevent release : Process with efficient use of raw materials.
Application of solvent-borne or water-borne products.
Equipment cleaned with water, washing disposed of with wastewater.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of volatile substances in adhesives/sealants

Amounts used : Daily local widespread use amount: ≤0.000028 tonnes/day.

Other conditions affecting environmental exposure : Outdoor use.

Release factor after on-site risk management:
water: 1% (EFCC SPERC 8D.1a.v1).
air: 98% (EFCC SPERC 8D.1a.v1).
Soil: 0% (EFCC SPERC 8D.1a.v1).

Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to emission of volatiles to air.

octanoic acid	Exposure Scenario: 039	Widespread use by professional workers; Adhesives, sealants (PC01)
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of substances other than solvents in adhesives/sealants		
Amounts used	: Daily local widespread use amount: ≤0.000028 tonnes/day.	
Other conditions affecting environmental exposure	: Outdoor use. Release factor after on-site risk management: water: 1.5% (FEICA SPERC 8c.3.v2). air: 0% (FEICA SPERC 8c.3.v2). Soil: 0% (FEICA SPERC 8c.3.v2).	
Technical conditions and measures at process level (source) to prevent release	: Process with efficient use of raw materials. Application of solvent-borne or water-borne products. Equipment cleaned with water, washing disposed of with wastewater.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Use of non-volatile substances in adhesives/sealants		
Amounts used	: Daily local widespread use amount: ≤0.000028 tonnes/day.	
Other conditions affecting environmental exposure	: Outdoor use. Release factor after on-site risk management: water: 1% (EFCC SPERC 8F.1a.v1). air: 0% (EFCC SPERC 8F.1a.v1). Soil: 0% (EFCC SPERC 8F.1a.v1).	
Technical conditions and measures at process level (source) to prevent release	: Professional and consumer product use, leading to embedding substances into a matrix. Upon curing, substances are included into matrix without intended release to the environment.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
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octanoic acid	Exposure Scenario: 039	<i>Widespread use by professional workers; Adhesives, sealants (PC01)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios CS05: Mixing or blending in batch processes - Indoor - PROC05 CS06: Mixing or blending in batch processes - Outdoor - PROC05 CS07: Roller application or brushing - Indoor - PROC10 CS08: Roller application or brushing - Outdoor - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Wide dispersive use of solvents in adhesives and sealants - indoor	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000172 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Use of volatile substances in adhesives/ sealants	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000172 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.

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octanoic acid		Exposure Scenario: 039	Widespread use by professional workers; Adhesives, sealants (PC01)
Remark	:	Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Use of substances other than solvents in adhesives/sealants			
Exposure assessment (environment):	:	EUSES 2.1.2	
Exposure estimation	:	Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000259 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	:	Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Use of non-volatile substances in adhesives/sealants			
Exposure assessment (environment):	:	EUSES 2.1.2	
Exposure estimation	:	Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000172 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	:	Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios			
Exposure assessment (human):	:	Qualitative approach used to conclude safe use.	
Exposure estimation	:	Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 039	<i>Widespread use by professional workers; Adhesives, sealants (PC01)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Adhesives, sealants (PC01)
List of use descriptors : **Identified use name: ES040:** Widespread use by professional workers - Large scale application of cementitious based adhesives for tile bonding [FEICA_PW_004]: PC01; PROC 05, PROC10; ERC08c, ERC08f
Process Category: PROC05, PROC10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08c, ERC08f
Market sector by type of chemical product: PC01
Environmental contributing scenarios : **Use of substances other than solvents in adhesives/sealants** - ERC08c
Use of non-volatile substances in adhesives/sealants - ERC08f
Health Contributing scenarios : **Contributing scenarios** - PROC05, PROC10

Number of the ES : 040

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of substances other than solvents in adhesives/sealants

Amounts used : Daily local widespread use amount: ≤0.000028 tonnes/day.
Other conditions affecting environmental exposure : Indoor use.
Release factor after on-site risk management:
water: 1.5% (FEICA SPERC 8c.3.v2).
air: 0% (FEICA SPERC 8c.3.v2).
Soil: 0% (FEICA SPERC 8c.3.v2).
Technical conditions and measures at process level (source) to prevent release : Process with efficient use of raw materials.
Application of solvent-borne or water-borne products.
Equipment cleaned with water, washing disposed of with wastewater.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of non-volatile substances in adhesives/sealants

Amounts used : Daily local widespread use amount: ≤0.000028 tonnes/day.
Other conditions affecting environmental exposure : Outdoor use.
Release factor after on-site risk management:
water: 1% (EFCC SPERC 8F.1a.v1).
air: 0% (EFCC SPERC 8F.1a.v1).
Soil: 0% (EFCC SPERC 8F.1a.v1).
Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to embedding substances into a matrix.
Upon curing, substances are included into matrix without intended release to the environment.

octanoic acid	Exposure Scenario: 040	Widespread use by professional workers; Adhesives, sealants (PC01)
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 3: Contributing scenarios		
CS03: Mixing or blending in batch processes - Indoor - PROC05 CS04: Mixing or blending in batch processes - Outdoor - PROC05 CS05: Large scale application of cementitious based adhesives for tile bonding - Indoor - PROC10 CS06: Large scale application of cementitious based adhesives for tile bonding - Outdoor - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of substances other than solvents in adhesives/sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000259 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 040	Widespread use by professional workers; Adhesives, sealants (PC01)
Exposure estimation and reference to its source - Environment: 2: Use of non-volatile substances in adhesives/ sealants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0.0000172 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 3: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	:	The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Adhesives, sealants (PC01)

List of use descriptors : **Identified use name: ES041:** Widespread use by professional workers - Small scale application of adhesives, sealants or primers [FEICA_PW_005]: PC01; PROC10; ERC08a, ERC08c, ERC08d, ERC08f
Process Category: PROC10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08c, ERC08d, ERC08f
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **Wide dispersive use of solvents in adhesives and sealants - indoor** - ERC08a
Use of volatile substances in adhesives/sealants - ERC08d
Use of substances other than solvents in adhesives/sealants - ERC08c
Use of non-volatile substances in adhesives/sealants - ERC08f

Health Contributing scenarios : **Contributing scenarios** - PROC10

Number of the ES : 041

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Wide dispersive use of solvents in adhesives and sealants - indoor

Amounts used : Daily local widespread use amount: ≤0.000014 tonnes/day.

Other conditions affecting environmental exposure : Indoor use/Outdoor use.

Release factor after on-site risk management:
water: 1.5% (FEICA SPERC 8a.3.v2).
air: 98% (FEICA SPERC 8a.3.v2).
Soil: 0% (FEICA SPERC 8a.3.v2).

Technical conditions and measures at process level (source) to prevent release : Process with efficient use of raw materials.
Application of solvent-borne or water-borne products.
Equipment cleaned with water, washing disposed of with wastewater.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of volatile substances in adhesives/sealants

Amounts used : Daily local widespread use amount: ≤0.000014 tonnes/day.

Other conditions affecting environmental exposure : Outdoor use.

Release factor after on-site risk management:
water: 1% (EFCC SPERC 8D.1a.v1).
air: 98% (EFCC SPERC 8D.1a.v1).
Soil: 0% (EFCC SPERC 8D.1a.v1).

Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to emission of volatiles to air.

octanoic acid	Exposure Scenario: 041	Widespread use by professional workers; Adhesives, sealants (PC01)
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of substances other than solvents in adhesives/sealants		
Amounts used	: Daily local widespread use amount: ≤0.000014 tonnes/day.	
Other conditions affecting environmental exposure	: Outdoor use. Release factor after on-site risk management: water: 1.5% (FEICA SPERC 8c.3.v2). air: 0% (FEICA SPERC 8c.3.v2). Soil: 0% (FEICA SPERC 8c.3.v2).	
Technical conditions and measures at process level (source) to prevent release	: Process with efficient use of raw materials. Application of solvent-borne or water-borne products. Equipment cleaned with water, washing disposed of with wastewater.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Use of non-volatile substances in adhesives/sealants		
Amounts used	: Daily local widespread use amount: ≤0.000014 tonnes/day.	
Other conditions affecting environmental exposure	: Outdoor use. Release factor after on-site risk management: water: 1% (EFCC SPERC 8F.1a.v1). air: 0% (EFCC SPERC 8F.1a.v1). Soil: 0% (EFCC SPERC 8F.1a.v1).	
Technical conditions and measures at process level (source) to prevent release	: Professional and consumer product use, leading to embedding substances into a matrix. Upon curing, substances are included into matrix without intended release to the environment.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
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octanoic acid	Exposure Scenario: 041	<i>Widespread use by professional workers; Adhesives, sealants (PC01)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios CS05: Roller application or brushing - Indoor - PROC10 CS06: Roller application or brushing - Outdoor - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Wide dispersive use of solvents in adhesives and sealants - indoor	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000129 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Use of volatile substances in adhesives/ sealants	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000862 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

octanoic acid		Exposure Scenario: 041	Widespread use by professional workers; Adhesives, sealants (PC01)
Exposure estimation and reference to its source - Environment: 3: Use of substances other than solvents in adhesives/sealants			
Exposure assessment (environment):	: EUSES 2.1.2		
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000129 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Environment: 4: Use of non-volatile substances in adhesives/sealants			
Exposure assessment (environment):	: EUSES 2.1.2		
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000862 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios			
Exposure assessment (human):	: Qualitative approach used to conclude safe use.		
Exposure estimation	: Not applicable.		

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 041	<i>Widespread use by professional workers; Adhesives, sealants (PC01)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Adhesives, sealants (PC01)

List of use descriptors : **Identified use name: ES042:** Widespread use by professional workers - Professional small scale application of reactive adhesives and sealant [FEICA_PW_006]: PC01; PROC10; ERC08a, ERC08c, ERC08d, ERC08f
Process Category: PROC10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08c, ERC08d, ERC08f
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **Wide dispersive use of solvents in adhesives and sealants - indoor** - ERC08a
Use of volatile substances in adhesives/sealants - ERC08d
Use of substances other than solvents in adhesives/sealants - ERC08c
Use of non-volatile substances in adhesives/sealants - ERC08f

Health Contributing scenarios : **Contributing scenarios** - PROC10

Number of the ES : 042

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Wide dispersive use of solvents in adhesives and sealants - indoor

Amounts used : Daily local widespread use amount: ≤0.000014 tonnes/day.

Other conditions affecting environmental exposure : Indoor use/Outdoor use.

Release factor after on-site risk management:
water: 1.5% (FEICA SPERC 8a.3.v2).
air: 98% (FEICA SPERC 8a.3.v2).
Soil: 0% (FEICA SPERC 8a.3.v2).

Technical conditions and measures at process level (source) to prevent release : Process with efficient use of raw materials.
Application of solvent-borne or water-borne products.
Equipment cleaned with water, washing disposed of with wastewater.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of volatile substances in adhesives/sealants

Amounts used : Daily local widespread use amount: ≤0.000014 tonnes/day.

Other conditions affecting environmental exposure : Outdoor use.

Release factor after on-site risk management:
water: 1% (EFCC SPERC 8D.1a.v1).
air: 98% (EFCC SPERC 8D.1a.v1).
Soil: 0% (EFCC SPERC 8D.1a.v1).

Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to emission of volatiles to air.

octanoic acid	Exposure Scenario: 042	Widespread use by professional workers; Adhesives, sealants (PC01)
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of substances other than solvents in adhesives/sealants		
Amounts used	: Daily local widespread use amount: ≤0.000014 tonnes/day.	
Other conditions affecting environmental exposure	: Outdoor use. Release factor after on-site risk management: water: 1.5% (FEICA SPERC 8c.3.v2). air: 0% (FEICA SPERC 8c.3.v2). Soil: 0% (FEICA SPERC 8c.3.v2).	
Technical conditions and measures at process level (source) to prevent release	: Process with efficient use of raw materials. Application of solvent-borne or water-borne products. Equipment cleaned with water, washing disposed of with wastewater.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Use of non-volatile substances in adhesives/sealants		
Amounts used	: Daily local widespread use amount: ≤0.000014 tonnes/day.	
Other conditions affecting environmental exposure	: Outdoor use. Release factor after on-site risk management: water: 1% (EFCC SPERC 8F.1a.v1). air: 0% (EFCC SPERC 8F.1a.v1). Soil: 0% (EFCC SPERC 8F.1a.v1).	
Technical conditions and measures at process level (source) to prevent release	: Professional and consumer product use, leading to embedding substances into a matrix. Upon curing, substances are included into matrix without intended release to the environment.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
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octanoic acid	Exposure Scenario: 042	<i>Widespread use by professional workers; Adhesives, sealants (PC01)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios CS05: Roller application or brushing - Indoor - PROC10 CS06: Roller application or brushing - Outdoor - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Wide dispersive use of solvents in adhesives and sealants - indoor	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000129 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Use of volatile substances in adhesives/ sealants	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000862 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

octanoic acid		Exposure Scenario: 042	Widespread use by professional workers; Adhesives, sealants (PC01)
Exposure estimation and reference to its source - Environment: 3: Use of substances other than solvents in adhesives/sealants			
Exposure assessment (environment):	:	EUSES 2.1.2	
Exposure estimation	:	Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000129 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	:	Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Use of non-volatile substances in adhesives/sealants			
Exposure assessment (environment):	:	EUSES 2.1.2	
Exposure estimation	:	Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000862 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	:	Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios			
Exposure assessment (human):	:	Qualitative approach used to conclude safe use.	
Exposure estimation	:	Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 042	<i>Widespread use by professional workers; Adhesives, sealants (PC01)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Adhesives, sealants (PC01)

List of use descriptors : **Identified use name: ES043:** Widespread use by professional workers - Professional application of reactive sealants [FEICA_PW_007]: PC01; PROC10; ERC08a, ERC08c, ERC08d, ERC08f
Process Category: PROC10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08c, ERC08d, ERC08f
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **Wide dispersive use of solvents in adhesives and sealants - indoor** - ERC08a
Use of volatile substances in adhesives/sealants - ERC08d
Use of substances other than solvents in adhesives/sealants - ERC08c
Use of non-volatile substances in adhesives/sealants - ERC08f

Health Contributing scenarios : **Contributing scenarios** - PROC10

Number of the ES : 043

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Wide dispersive use of solvents in adhesives and sealants - indoor

Amounts used : Daily local widespread use amount: ≤0.000014 tonnes/day.

Other conditions affecting environmental exposure : Indoor use/Outdoor use.

Release factor after on-site risk management:
water: 1.5% (FEICA SPERC 8a.3.v2).
air: 98% (FEICA SPERC 8a.3.v2).
Soil: 0% (FEICA SPERC 8a.3.v2).

Technical conditions and measures at process level (source) to prevent release : Process with efficient use of raw materials.
Application of solvent-borne or water-borne products.
Equipment cleaned with water, washing disposed of with wastewater.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of volatile substances in adhesives/sealants

Amounts used : Daily local widespread use amount: ≤0.000014 tonnes/day.

Other conditions affecting environmental exposure : Outdoor use.

Release factor after on-site risk management:
water: 1% (EFCC SPERC 8D.1a.v1).
air: 98% (EFCC SPERC 8D.1a.v1).
Soil: 0% (EFCC SPERC 8D.1a.v1).

Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to emission of volatiles to air.

octanoic acid	Exposure Scenario: 043	Widespread use by professional workers; Adhesives, sealants (PC01)
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of substances other than solvents in adhesives/sealants		
Amounts used	: Daily local widespread use amount: ≤0.000014 tonnes/day.	
Other conditions affecting environmental exposure	: Outdoor use. Release factor after on-site risk management: water: 1.5% (FEICA SPERC 8c.3.v2). air: 0% (FEICA SPERC 8c.3.v2). Soil: 0% (FEICA SPERC 8c.3.v2).	
Technical conditions and measures at process level (source) to prevent release	: Process with efficient use of raw materials. Application of solvent-borne or water-borne products. Equipment cleaned with water, washing disposed of with wastewater.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Use of non-volatile substances in adhesives/sealants		
Amounts used	: Daily local widespread use amount: ≤0.000014 tonnes/day.	
Other conditions affecting environmental exposure	: Outdoor use. Release factor after on-site risk management: water: 1% (EFCC SPERC 8F.1a.v1). air: 0% (EFCC SPERC 8F.1a.v1). Soil: 0% (EFCC SPERC 8F.1a.v1).	
Technical conditions and measures at process level (source) to prevent release	: Professional and consumer product use, leading to embedding substances into a matrix. Upon curing, substances are included into matrix without intended release to the environment.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
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octanoic acid	Exposure Scenario: 043	<i>Widespread use by professional workers; Adhesives, sealants (PC01)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios CS05: Use of adhesives and sealants by low energy bead extrusion - Indoor - PROC10 CS06: Use of adhesives and sealants by low energy bead extrusion - Outdoor - PROC10		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Wide dispersive use of solvents in adhesives and sealants - indoor	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000129 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Use of volatile substances in adhesives/ sealants	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000862 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

octanoic acid		Exposure Scenario: 043	Widespread use by professional workers; Adhesives, sealants (PC01)
Exposure estimation and reference to its source - Environment: 3: Use of substances other than solvents in adhesives/sealants			
Exposure assessment (environment):	: EUSES 2.1.2		
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000129 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Environment: 4: Use of non-volatile substances in adhesives/sealants			
Exposure assessment (environment):	: EUSES 2.1.2		
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000862 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios			
Exposure assessment (human):	: Qualitative approach used to conclude safe use.		
Exposure estimation	: Not applicable.		

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 043	<i>Widespread use by professional workers; Adhesives, sealants (PC01)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites
List of use descriptors : **Identified use name: ES044:** Use at industrial sites - Use in food and feed industry: PROC01, PROC02, PROC03, PROC05, PROC08b; ERC06a
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08b
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC06a
Environmental contributing scenarios : **Use in food and feed industry** - ERC06a
Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC03, PROC05, PROC08b

Number of the ES : 044

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use in food and feed industry

Amounts used : Daily amount per site: ≤2.8 tonnes/day.
Annual amount per site: ≤280 tonnes/year.
Frequency and duration of use : Emission days: ≥100 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0% (EU TGD 2003).
air: 0% (EU TGD 2003).
Soil: 5% (EU TGD 2003).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 044	Use at industrial sites
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC01 CS03: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02 CS04: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03 CS05: Mixing or blending in batch processes - PROC05 CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use in food and feed industry	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing

List of use descriptors : **Identified use name: ES045:** Formulation or re-packing - Formulation of fragrance compounds [IFRA_GES1]: PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09, PROC15, PROC28; ERC02
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09, PROC15, PROC28
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02

Environmental contributing scenarios : **Formulation of fragrance compounds - ERC02**

Health Contributing scenarios : **Contributing scenarios -** PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09, PROC15, PROC28

Number of the ES : 045

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Formulation of fragrance compounds

Amounts used : Daily amount per site: ≤0.22 tonnes/day.
Annual amount per site: ≤55 tonnes/year.

Frequency and duration of use : Emission days: 250 days per year.

Other conditions affecting environmental exposure : Release factor after on-site risk management:
water: 0.2% (IFRA SPERC 2.1.a.v1).
air: 2.5% (ERC02).
Soil: 0% (IFRA SPERC 2.1.a.v1).
Waste: 0.2%.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 045	Formulation or re-packing
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Loading and unloading - PROC08b CS03: Product sampling - PROC02 CS04: Quality check - PROC15 CS05: Storage - PROC01 CS06: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03 CS07: Mixing or blending in batch processes - PROC05 CS08: Manual maintenance (cleaning and repair) of machinery - PROC28 CS09: Product sampling - PROC02 CS10: Quality check - PROC15 CS11: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS12: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Formulation of fragrance compounds	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00531 mg/l. Risk characterisation ratio (PEC/PNEC): 0.265. Freshwater sediment: 0.078 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.265. Marine water: 0.000529 mg/l. Risk characterisation ratio (PEC/PNEC): 0.265. Marine water sediment: 0.00781 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.265. Sewage Treatment Plant: 0.028 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.012 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.256.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.
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Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing

List of use descriptors : **Identified use name: ES046:** Formulation or re-packing - Formulation of fragranced end-products [IFRA_GES2]: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15, PROC28; ERC02
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15, PROC28
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02

Environmental contributing scenarios : **Formulation of Granular Detergents/Maintenance Products - Regular & Compact (large scale) - ERC02**
Formulation of Granular Detergents/Maintenance Products - Regular & Compact (medium scale) - ERC02
Formulation of Granular Detergents/Maintenance Products - Regular & Compact (small scale) - ERC02
Formulation of liquid Detergents/Maintenance Products: low viscosity (large scale) - ERC02
Formulation of liquid Detergents/Maintenance Products: low viscosity (medium scale) - ERC02
Formulation of liquid Detergents/Maintenance Products: low viscosity (small scale) - ERC02
Formulation of liquid detergents/maintenance products: high viscosity (large scale) - ERC02
Formulation of liquid Detergents/Maintenance Products: high viscosity (medium scale) - ERC02
Formulation of liquid Detergents/Maintenance Products: high viscosity (small scale) - ERC02
Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (large scale) - ERC02
Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (medium scale) - ERC02
Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (small scale) - ERC02
Formulation of Fine Fragrances - Cleaning with Water (medium scale) - ERC02
Formulation of Fine Fragrances - Cleaning with Water (small scale) - ERC02
Formulation of High Viscosity Body Care Products (medium scale) - ERC02
Formulation of High Viscosity Body Care Products (small scale) - ERC02
Formulation of liquid detergents/maintenance products: high viscosity (medium scale) - ERC02
Formulation of High Viscosity Body Care Products (small scale) - ERC02
Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (large scale) - ERC02
Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (medium scale) - ERC02
Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (small scale) - ERC02
Formulation of solid cosmetic and home care products (large scale) - ERC02

octanoic acid	Exposure Scenario: 046	Formulation or re-packing
	Formulation of solid cosmetic and home care products (medium scale) - ERC02 Formulation of solid cosmetic and home care products (small scale) - ERC02	
Health Contributing scenarios	: Contributing scenarios - PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15, PROC28	
Number of the ES	: 046	

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Formulation of Granular Detergents/ Maintenance Products - Regular & Compact (large scale)	
Amounts used	: Daily amount per site: ≤0.25 tonnes/day. Annual amount per site: ≤55 tonnes/year.
Frequency and duration of use	: Emission days: 220 days per year.
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.01% (AISE SPERC 2.1.a.v2). air: 0% (AISE SPERC 2.1.a.v2). Soil: 0% (AISE SPERC 2.1.a.v2).
Technical conditions and measures at process level (source) to prevent release	: Granular detergents are obtained by drying liquid slurries. Residues of granular detergents recovered in cleaning steps at packaging or transfer lines are recycled into the slurries. Process optimised for highly efficient use of raw materials.
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Formulation of Granular Detergents/ Maintenance Products - Regular & Compact (medium scale)	
Amounts used	: Daily amount per site: ≤0.12 tonnes/day. Annual amount per site: ≤30 tonnes/year.
Frequency and duration of use	: Emission days: 250 days per year.
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.1% (AISE SPERC 2.1.b.v2). air: 0% (AISE SPERC 2.1.b.v2). Soil: 0% (AISE SPERC 2.1.b.v2).
Technical conditions and measures at process level (source) to prevent release	: Granular detergents are obtained by drying liquid slurries. Residues of granular detergents recovered in cleaning steps at packaging or transfer lines are recycled into the slurries. Process optimised for efficient use of raw materials.
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Contributing scenario controlling environmental exposure for 3: Formulation of Granular Detergents/ Maintenance Products - Regular & Compact (small scale)		
Amounts used	: Daily amount per site: ≤0.022 tonnes/day. Annual amount per site: ≤5.5 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.2% (AISE SPERC 2.1.c.v2). air: 0% (AISE SPERC 2.1.c.v2). Soil: 0% (AISE SPERC 2.1.c.v2).	
Technical conditions and measures at process level (source) to prevent release	: Granular detergents are obtained by drying liquid slurries. Residues of granular detergents recovered in cleaning steps at packaging or transfer lines are recycled into the slurries. Process optimised for efficient use of raw materials.	
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Formulation of liquid Detergents/Maintenance Products: low viscosity (large scale)		
Amounts used	: Daily amount per site: ≤0.22 tonnes/day. Annual amount per site: ≤55 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.01% (AISE SPERC 2.1.g.v2). air: 0% (AISE SPERC 2.1.g.v2). Soil: 0% (AISE SPERC 2.1.g.v2).	
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaning with minimized emissions to wastewater. Process optimised for highly efficient use of raw materials.	
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 5: Formulation of liquid Detergents/Maintenance Products: low viscosity (medium scale)		
Amounts used	: Daily amount per site: ≤0.12 tonnes/day. Annual amount per site: ≤30 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
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octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.1% (AISE SPERC 2.1.h.v2). air: 0% (AISE SPERC 2.1.h.v2). Soil: 0% (AISE SPERC 2.1.h.v2).	
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaning with minimized emissions to wastewater. Process optimised for efficient use of raw materials.	
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 6: Formulation of liquid Detergents/Maintenance Products: low viscosity (small scale)		
Amounts used	: Daily amount per site: ≤0.022 tonnes/day. Annual amount per site: ≤5.5 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.2% (AISE SPERC 2.1.i.v2). air: 0% (AISE SPERC 2.1.i.v2). Soil: 0% (AISE SPERC 2.1.i.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with water, washing disposed of with wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 7: Formulation of liquid detergents/maintenance products: high viscosity (large scale)		
Amounts used	: Daily amount per site: ≤0.22 tonnes/day. Annual amount per site: ≤55 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.1% (AISE SPERC 2.1.j.v2). air: 0% (AISE SPERC 2.1.j.v2). Soil: 0% (AISE SPERC 2.1.j.v2).	
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaning with minimized emissions to wastewater. Process optimised for highly efficient use of raw materials.	
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.	
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octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.	
Contributing scenario controlling environmental exposure for 8: Formulation of liquid Detergents/Maintenance Products: high viscosity (medium scale)		
Amounts used	: Daily amount per site: ≤0.12 tonnes/day. Annual amount per site: ≤30 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.2% (AISE SPERC 2.1.k.v2). air: 0% (AISE SPERC 2.1.k.v2). Soil: 0% (AISE SPERC 2.1.k.v2).	
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaning with reduced emissions to wastewater. Process optimised for efficient use of raw materials.	
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.	
Contributing scenario controlling environmental exposure for 9: Formulation of liquid Detergents/Maintenance Products: high viscosity (small scale)		
Amounts used	: Daily amount per site: ≤0.45 tonnes/day. Annual amount per site: ≤200 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.4% (AISE SPERC 2.1.l.v2). air: 0% (AISE SPERC 2.1.l.v2). Soil: 0% (AISE SPERC 2.1.l.v2).	
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaned with water, washing disposed of with wastewater. Process optimised for efficient use of raw materials.	
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.	

octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Contributing scenario controlling environmental exposure for 10: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (large scale)		
Amounts used	: Daily amount per site: ≤0.25 tonnes/day. Annual amount per site: ≤55 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0% (Cosmetics Europe SPERC 2.2.a.v2). air: 0% (Cosmetics Europe SPERC 2.2.a.v2). Soil: 0% (Cosmetics Europe SPERC 2.2.a.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Solvent-based process. Process optimised for highly efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 11: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (medium scale)		
Amounts used	: Daily amount per site: ≤0.12 tonnes/day. Annual amount per site: ≤30 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0% (Cosmetics Europe SPERC 2.2.b.v2). air: 0% (Cosmetics Europe SPERC 2.2.b.v2). Soil: 0% (Cosmetics Europe SPERC 2.2.b.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Solvent-based process. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 12: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (small scale)		
Amounts used	: Daily amount per site: ≤0.022 tonnes/day. Annual amount per site: ≤5 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0% (Cosmetics Europe SPERC 2.2.c.v2). air: 0% (Cosmetics Europe SPERC 2.2.c.v2). Soil: 0% (Cosmetics Europe SPERC 2.2.c.v2).	
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octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Solvent-based process. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 13: Formulation of Fine Fragrances - Cleaning with Water (medium scale)		
Amounts used	: Daily amount per site: ≤0.12 tonnes/day. Annual amount per site: ≤30 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 1.5% (Cosmetics Europe SPERC 2.1.d.v2). air: 0% (Cosmetics Europe SPERC 2.1.d.v2). Soil: 0% (Cosmetics Europe SPERC 2.1.d.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaning with reduced emissions to wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 14: Formulation of Fine Fragrances - Cleaning with Water (small scale)		
Amounts used	: Daily amount per site: ≤0.022 tonnes/day. Annual amount per site: ≤5.5 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 3% (Cosmetics Europe SPERC 2.1.e.v2). air: 0% (Cosmetics Europe SPERC 2.1.e.v2). Soil: 0% (Cosmetics Europe SPERC 2.1.e.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with water, washing disposed of with wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	

octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Contributing scenario controlling environmental exposure for 15: Formulation of High Viscosity Body Care Products (medium scale)		
Amounts used	: Daily amount per site: ≤0.12 tonnes/day. Annual amount per site: ≤30 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 1% (Cosmetics Europe SPERC 2.1.f.v2). air: 0% (Cosmetics Europe SPERC 2.1.f.v2). Soil: 0% (Cosmetics Europe SPERC 2.1.f.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaning with reduced emissions to wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 16: Formulation of High Viscosity Body Care Products (small scale)		
Amounts used	: Daily amount per site: ≤0.08 tonnes/day. Annual amount per site: ≤20 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 2% (Cosmetics Europe SPERC 2.1.g.v2). air: 0% (Cosmetics Europe SPERC 2.1.g.v2). Soil: 0% (Cosmetics Europe SPERC 2.1.g.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with water, washing disposed of with wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 17: Formulation of liquid detergents/maintenance products: high viscosity (medium scale)		
Amounts used	: Daily amount per site: ≤0.12 tonnes/day. Annual amount per site: ≤30 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.2% (AISE SPERC 2.1.k.v2). air: 0% (AISE SPERC 2.1.k.v2). Soil: 0% (AISE SPERC 2.1.k.v2).	
Technical conditions and measures at process level (source) to prevent release	: Substance applied in aqueous process solution with negligible volatilization. Equipment cleaning with reduced emissions to wastewater. Process optimised for efficient use of raw materials.	
Organisational measures to prevent/limit release from site	: Trained staff, spill protection including waste reuse.	
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octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.	
Contributing scenario controlling environmental exposure for 18: Formulation of High Viscosity Body Care Products (small scale)		
Amounts used	: Daily amount per site: ≤0.022 tonnes/day. Annual amount per site: ≤5.5 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 2% (Cosmetics Europe SPERC 2.1.g.v2). air: 0% (Cosmetics Europe SPERC 2.1.g.v2). Soil: 0% (Cosmetics Europe SPERC 2.1.g.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with water, washing disposed of with wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 19: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (large scale)		
Amounts used	: Daily amount per site: ≤0.22 tonnes/day. Annual amount per site: ≤55 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0% (Cosmetics Europe SPERC 2.2.a.v2). air: 0% (Cosmetics Europe SPERC 2.2.a.v2). Soil: 0% (Cosmetics Europe SPERC 2.2.a.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Solvent-based process. Process optimised for highly efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.	
Contributing scenario controlling environmental exposure for 20: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (medium scale)		
Amounts used	: Daily amount per site: ≤0.12 tonnes/day. Annual amount per site: ≤30 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
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octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Other conditions affecting environmental exposure	: Indoor use.	Release factor after on-site risk management: water: 0% (Cosmetics Europe SPERC 2.2.b.v2). air: 0% (Cosmetics Europe SPERC 2.2.b.v2). Soil: 0% (Cosmetics Europe SPERC 2.2.b.v2).
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Solvent-based process. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.	
Contributing scenario controlling environmental exposure for 21: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (small scale)		
Amounts used	: Daily amount per site: ≤0.022 tonnes/day. Annual amount per site: ≤5.5 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use.	Release factor after on-site risk management: water: 0% (Cosmetics Europe SPERC 2.2.c.v2). air: 0% (Cosmetics Europe SPERC 2.2.c.v2). Soil: 0% (Cosmetics Europe SPERC 2.2.c.v2).
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Solvent-based process. Process with efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 22: Formulation of solid cosmetic and home care products (large scale)		
Amounts used	: Daily amount per site: ≤0.22 tonnes/day. Annual amount per site: ≤55 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use.	Release factor after on-site risk management: water: 0.05% (Cosmetics Europe / AISE SPERC 2.3.a.v2). air: 0% (Cosmetics Europe / AISE SPERC 2.3.a.v2). Soil: 0% (Cosmetics Europe / AISE SPERC 2.3.a.v2).
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaning with minimized emissions to wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for highly efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
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octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Contributing scenario controlling environmental exposure for 23: Formulation of solid cosmetic and home care products (medium scale)		
Amounts used	: Daily amount per site: ≤0.12 tonnes/day. Annual amount per site: ≤30 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.1% (Cosmetics Europe / AISE SPERC 2.3.b.v2). air: 0% (Cosmetics Europe / AISE SPERC 2.3.b.v2). Soil: 0% (Cosmetics Europe / AISE SPERC 2.3.b.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaning with reduced emissions to wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.	
Contributing scenario controlling environmental exposure for 24: Formulation of solid cosmetic and home care products (small scale)		
Amounts used	: Daily amount per site: ≤0.022 tonnes/day. Annual amount per site: ≤5.5 tonnes/year.	
Frequency and duration of use	: Emission days: 250 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0.2% (Cosmetics Europe / AISE SPERC 2.3.c.v2). air: 0% (Cosmetics Europe / AISE SPERC 2.3.c.v2). Soil: 0% (Cosmetics Europe / AISE SPERC 2.3.c.v2).	
Technical conditions and measures at process level (source) to prevent release	: Equipment cleaned with water, washing disposed of with wastewater. Substance applied in aqueous process solution with negligible volatilization. Process optimised for efficient use of raw materials.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
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octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 25: Contributing scenarios CS10: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC01 CS11: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02 CS12: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03 CS13: Chemical production where opportunity for exposure arises - PROC04 CS14: Mixing or blending in batch processes - PROC05 CS15: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS16: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09 CS17: Tableting, compression, extrusion, pelletisation, granulation - PROC09		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Formulation of Granular Detergents/ Maintenance Products - Regular & Compact (large scale)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00271 mg/l. Risk characterisation ratio (PEC/PNEC): 0.135. Freshwater sediment: 0.04 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.135. Marine water: 0.000269 mg/l. Risk characterisation ratio (PEC/PNEC): 0.135. Marine water sediment: 0.00398 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.135. Sewage Treatment Plant: 0.00157 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00548 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.116.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Formulation of Granular Detergents/ Maintenance Products - Regular & Compact (medium scale)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.0033 mg/l. Risk characterisation ratio (PEC/PNEC): 0.165. Freshwater sediment: 0.049 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.165. Marine water: 0.000329 mg/l. Risk characterisation ratio (PEC/PNEC): 0.165. Marine water sediment: 0.00486 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.165. Sewage Treatment Plant: 0.00752 mg/l.

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octanoic acid	Exposure Scenario: 046	Formulation or re-packing
	Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00695 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.147.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Formulation of Granular Detergents/ Maintenance Products - Regular & Compact (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00283 mg/l. Risk characterisation ratio (PEC/PNEC): 0.141. Freshwater sediment: 0.042 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.141. Marine water: 0.000281 mg/l. Risk characterisation ratio (PEC/PNEC): 0.141. Marine water sediment: 0.00415 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.141. Sewage Treatment Plant: 0.00276 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00577 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.122.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Formulation of liquid Detergents/ Maintenance Products: low viscosity (large scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00269 mg/l. Risk characterisation ratio (PEC/PNEC): 0.134. Freshwater sediment: 0.04 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.134. Marine water: 0.000268 mg/l. Risk characterisation ratio (PEC/PNEC): 0.134. Marine water sediment: 0.00395 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.134. Sewage Treatment Plant: 0.00138 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00543 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.115.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Exposure estimation and reference to its source - Environment: 5: Formulation of liquid Detergents/ Maintenance Products: low viscosity (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.0033 mg/l. Risk characterisation ratio (PEC/PNEC): 0.165.	
	Freshwater sediment: 0.049 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.165.	
	Marine water: 0.000329 mg/l. Risk characterisation ratio (PEC/PNEC): 0.165.	
	Marine water sediment: 0.00486 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.165.	
	Sewage Treatment Plant: 0.00752 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00695 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.147.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 6: Formulation of liquid Detergents/ Maintenance Products: low viscosity (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00283 mg/l. Risk characterisation ratio (PEC/PNEC): 0.141.	
	Freshwater sediment: 0.042 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.141.	
	Marine water: 0.000281 mg/l. Risk characterisation ratio (PEC/PNEC): 0.141.	
	Marine water sediment: 0.00415 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.141.	
	Sewage Treatment Plant: 0.00276 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00577 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.122.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 7: Formulation of liquid detergents/ maintenance products: high viscosity (large scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00393 mg/l. Risk characterisation ratio (PEC/PNEC): 0.196.	
	Freshwater sediment: 0.058 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.196.	
	Marine water: 0.000392 mg/l. Risk characterisation ratio (PEC/PNEC): 0.196.	
	Marine water sediment: 0.00578 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.196.	
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octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Sewage Treatment Plant: 0.014 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00849 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.18. Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Environment: 8: Formulation of liquid Detergents/ Maintenance Products: high viscosity (medium scale) Exposure assessment (environment): : EUSES 2.1.2 Exposure estimation : Freshwater: 0.00405 mg/l. Risk characterisation ratio (PEC/PNEC): 0.203. Freshwater sediment: 0.06 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.203. Marine water: 0.000404 mg/l. Risk characterisation ratio (PEC/PNEC): 0.202. Marine water sediment: 0.00596 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.202. Sewage Treatment Plant: 0.015 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0088 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.186. Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Environment: 9: Formulation of liquid Detergents/ Maintenance Products: high viscosity (small scale) Exposure assessment (environment): : EUSES 2.1.2 Exposure estimation : Freshwater: 0.014 mg/l. Risk characterisation ratio (PEC/PNEC): 0.691. Freshwater sediment: 0.204 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.691. Marine water: 0.00138 mg/l. Risk characterisation ratio (PEC/PNEC): 0.691. Marine water sediment: 0.02 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.691. Sewage Treatment Plant: 0.113 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.033 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.696. Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		

octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Exposure estimation and reference to its source - Environment: 10: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (large scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 11: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 12: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
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octanoic acid	Exposure Scenario: 046	Formulation or re-packing
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 13: Formulation of Fine Fragrances - Cleaning with Water (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.014 mg/l. Risk characterisation ratio (PEC/PNEC): 0.691.	
	Freshwater sediment: 0.204 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.691. Marine water: 0.00138 mg/l. Risk characterisation ratio (PEC/PNEC): 0.691. Marine water sediment: 0.02 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.691. Sewage Treatment Plant: 0.113 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.033 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.696.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 14: Formulation of Fine Fragrances - Cleaning with Water (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00668 mg/l. Risk characterisation ratio (PEC/PNEC): 0.334.	
	Freshwater sediment: 0.099 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.334. Marine water: 0.000667 mg/l. Risk characterisation ratio (PEC/PNEC): 0.334. Marine water sediment: 0.00985 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.334. Sewage Treatment Plant: 0.041 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.015 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Exposure estimation and reference to its source - Environment: 15: Formulation of High Viscosity Body Care Products (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.01 mg/l. Risk characterisation ratio (PEC/PNEC): 0.503.	
	Freshwater sediment: 0.149 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.504.	
	Marine water: 0.00101 mg/l. Risk characterisation ratio (PEC/PNEC): 0.503.	
	Marine water sediment: 0.015 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.503.	
	Sewage Treatment Plant: 0.075 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.024 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.5.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 16: Formulation of High Viscosity Body Care Products (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.013 mg/l. Risk characterisation ratio (PEC/PNEC): 0.629.	
	Freshwater sediment: 0.186 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.629.	
	Marine water: 0.00126 mg/l. Risk characterisation ratio (PEC/PNEC): 0.628.	
	Marine water sediment: 0.019 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.629.	
	Sewage Treatment Plant: 0.1 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.03 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.631.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 17: Formulation of liquid detergents/ maintenance products: high viscosity (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00405 mg/l. Risk characterisation ratio (PEC/PNEC): 0.203.	
	Freshwater sediment: 0.06 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.203.	
	Marine water: 0.000404 mg/l. Risk characterisation ratio (PEC/PNEC): 0.202.	
	Marine water sediment: 0.00596 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.202.	
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octanoic acid	Exposure Scenario: 046	Formulation or re-packing
	Sewage Treatment Plant: 0.015 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0088 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.186.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 18: Formulation of High Viscosity Body Care Products (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00531 mg/l. Risk characterisation ratio (PEC/PNEC): 0.265. Freshwater sediment: 0.078 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.265. Marine water: 0.000529 mg/l. Risk characterisation ratio (PEC/PNEC): 0.265. Marine water sediment: 0.00781 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.265. Sewage Treatment Plant: 0.028 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.012 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.252.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 19: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (large scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Exposure estimation and reference to its source - Environment: 20: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 21: Formulation of cosmetic products involving cleaning with organic solvents (varnish, removers, decorative cosmetics, spray, lacquer, fine fragrance, solar oil, solid products) (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 22: Formulation of solid cosmetic and home care products (large scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00324 mg/l. Risk characterisation ratio (PEC/PNEC): 0.162.	
	Freshwater sediment: 0.048 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.162.	
	Marine water: 0.000323 mg/l. Risk characterisation ratio (PEC/PNEC): 0.161.	
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Version		: 1 / en 200/390

octanoic acid	Exposure Scenario: 046	Formulation or re-packing
	Marine water sediment: 0.00476 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.161. Sewage Treatment Plant: 0.00689 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00679 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.144.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 23: Formulation of solid cosmetic and home care products (medium scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.0033 mg/l. Risk characterisation ratio (PEC/PNEC): 0.165. Freshwater sediment: 0.049 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.165. Marine water: 0.000329 mg/l. Risk characterisation ratio (PEC/PNEC): 0.165. Marine water sediment: 0.00486 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.165. Sewage Treatment Plant: 0.00752 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00695 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.147.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 24: Formulation of solid cosmetic and home care products (small scale)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00283 mg/l. Risk characterisation ratio (PEC/PNEC): 0.141. Freshwater sediment: 0.042 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.141. Marine water: 0.000281 mg/l. Risk characterisation ratio (PEC/PNEC): 0.141. Marine water sediment: 0.00415 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.141. Sewage Treatment Plant: 0.00276 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00577 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.122.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid	Exposure Scenario: 046	Formulation or re-packing
Exposure estimation and reference to its source - Workers: 25: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Washing and cleaning products (PC35)
List of use descriptors : **Identified use name: ES047:** Use at industrial sites - Washing and cleaning products [IFRA_GES3]: PC35; PROC02, PROC04, PROC07, PROC08b, PROC10, PROC13; ERC04
Process Category: PROC02, PROC04, PROC07, PROC08b, PROC10, PROC13
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC35
Environmental contributing scenarios : **Use of washing and cleaning products** - ERC04
Health Contributing scenarios : **Contributing scenarios** - PROC02, PROC04, PROC07, PROC08b, PROC10, PROC13

Number of the ES : 047

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of washing and cleaning products

Amounts used : Daily amount per site: ≤0.009 tonnes/day.
Annual amount per site: ≤2 tonnes/year.
Other conditions affecting environmental exposure : Indoor use.
Spent process fluid discharged to wastewater for subsequent treatment.
Release factor after on-site risk management:
water: 100% (ERC04).
air: 0% (Estimated release factor).
Soil: 5% (ERC04).
Technical conditions and measures at process level (source) to prevent release : Substance applied in aqueous process solution with negligible volatilization.
Process with efficient use of raw materials.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 90%.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure : - Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.

octanoic acid	Exposure Scenario: 047	Use at industrial sites; Washing and cleaning products (PC35)
- Training for staff on good practice. - Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS03: Industrial use; Use in closed process - PROC02 CS04: Industrial use; Automated task; Semi-automated task; Dedicated equipment - PROC04 CS05: Industrial spraying; Automated task; Open systems; Long term; Short term - PROC07 CS06: Brushing; Automated task - PROC10 CS07: Industrial use; Treatment of articles by dipping or pouring. - PROC13		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of washing and cleaning products	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00819 mg/l. Risk characterisation ratio (PEC/PNEC): 0.409. Freshwater sediment: 0.121 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.410. Marine water: 0.000818 mg/l. Risk characterisation ratio (PEC/PNEC): 0.409. Marine water sediment: 0.012 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.409. Sewage Treatment Plant: 0.056 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.019 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.402.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Washing and cleaning products (PC35)

List of use descriptors : **Identified use name: ES048:** Widespread use by professional workers - Washing and cleaning products [IFRA_GES4]: PC35; PROC01, PROC03, PROC04, PROC08a, PROC10, PROC11, PROC13, PROC19; ERC08a
Process Category: PROC01, PROC03, PROC04, PROC08a, PROC10, PROC11, PROC13, PROC19
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC35

Environmental contributing scenarios : **Use of washing and cleaning products** - ERC08a
Use of washing and cleaning products - ERC08a
Use of washing and cleaning products - ERC08a
Use of washing and cleaning products - ERC08a

Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC03, PROC04, PROC08a, PROC10, PROC11, PROC13, PROC19

Number of the ES : 048

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of washing and cleaning products

Amounts used : Daily local widespread use amount: ≤ 0.000016 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075

Frequency and duration of use : Emission days: 365 days per year.

Other conditions affecting environmental exposure : Indoor use/Outdoor use.
Spent process fluid discharged to wastewater for subsequent treatment.

Release factor after on-site risk management:
water: 100% (AISE SPERC 8a.1.a.v2).
air: 0% (AISE SPERC 8a.1.a.v2).
Soil: 0% (AISE SPERC 8a.1.a.v2).

Technical conditions and measures at process level (source) to prevent release : Substance applied in aqueous process solution with negligible volatilization.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 048	Widespread use by professional workers; Washing and cleaning products (PC35)
Contributing scenario controlling environmental exposure for 2: Use of washing and cleaning products		
Amounts used	: Daily local widespread use amount: ≤0.000022 tonnes/day. Fraction of EU tonnage used in region: 0.053 Fraction of Regional tonnage used locally: 0.00075	
Frequency and duration of use	: Emission days: 365 days per year.	
Other conditions affecting environmental exposure	: Indoor use Release factor after on-site risk management: water: 100% (AISE SPERC 8a.1.a.v2). air: 0% (AISE SPERC 8a.1.a.v2). Soil: 0% (AISE SPERC 8a.1.a.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of washing and cleaning products		
Amounts used	: Daily local widespread use amount: ≤0.000022 tonnes/day. Fraction of EU tonnage used in region: 0.053 Fraction of Regional tonnage used locally: 0.00075	
Frequency and duration of use	: Emission days: 365 days per year.	
Other conditions affecting environmental exposure	: Indoor use Release factor after on-site risk management: water: 0% (AISE SPERC 8a.1.b.v2). air: 100% (AISE SPERC 8a.1.b.v2). Soil: 0% (AISE SPERC 8a.1.b.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Use of washing and cleaning products		
Amounts used	: Daily local widespread use amount: ≤0.000022 tonnes/day. Fraction of EU tonnage used in region: 0.053 Fraction of Regional tonnage used locally: 0.00075	
Frequency and duration of use	: Emission days: 365 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 100% (AISE SPERC 8a.1.c.v2). air: 0% (AISE SPERC 8a.1.c.v2). Soil: 0% (AISE SPERC 8a.1.c.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	

octanoic acid	Exposure Scenario: 048	Widespread use by professional workers; Washing and cleaning products (PC35)
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	- Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	- Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios		
CS05: Transfer of professional product to a container (Bottle/Bucket/Machines) - PROC08a		
CS06: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03		
CS07: Professional uses; Semi-closed system - PROC04		
CS08: (trigger) spraying - PROC11		
CS09: Roller application or brushing - PROC10		
CS10: Use in closed process - PROC01		
CS11: Manual application - PROC19		
CS12: Treatment of articles by dipping, soaking or pouring - PROC13		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of washing and cleaning products	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00265 mg/l. Risk characterisation ratio (PEC/PNEC): 0.133. Freshwater sediment: 0.039 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.133. Marine water: 0.000264 mg/l. Risk characterisation ratio (PEC/PNEC): 0.132. Marine water sediment: 0.0039 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.132. Sewage Treatment Plant: 0.00103 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00535 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.113.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

octanoic acid	Exposure Scenario: 048	Widespread use by professional workers; Washing and cleaning products (PC35)
Exposure estimation and reference to its source - Environment: 2: Use of washing and cleaning products		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00269 mg/l. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Freshwater sediment: 0.04 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Marine water: 0.000267 mg/l. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Marine water sediment: 0.00395 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Sewage Treatment Plant: 0.00136 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00543 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.115.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Use of washing and cleaning products		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Use of washing and cleaning products		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00269 mg/l. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Freshwater sediment: 0.04 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Marine water: 0.000267 mg/l. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Marine water sediment: 0.00395 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Sewage Treatment Plant: 0.00136 mg/l.	
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octanoic acid	Exposure Scenario: 048	<i>Widespread use by professional workers; Washing and cleaning products (PC35)</i>
	Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00543 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.115.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers; Polishes and wax blends (PC31)

List of use descriptors : **Identified use name: ES049:** Widespread use by professional workers - Polishes and wax blends [IFRA_GES5]: PC31; PROC01, PROC04, PROC08a, PROC10, PROC13, PROC19; ERC08a
Process Category: PROC01, PROC04, PROC08a, PROC10, PROC13, PROC19
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC31

Environmental contributing scenarios : **Professional use of polishes and wax blends** - ERC08a
Professional use of polishes and wax blends - ERC08a
Professional use of polishes and wax blends - ERC08a
Professional use of polishes and wax blends - ERC08a

Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC04, PROC08a, PROC10, PROC13, PROC19

Number of the ES : 049

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Professional use of polishes and wax blends

Amounts used : Daily local widespread use amount: ≤ 0.000016 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075

Frequency and duration of use : Emission days: 365 days per year.

Other conditions affecting environmental exposure : Indoor use/Outdoor use.
Spent process fluid discharged to wastewater for subsequent treatment.

Release factor after on-site risk management:
water: 100% (AISE SPERC 8a.1.a.v2).
air: 0% (AISE SPERC 8a.1.a.v2).
Soil: 0% (AISE SPERC 8a.1.a.v2).

Technical conditions and measures at process level (source) to prevent release : Substance applied in aqueous process solution with negligible volatilization.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 049	Widespread use by professional workers; Polishes and wax blends (PC31)
Contributing scenario controlling environmental exposure for 2: Professional use of polishes and wax blends		
Amounts used	: Daily local widespread use amount: ≤0.000022 tonnes/day. Fraction of EU tonnage used in region: 0.053 Fraction of Regional tonnage used locally: 0.00075	
Frequency and duration of use	: Emission days: 365 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 100% (AISE SPERC 8a.1.a.v2). air: 0% (AISE SPERC 8a.1.a.v2). Soil: 0% (AISE SPERC 8a.1.a.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Professional use of polishes and wax blends		
Amounts used	: Daily local widespread use amount: ≤0.000022 tonnes/day. Fraction of EU tonnage used in region: 0.053 Fraction of Regional tonnage used locally: 0.00075	
Frequency and duration of use	: Emission days: 365 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 0% (AISE SPERC 8a.1.b.v2). air: 100% (AISE SPERC 8a.1.b.v2). Soil: 0% (AISE SPERC 8a.1.b.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 4: Professional use of polishes and wax blends		
Amounts used	: Daily local widespread use amount: ≤0.000022 tonnes/day. Fraction of EU tonnage used in region: 0.053 Fraction of Regional tonnage used locally: 0.00075	
Frequency and duration of use	: Emission days: 365 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Release factor after on-site risk management: water: 100% (AISE SPERC 8a.1.c.v2). air: 0% (AISE SPERC 8a.1.c.v2). Soil: 0% (AISE SPERC 8a.1.c.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	

octanoic acid	Exposure Scenario: 049	Widespread use by professional workers; Polishes and wax blends (PC31)
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	- Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	- Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals. - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 5: Contributing scenarios		
CS05: Transfer of professional product to a container (Bottle/Bucket/Machines) - PROC08a		
CS06: Professional use; Fully closed equipment - PROC01		
CS07: Professional use; Semi-closed system - PROC04		
CS08: Professional use; Brushing - PROC10		
CS09: Professional use; Manual application - PROC19		
CS10: Professional use; Treatment of articles by dipping, soaking or pouring - PROC13		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Professional use of polishes and wax blends	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00265 mg/l. Risk characterisation ratio (PEC/PNEC): 0.133. Freshwater sediment: 0.039 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.133. Marine water: 0.000264 mg/l. Risk characterisation ratio (PEC/PNEC): 0.132. Marine water sediment: 0.0039 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.132. Sewage Treatment Plant: 0.00103 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00535 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.113.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

octanoic acid	Exposure Scenario: 049	Widespread use by professional workers; Polishes and wax blends (PC31)
Exposure estimation and reference to its source - Environment: 2: Professional use of polishes and wax blends		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00269 mg/l. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Freshwater sediment: 0.04 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Marine water: 0.000267 mg/l. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Marine water sediment: 0.00395 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Sewage Treatment Plant: 0.00136 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00543 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.115.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Professional use of polishes and wax blends		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 4: Professional use of polishes and wax blends		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00269 mg/l. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Freshwater sediment: 0.04 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Marine water: 0.000267 mg/l. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Marine water sediment: 0.00395 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.134.	
	Sewage Treatment Plant: 0.00136 mg/l.	
Date of issue/Date of revision : 09/09/2019		
Version : 1 / en 213/390		

octanoic acid	Exposure Scenario: 049	<i>Widespread use by professional workers; Polishes and wax blends (PC31)</i>
	Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00543 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.115.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 5: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Use as an intermediate

List of use descriptors : **Identified use name: ES050:** Use at industrial sites - Use as an intermediate/resale and trading/distribution: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC15; ERC06a
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC15
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC06a

Environmental contributing scenarios : **Use as an intermediate/resale and trading/distribution** - ERC06a

Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC15

Number of the ES	: 050
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Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use as an intermediate/resale and trading/distribution

Amounts used : Daily amount per site: ≤4.2 tonnes/day.
Annual amount per site: ≤835 tonnes/year.

Frequency and duration of use : Emission days: ≥200 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0% (Estimated release factor).
air: 5% (ERC06a).
Soil: 0.1% (ERC06a).

Technical conditions and measures at process level (source) to prevent release : Negligible wastewater emission.
Substance is used as an intermediate or for resale in closed processes.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.

octanoic acid	Exposure Scenario: 050	Use at industrial sites; Use as an intermediate
- Training for staff on good practice. - Good standard of personal hygiene.		
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	- Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC01		
CS03: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02		
CS04: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03		
CS05: Mixing or blending in batch processes - PROC05		
CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b		
CS07: Use as laboratory reagent - PROC15		
CS08: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a		
CS09: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use as an intermediate/resale and trading/distribution	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.011 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.239.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 050	<i>Use at industrial sites; Use as an intermediate</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Paper and board treatment products (PC26)
List of use descriptors : **Identified use name: ES051:** Formulation or re-packing - Paper and board treatment products: PC26; PROC02, PROC03, PROC05, PROC09; ERC02
Process Category: PROC02, PROC03, PROC05, PROC09
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC26
Environmental contributing scenarios : **Formulation of paper and board treatment products - ERC02**
Health Contributing scenarios : **Contributing scenarios - PROC02, PROC03, PROC05, PROC09**

Number of the ES : 051

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Formulation of paper and board treatment products

Amounts used : Daily amount per site: ≤0.25 tonnes/day.
Annual amount per site: ≤25 tonnes/year.
Frequency and duration of use : Emission days: ≥100 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.2% (ERC02).
air: 2.5% (ERC02).
Soil: 0.01% (ERC02).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant : Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 90%.
Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure : - Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

octanoic acid	Exposure Scenario: 051	Formulation or re-packing; Paper and board treatment products (PC26)
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	- Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02		
CS03: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03		
CS04: Mixing or blending in batch processes - PROC05		
CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Formulation of paper and board treatment products	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00568 mg/l. Risk characterisation ratio (PEC/PNEC): 0.284. Freshwater sediment: 0.084 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.284. Marine water: 0.000567 mg/l. Risk characterisation ratio (PEC/PNEC): 0.284. Marine water sediment: 0.00837 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.284. Sewage Treatment Plant: 0.031 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.013 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.273.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of pulp, paper and paper products (SU06b); Paper and board treatment products (PC26)
List of use descriptors : **Identified use name: ES052:** Use at industrial sites - Paper and board treatment products: SU06b; PC26; PROC02, PROC05, PROC07, PROC13; ERC04
Process Category: PROC02, PROC05, PROC07, PROC13
Sector of end use: SU06b
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC26

Environmental contributing scenarios : **Use of paper and board treatment chemicals - ERC04**

Health Contributing scenarios : **Contributing scenarios - PROC02, PROC05, PROC07, PROC13**

Number of the ES : 052

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of paper and board treatment chemicals

Amounts used	: Daily amount per site: ≤0.15 tonnes/day. Annual amount per site: ≤15 tonnes/year.
Frequency and duration of use	: Emission days: ≥100 days per year.
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Release factor after on-site risk management: water: 1% (ERC04). air: 100% (ERC04). Soil: 5% (ERC04).
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant : Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes. Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 99%.
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.
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octanoic acid	Exposure Scenario: 052	<i>Use at industrial sites; Manufacture of pulp, paper and paper products (SU06b); Paper and board treatment products (PC26)</i>
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02		
CS03: Mixing or blending in batch processes - PROC05		
CS04: Industrial spraying - PROC07		
CS05: Treatment of articles by dipping and pouring - PROC13		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of paper and board treatment chemicals	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.012 mg/l. Risk characterisation ratio (PEC/PNEC): 0.597. Freshwater sediment: 0.176 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.598. Marine water: 0.00119 mg/l. Risk characterisation ratio (PEC/PNEC): 0.597. Marine water sediment: 0.018 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.597. Sewage Treatment Plant: 0.094 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.031 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.645.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES053:** Formulation or re-packing - Use of additives in polymer production, MB production, compounds production [PlasticsEurope_GES1]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC03
Process Category: PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC03
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Use of additives in polymer production, MB production, compounds production** - ERC03

Health Contributing scenarios : **Contributing scenarios** - PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24

Number of the ES : 053

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of additives in polymer production, MB production, compounds production

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.2% (ERC03).
air: 30% (ERC03).
Soil: 0.1% (ERC03).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure : - Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.

octanoic acid	Exposure Scenario: 053	Formulation or re-packing; Polymer preparations and compounds (PC32)
- Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing or blending in batch processes - PROC04 CS03: Mixing or blending in batch processes - PROC05 CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09 CS07: Tableting, compression, extrusion, pelletisation, granulation - PROC14 CS08: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS09: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of additives in polymer production, MB production, compounds production	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00882 mg/l. Risk characterisation ratio (PEC/PNEC): 0.441. Freshwater sediment: 0.13 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Marine water: 0.00088 mg/l. Risk characterisation ratio (PEC/PNEC): 0.440. Marine water sediment: 0.013 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Sewage Treatment Plant: 0.063 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.023 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.482.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 053	Formulation or re-packing; Polymer preparations and compounds (PC32)
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES054:** Formulation or re-packing - Direct uses of additives by converters [PlasticsEurope_GES2]: PC32; PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC14, PROC21, PROC24; ERC03
Process Category: PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC14, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC03
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Direct uses of additives by converters** - ERC03

Health Contributing scenarios : **Contributing scenarios** - PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC14, PROC21, PROC24

Number of the ES	: 054
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Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Direct uses of additives by converters

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.2% (ERC03).
air: 30% (ERC03).
Soil: 0.1% (ERC03).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 054	Formulation or re-packing; Polymer preparations and compounds (PC32)
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing or blending in batch processes - PROC04 CS03: Mixing or blending in batch processes - PROC05 CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09 CS07: Tableting, compression, extrusion, pelletisation, granulation - PROC14 CS08: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS09: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24 CS10: Calendering operations - PROC06 CS11: Roller application or brushing - PROC10 CS12: Treatment of articles by dipping and pouring - PROC13		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Direct uses of additives by converters	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00882 mg/l. Risk characterisation ratio (PEC/PNEC): 0.441. Freshwater sediment: 0.13 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Marine water: 0.00088 mg/l. Risk characterisation ratio (PEC/PNEC): 0.440. Marine water sediment: 0.013 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Sewage Treatment Plant: 0.063 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.023 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.482.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES055:** Formulation or re-packing - Use of additives in a plastic, masterbatch or compound in extrusion applications [PlasticsEurope_GES3]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC03
Process Category: PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC03
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Use of additives in a plastic, masterbatch or compound in extrusion applications** - ERC03

Health Contributing scenarios : **Contributing scenarios** - PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24

Number of the ES : 055

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of additives in a plastic, masterbatch or compound in extrusion applications

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.2% (ERC03).
air: 30% (ERC03).
Soil: 0.1% (ERC03).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.

octanoic acid	Exposure Scenario: 055	Formulation or re-packing; Polymer preparations and compounds (PC32)
- Good standard of personal hygiene.		
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Mixing or blending in batch processes - PROC04		
CS03: Mixing or blending in batch processes - PROC05		
CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a		
CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b		
CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09		
CS07: Tableting, compression, extrusion, pelletisation, granulation - PROC14		
CS08: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21		
CS09: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of additives in a plastic, masterbatch or compound in extrusion applications	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00882 mg/l. Risk characterisation ratio (PEC/PNEC): 0.441. Freshwater sediment: 0.13 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Marine water: 0.00088 mg/l. Risk characterisation ratio (PEC/PNEC): 0.440. Marine water sediment: 0.013 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Sewage Treatment Plant: 0.063 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.023 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.482.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 055	Formulation or re-packing; Polymer preparations and compounds (PC32)
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES056:** Formulation or re-packing - Use of additives in a plastic, masterbatch or compound in moulding applications [PlasticsEurope_GES4]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC03
Process Category: PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC03
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Use of additives in a plastic, masterbatch or compound in moulding applications** - ERC03

Health Contributing scenarios : **Contributing scenarios** - PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24

Number of the ES : 056

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of additives in a plastic, masterbatch or compound in moulding applications

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.2% (ERC03).
air: 30% (ERC03).
Soil: 0.1% (ERC03).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.

octanoic acid	Exposure Scenario: 056	Formulation or re-packing; Polymer preparations and compounds (PC32)	
- Good standard of personal hygiene.			
Conditions and measures related to personal protection, hygiene and health evaluation			
Personal protection	:		- Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.
Contributing scenario controlling worker exposure for 2: Contributing scenarios			
CS02: Mixing or blending in batch processes - PROC04			
CS03: Mixing or blending in batch processes - PROC05			
CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a			
CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b			
CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09			
CS07: Tableting, compression, extrusion, pelletisation, granulation - PROC14			
CS08: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21			
CS09: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24			

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of additives in a plastic, masterbatch or compound in moulding applications	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00882 mg/l. Risk characterisation ratio (PEC/PNEC): 0.441. Freshwater sediment: 0.13 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Marine water: 0.00088 mg/l. Risk characterisation ratio (PEC/PNEC): 0.440. Marine water sediment: 0.013 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Sewage Treatment Plant: 0.063 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.023 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.482.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 056	Formulation or re-packing; Polymer preparations and compounds (PC32)
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

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Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES057:** Formulation or re-packing - Use of additives in a plastic, masterbatch or compound in calendering [PlasticsEurope_GES5]: PC32; PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC03
Process Category: PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC03
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Use of additives in a plastic, masterbatch or compound in calendering** - ERC03

Health Contributing scenarios : **Contributing scenarios** - PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24

Number of the ES : 057

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of additives in a plastic, masterbatch or compound in calendering

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.2% (ERC03).
air: 30% (ERC03).
Soil: 0.1% (ERC03).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.

octanoic acid	Exposure Scenario: 057	Formulation or re-packing; Polymer preparations and compounds (PC32)
- Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing or blending in batch processes - PROC04 CS03: Mixing or blending in batch processes - PROC05 CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09 CS07: Calendering operations - PROC06 CS08: Tableting, compression, extrusion, pelletisation, granulation - PROC14 CS09: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS10: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of additives in a plastic, masterbatch or compound in calendering	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00882 mg/l. Risk characterisation ratio (PEC/PNEC): 0.441. Freshwater sediment: 0.13 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Marine water: 0.00088 mg/l. Risk characterisation ratio (PEC/PNEC): 0.440. Marine water sediment: 0.013 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Sewage Treatment Plant: 0.063 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.023 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.482.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 057	Formulation or re-packing; Polymer preparations and compounds (PC32)
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

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Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES058:** Formulation or re-packing - Use of additives in a plastic, masterbatch or compound in spread coating or dip coating [PlasticsEurope_GES6]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC21, PROC24; ERC03
Process Category: PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC03
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Use of additives in a plastic, masterbatch or compound in spread coating or dip coating - ERC03**

Health Contributing scenarios : **Contributing scenarios -** PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC21, PROC24

Number of the ES : 058

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of additives in a plastic, masterbatch or compound in spread coating or dip coating

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.2% (ERC03).
air: 30% (ERC03).
Soil: 0.1% (ERC03).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.

octanoic acid	Exposure Scenario: 058	Formulation or re-packing; Polymer preparations and compounds (PC32)
- Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing or blending in batch processes - PROC04 CS03: Mixing or blending in batch processes - PROC05 CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09 CS07: Roller application or brushing - PROC10 CS08: Treatment of articles by dipping and pouring - PROC13 CS09: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS10: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of additives in a plastic, masterbatch or compound in spread coating or dip coating	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00882 mg/l. Risk characterisation ratio (PEC/PNEC): 0.441. Freshwater sediment: 0.13 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Marine water: 0.00088 mg/l. Risk characterisation ratio (PEC/PNEC): 0.440. Marine water sediment: 0.013 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Sewage Treatment Plant: 0.063 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.023 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.482.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 058	<i>Formulation or re-packing; Polymer preparations and compounds (PC32)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

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Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES059:** Formulation or re-packing - Use of additives in a plastic, masterbatch or compound in foam production by steaming [PlasticsEurope_GES7]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC12, PROC21, PROC24; ERC03
Process Category: PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC12, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC03
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Use of additives in a plastic, masterbatch or compound in foam production by steaming** - ERC03

Health Contributing scenarios : **Contributing scenarios** - PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC12, PROC21, PROC24

Number of the ES : 059

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of additives in a plastic, masterbatch or compound in foam production by steaming

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.2% (ERC03).
air: 30% (ERC03).
Soil: 0.1% (ERC03).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.

octanoic acid	Exposure Scenario: 059	Formulation or re-packing; Polymer preparations and compounds (PC32)
- Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing or blending in batch processes - PROC04 CS03: Mixing or blending in batch processes - PROC05 CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09 CS07: Foam production by steaming operations (batch process) - PROC05 CS08: Foam production by steaming operations (batch process) - PROC12 CS09: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS10: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of additives in a plastic, masterbatch or compound in foam production by steaming	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00882 mg/l. Risk characterisation ratio (PEC/PNEC): 0.441. Freshwater sediment: 0.13 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Marine water: 0.00088 mg/l. Risk characterisation ratio (PEC/PNEC): 0.440. Marine water sediment: 0.013 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Sewage Treatment Plant: 0.063 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.023 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.482.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 059	<i>Formulation or re-packing; Polymer preparations and compounds (PC32)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

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Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES060:** Use at industrial sites - Use of additives in polymer production, MB production, compounds production [PlasticsEurope_GES1]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC05
Process Category: PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Use of additives in polymer production, MB production, compounds production** - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24

Number of the ES	: 060
Additional information	: Contributing scenarios: ES067, ES068, ES110.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of additives in polymer production, MB production, compounds production

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.125% (OECD ESD Series No. 3 for plastic additives).
air: 0.125% (OECD ESD Series No. 3 for plastic additives).
Soil: 1% (ERC05).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.

octanoic acid	Exposure Scenario: 060	Use at industrial sites; Polymer preparations and compounds (PC32)
- Training for staff on good practice. - Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing or blending in batch processes - PROC04 CS03: Mixing or blending in batch processes - PROC05 CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09 CS07: Tableting, compression, extrusion, pelletisation, granulation - PROC14 CS08: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS09: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of additives in polymer production, MB production, compounds production	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00647 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Freshwater sediment: 0.095 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water: 0.000645 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water sediment: 0.00953 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Sewage Treatment Plant: 0.039 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.015 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.312.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 060	<i>Use at industrial sites; Polymer preparations and compounds (PC32)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES061:** Use at industrial sites - Direct uses of additives by converters [PlasticsEurope_GES2]: PC32; PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC14, PROC21, PROC24; ERC05
Process Category: PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC14, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Direct uses of additives by converters** - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC14, PROC21, PROC24

Number of the ES	: 061
Additional information	: Contributing scenarios: ES067, ES068, ES110.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Direct uses of additives by converters

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.125% (OECD ESD Series No. 3 for plastic additives).
air: 0.125% (OECD ESD Series No. 3 for plastic additives).
Soil: 1% (ERC05).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure : - Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

octanoic acid	Exposure Scenario: 061	Use at industrial sites; Polymer preparations and compounds (PC32)
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Mixing or blending in batch processes - PROC04 CS03: Mixing or blending in batch processes - PROC05 CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09 CS07: Tableting, compression, extrusion, pelletisation, granulation - PROC14 CS08: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS09: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24 CS10: Calendering operations - PROC06 CS11: Roller application or brushing - PROC10 CS12: Treatment of articles by dipping and pouring - PROC13		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Direct uses of additives by converters	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00647 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Freshwater sediment: 0.095 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water: 0.000645 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water sediment: 0.00953 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Sewage Treatment Plant: 0.039 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.015 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.312.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 061	<i>Use at industrial sites; Polymer preparations and compounds (PC32)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES062:** Use at industrial sites - Use of additives in a plastic, masterbatch or compound in extrusion applications [PlasticsEurope_GES3]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC05
Process Category: PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Use of additives in a plastic, masterbatch or compound in extrusion applications** - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24

Number of the ES : 062
Additional information : Contributing scenarios: ES067, ES068, ES110.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of additives in a plastic, masterbatch or compound in extrusion applications

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.125% (OECD ESD Series No. 3 for plastic additives).
air: 0.125% (OECD ESD Series No. 3 for plastic additives).
Soil: 1% (ERC05).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure : - Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.

octanoic acid	Exposure Scenario: 062	Use at industrial sites; Polymer preparations and compounds (PC32)
- Training for staff on good practice. - Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing or blending in batch processes - PROC04 CS03: Mixing or blending in batch processes - PROC05 CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09 CS07: Tableting, compression, extrusion, pelletisation, granulation - PROC14 CS08: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS09: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of additives in a plastic, masterbatch or compound in extrusion applications	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00647 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Freshwater sediment: 0.095 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water: 0.000645 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water sediment: 0.00953 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Sewage Treatment Plant: 0.039 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.015 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.312.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 062	<i>Use at industrial sites; Polymer preparations and compounds (PC32)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES063:** Use at industrial sites - Use of additives in a plastic, masterbatch or compound in moulding applications [PlasticsEurope_GES4]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC05
Process Category: PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Use of additives in a plastic, masterbatch or compound in moulding applications** - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24

Number of the ES : 063
Additional information : Contributing scenarios: ES067, ES068, ES110.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of additives in a plastic, masterbatch or compound in moulding applications

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.125% (OECD ESD Series No. 3 for plastic additives).
air: 0.125% (OECD ESD Series No. 3 for plastic additives).
Soil: 1% (ERC05).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure : - Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.

octanoic acid	Exposure Scenario: 063	Use at industrial sites; Polymer preparations and compounds (PC32)
- Training for staff on good practice. - Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing or blending in batch processes - PROC04 CS03: Mixing or blending in batch processes - PROC05 CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09 CS07: Tableting, compression, extrusion, pelletisation, granulation - PROC14 CS08: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS09: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of additives in a plastic, masterbatch or compound in moulding applications	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00647 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Freshwater sediment: 0.095 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water: 0.000645 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water sediment: 0.00953 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Sewage Treatment Plant: 0.039 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.015 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.312.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 063	<i>Use at industrial sites; Polymer preparations and compounds (PC32)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES064:** Use at industrial sites - Use of additives in a plastic, masterbatch or compound in calendering [PlasticsEurope_GES5]: PC32; PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24; ERC05
Process Category: PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Use of additives in a plastic, masterbatch or compound in calendering - ERC05**

Health Contributing scenarios : **Contributing scenarios -** PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC14, PROC21, PROC24

Number of the ES	: 064
Additional information	: Contributing scenarios: ES067, ES068, ES110.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of additives in a plastic, masterbatch or compound in calendering

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.125% (OECD ESD Series No. 3 for plastic additives).
air: 0.125% (OECD ESD Series No. 3 for plastic additives).
Soil: 1% (ERC05).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure : - Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.

octanoic acid	Exposure Scenario: 064	Use at industrial sites; Polymer preparations and compounds (PC32)
- Training for staff on good practice. - Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing or blending in batch processes - PROC04 CS03: Mixing or blending in batch processes - PROC05 CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09 CS07: Calendering operations - PROC06 CS08: Tableting, compression, extrusion, pelletisation, granulation - PROC14 CS09: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS10: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of additives in a plastic, masterbatch or compound in calendering	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00647 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Freshwater sediment: 0.095 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water: 0.000645 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water sediment: 0.00953 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Sewage Treatment Plant: 0.039 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.015 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.312.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 064	<i>Use at industrial sites; Polymer preparations and compounds (PC32)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

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Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES065:** Formulation or re-packing - Use of additives in a plastic, masterbatch or compound in spread coating or dip coating [PlasticsEurope_GES6]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC21, PROC24; ERC05
Process Category: PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Use of additives in a plastic, masterbatch or compound in spread coating or dip coating - ERC05**

Health Contributing scenarios : **Contributing scenarios -** PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC21, PROC24

Number of the ES	: 065
Additional information	: Contributing scenarios: ES067, ES068, ES110.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of additives in a plastic, masterbatch or compound in spread coating or dip coating

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.125% (OECD ESD Series No. 3 for plastic additives).
air: 0.125% (OECD ESD Series No. 3 for plastic additives).
Soil: 1% (ERC05).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure : - Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.

octanoic acid	Exposure Scenario: 065	Use at industrial sites; Polymer preparations and compounds (PC32)
- Training for staff on good practice. - Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing or blending in batch processes - PROC04 CS03: Mixing or blending in batch processes - PROC05 CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09 CS07: Roller application or brushing - PROC10 CS08: Treatment of articles by dipping and pouring - PROC13 CS09: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS10: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of additives in a plastic, masterbatch or compound in spread coating or dip coating	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00647 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Freshwater sediment: 0.095 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water: 0.000645 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water sediment: 0.00953 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Sewage Treatment Plant: 0.039 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.015 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.312.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 065	<i>Use at industrial sites; Polymer preparations and compounds (PC32)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Polymer preparations and compounds (PC32)

List of use descriptors : **Identified use name: ES066:** Use at industrial sites - Use of additives in a plastic, masterbatch or compound in foam production by steaming [PlasticsEurope_GES7]: PC32; PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC12, PROC21, PROC24; ERC05
Process Category: PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC12, PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **Use of additives in a plastic, masterbatch or compound in foam production by steaming** - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC12, PROC21, PROC24

Number of the ES : 066
Additional information : Contributing scenarios: ES067, ES068, ES110.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of additives in a plastic, masterbatch or compound in foam production by steaming

Amounts used : Daily amount per site: ≤0.5 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥100 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.125% (OECD ESD Series No. 3 for plastic additives).
air: 0.125% (OECD ESD Series No. 3 for plastic additives).
Soil: 1% (ERC05).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure : - Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.

octanoic acid	Exposure Scenario: 066	Use at industrial sites; Polymer preparations and compounds (PC32)
- Training for staff on good practice. - Good standard of personal hygiene. Conditions and measures related to personal protection, hygiene and health evaluation Personal protection : - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.		
Contributing scenario controlling worker exposure for 2: Contributing scenarios CS02: Mixing or blending in batch processes - PROC04 CS03: Mixing or blending in batch processes - PROC05 CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC09 CS07: Foam production by steaming operations (batch process) - PROC05 CS08: Foam production by steaming operations (batch process) - PROC12 CS09: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS10: High (mechanical) energy work-up of substances bound in/on materials and/or articles - PROC24		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of additives in a plastic, masterbatch or compound in foam production by steaming	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00647 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Freshwater sediment: 0.095 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water: 0.000645 mg/l. Risk characterisation ratio (PEC/PNEC): 0.323. Marine water sediment: 0.00953 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.323. Sewage Treatment Plant: 0.039 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.015 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.312.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 066	<i>Use at industrial sites; Polymer preparations and compounds (PC32)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Service life - workers; Plastic articles (AC13)
List of use descriptors : **Identified use name: ES067:** Service life - Industrial - service life plastic articles [PlasticsEurope]: AC13; PROC21, PROC24; ERC12a, ERC12b
Process Category: PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC12a, ERC12b
Article category related to subsequent service life: AC13
Environmental contributing scenarios : **service life plastic articles** - ERC12a, ERC12b
Health Contributing scenarios : **Contributing scenarios** - PROC21, PROC24

Number of the ES	: 067
Additional information	: Contributing scenarios: ES060, ES061, ES062, ES063, ES064, ES065, ES066.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: service life plastic articles

Amounts used	: Daily amount per site: ≤0.043 tonnes/day. Annual amount per site: ≤4.3 tonnes/year.
Frequency and duration of use	: Emission days: ≥100 days per year.
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m ³ /d. Release factor after on-site risk management: water: 0.5% (OECD ESD Series No. 3 for plastic additives). air: 20% (ERC12b). Soil: 20% (ERC12b).
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m ³ /d. Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.
Conditions and measures related to personal protection, hygiene and health evaluation	

octanoic acid	Exposure Scenario: 067	Service life - workers; Plastic articles (AC13)
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: service life plastic articles - PROC21		
CS03: service life plastic articles - PROC24		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: service life plastic articles	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.0039 mg/l. Risk characterisation ratio (PEC/PNEC): 0.195. Freshwater sediment: 0.058 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.195. Marine water: 0.000388 mg/l. Risk characterisation ratio (PEC/PNEC): 0.194. Marine water sediment: 0.00573 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.194. Sewage Treatment Plant: 0.013 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00855 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.181.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Service life - workers; Plastic articles (AC13)
List of use descriptors : **Identified use name: ES068:** Service life - Professional - service life plastic articles [PlasticsEurope]: AC13; PROC21, PROC24; ERC10a, ERC11a
Process Category: PROC21, PROC24
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC10a, ERC11a
Article category related to subsequent service life: AC13
Environmental contributing scenarios : **service life plastic articles** - ERC10a, ERC11a
Health Contributing scenarios : **Contributing scenarios** - PROC21, PROC24

Number of the ES	: 068
Additional information	: Contributing scenarios: ES060, ES061, ES062, ES063, ES064, ES065, ES066.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: service life plastic articles

Amounts used	: Daily local widespread use amount: ≤0.000024 tonnes/day.
Other conditions affecting environmental exposure	: Release factor after on-site risk management: water: 0.5% (OECD ESD Series No. 3 for plastic additives). air: 0.05% (ERC10a). Soil: 3.2% (ERC10a).
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.

Contributing scenario controlling worker exposure for 2: Contributing scenarios

CS02: service life plastic articles - PROC21

CS03: service life plastic articles - PROC24

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: 1: service life plastic articles****Exposure assessment (environment):** : EUSES 2.1.2**Exposure estimation** : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.Marine water: 0.000254 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.Marine water sediment: 0.00375 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.127.Sewage Treatment Plant: 0.00000741 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.Soil: 0.0051 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.108.**Remark** : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).**Exposure estimation and reference to its source - Workers: 2: Contributing scenarios****Exposure assessment (human):** : Qualitative approach used to conclude safe use.**Exposure estimation** : Not applicable.**Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES****General** : The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.**Environment** : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Pharmaceuticals (PC29)
List of use descriptors : **Identified use name: ES069:** Use at industrial sites - Manufacture of pharmaceutical products.: PC29; PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09, PROC14; ERC06a
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09, PROC14
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC06a
Market sector by type of chemical product: PC29
Environmental contributing scenarios : **Manufacture of pharmaceutical products.** - ERC06a
Health Contributing scenarios : **Contributing scenarios** - PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09, PROC14

Number of the ES : 069

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Manufacture of pharmaceutical products.

Amounts used : Daily amount per site: ≤0.25 tonnes/day.
Annual amount per site: ≤25 tonnes/year.
Frequency and duration of use : Emission days: ≥100 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0% (EU TGD 2003).
air: 0% (EU TGD 2003).
Soil: 0% (EU TGD 2003).
Technical conditions and measures at process level (source) to prevent release : Process optimised for highly efficient use of raw materials.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.

octanoic acid	Exposure Scenario: 069	Use at industrial sites; Pharmaceuticals (PC29)
- Training for staff on good practice. - Good standard of personal hygiene.		
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC01		
CS03: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC02		
CS04: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03		
CS05: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03		
CS06: Mixing or blending in batch processes - PROC05		
CS07: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b		
CS08: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09		
CS09: Tableting, compression, extrusion, pelletisation, granulation - PROC14		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Manufacture of pharmaceutical products.	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

octanoic acid	Exposure Scenario: 069	<i>Use at industrial sites; Pharmaceuticals (PC29)</i>
General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.	
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.	

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Various products (PC20, PC32, PC34)
List of use descriptors : **Identified use name: ES070:** Formulation or re-packing - blending (textiles)
[TEGEWA]: PC20, PC32, PC34; PROC05; ERC02, ERC03
Process Category: PROC05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02, ERC03
Market sector by type of chemical product: PC20, PC32, PC34
Environmental contributing scenarios : **Use of textile chemicals (auxiliaries) to prepare in-house formulations ready to use** - ERC02
Formulation of recipe with non-water based liquids - ERC03
Health Contributing scenarios : **Mixing or blending in batch processes** - PROC05

Number of the ES : 070

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of textile chemicals (auxiliaries) to prepare in-house formulations ready to use

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.
Frequency and duration of use : Emission days: ≥220 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.2% (ERC02).
air: 2.5% (ERC02).
Soil: 0.01% (ERC02).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant : Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 90%.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Formulation of recipe with non-water based liquids

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.
Frequency and duration of use : Emission days: ≥220 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.2% (ERC03).
air: 30% (ERC03).
Soil: 0.1% (ERC03).

octanoic acid	Exposure Scenario: 070	Formulation or re-packing; Various products (PC20, PC32, PC34)
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant : Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 3: Mixing or blending in batch processes		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of textile chemicals (auxiliaries) to prepare in-house formulations ready to use		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00398 mg/l. Risk characterisation ratio (PEC/PNEC): 0.199. Freshwater sediment: 0.059 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.199. Marine water: 0.000397 mg/l. Risk characterisation ratio (PEC/PNEC): 0.198. Marine water sediment: 0.00585 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.198. Sewage Treatment Plant: 0.014 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00871 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.184.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid		Exposure Scenario: 070	Formulation or re-packing; Various products (PC20, PC32, PC34)
Exposure estimation and reference to its source - Environment: 2: Formulation of recipe with non-water based liquids			
Exposure assessment (environment):	: EUSES 2.1.2		
Exposure estimation	: Freshwater: 0.00398 mg/l. Risk characterisation ratio (PEC/PNEC): 0.199. Freshwater sediment: 0.059 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.199. Marine water: 0.000397 mg/l. Risk characterisation ratio (PEC/PNEC): 0.198. Marine water sediment: 0.00585 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.198. Sewage Treatment Plant: 0.014 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00973 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.206.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Workers: 3: Mixing or blending in batch processes			
Exposure assessment (human):	: Qualitative approach used to conclude safe use.		
Exposure estimation	: Not applicable.		

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing; Various products (PC20, PC23, PC34)
List of use descriptors : **Identified use name: ES071:** Formulation or re-packing - blending (leather) [TEGEWA]: PC20, PC23, PC34; PROC05; ERC02
Process Category: PROC05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC20, PC23, PC34
Environmental contributing scenarios : **blending (leather) - ERC02**
Health Contributing scenarios : **Use of leather chemicals to prepare in-house formulations ready to use - PROC05**

Number of the ES : 071

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: blending (leather)

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.2% (ERC02).
air: 2.5% (ERC02).
Soil: 0.01% (ERC02).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant : Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 90%.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.
Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 071	<i>Formulation or re-packing; Various products (PC20, PC23, PC34)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Use of leather chemicals to prepare in-house formulations ready to use		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: blending (leather)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00398 mg/l. Risk characterisation ratio (PEC/PNEC): 0.199. Freshwater sediment: 0.059 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.199. Marine water: 0.000397 mg/l. Risk characterisation ratio (PEC/PNEC): 0.198. Marine water sediment: 0.00585 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.198. Sewage Treatment Plant: 0.014 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00871 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.184.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Use of leather chemicals to prepare in-house formulations ready to use	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC32, PC34)

List of use descriptors : **Identified use name: ES072:** Use at industrial sites - Handling (Textiles.) [TEGEWA]: SU05; PC20, PC32, PC34; PROC08a, PROC08b, PROC09; ERC04, ERC05, ERC06b
Process Category: PROC08a, PROC08b, PROC09
Sector of end use: SU05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05, ERC06b
Market sector by type of chemical product: PC20, PC32, PC34

Environmental contributing scenarios : **Use of non-reactive processing aid at industrial site (no inclusion into or onto article) - ERC04**
Transfer of non-processing aids from/to vessels - ERC05
Use of reactive processing aid at industrial site (no inclusion into or onto article) - ERC06b

Health Contributing scenarios : **Contributing scenarios - PROC08a, PROC08b, PROC09**

Number of the ES : 072

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

Amounts used : Daily amount per site: ≤0.05 tonnes/day (M SpERC (kg/d)).
Annual amount per site: ≤11 tonnes/year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Negligible wastewater emissions as process operates without water contact.

Release factor after on-site risk management:
water: 0% (Estimated release factor).
air: 0% (Estimated release factor).
Soil: 5% (ERC04).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Transfer of non-processing aids from/to vessels

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Marine water: 0.000254 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.

Marine water sediment: 0.00375 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.127.

Sewage Treatment Plant: 0 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00509 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.108.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Transfer of non-processing aids from/to vessels

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Marine water: 0.000254 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.

Marine water sediment: 0.00375 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.127.

Sewage Treatment Plant: 0 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00509 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.108.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 3: Use of reactive processing aid at industrial site (no inclusion into or onto article)

Exposure assessment (environment): : EUSES 2.1.2

octanoic acid	Exposure Scenario: 072	Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC32, PC34)
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 4: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Textile dyes and impregnating products (PC34)
List of use descriptors : **Identified use name: ES073:** Use at industrial sites - Textile application: calendering [TEGEWA]: SU05; PC34; PROC06; ERC05
Process Category: PROC06
Sector of end use: SU05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC34
Environmental contributing scenarios : **Textile application: calendering** - ERC05
Health Contributing scenarios : **Calendering operations** - PROC06

Number of the ES : 073

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Textile application: calendering

Amounts used : Daily amount per site: ≤0.09 tonnes/day.
Annual amount per site: ≤25 tonnes/year.
Frequency and duration of use : Emission days: ≥220 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.048% (OECD ESD Series No. 7 for textile finishing).
air: 2.5% (EU TGD 2003).
Soil: 1% (ERC05).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 073	<i>Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Textile dyes and impregnating products (PC34)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Calendering operations		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Textile application: calendering	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00282 mg/l. Risk characterisation ratio (PEC/PNEC): 0.141. Freshwater sediment: 0.042 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.141. Marine water: 0.000281 mg/l. Risk characterisation ratio (PEC/PNEC): 0.140. Marine water sediment: 0.00414 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.141. Sewage Treatment Plant: 0.00271 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00585 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.124.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Calendering operations	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC34, PC35)
List of use descriptors : **Identified use name: ES074:** Use at industrial sites - Textile application: dipping and pouring [TEGEWA]: SU05; PC20, PC34, PC35; PROC13; ERC04
Process Category: PROC13
Sector of end use: SU05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC20, PC34, PC35
Environmental contributing scenarios : **Textile application: dipping and pouring - ERC04**
Health Contributing scenarios : **Treatment of articles by dipping and pouring - PROC13**

Number of the ES : 074

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Textile application: dipping and pouring

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.
Frequency and duration of use : Emission days: ≥220 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.048% (OECD ESD Series No. 7 for textile finishing).
air: 2.5% (EU TGD 2003).
Soil: 5% (ERC04).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 074	<i>Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC34, PC35)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Treatment of articles by dipping and pouring		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Textile application: dipping and pouring	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00289 mg/l. Risk characterisation ratio (PEC/PNEC): 0.145. Freshwater sediment: 0.043 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.145. Marine water: 0.000288 mg/l. Risk characterisation ratio (PEC/PNEC): 0.144. Marine water sediment: 0.00425 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.144. Sewage Treatment Plant: 0.00343 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00603 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Treatment of articles by dipping and pouring	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC08, PC18, PC20, PC34, PC35)
List of use descriptors : **Identified use name: ES075:** Use at industrial sites - Textile application: dipping and pouring [TEGEWA]: SU05; PC08, PC18, PC20, PC32, PC34; PROC13; ERC05
Process Category: PROC13
Sector of end use: SU05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC08, PC18, PC20, PC32, PC34
Environmental contributing scenarios : **Textile application: dipping and pouring - ERC05**
Health Contributing scenarios : **Treatment of articles by dipping and pouring - PROC13**

Number of the ES : 075

Additional information : Contributing scenarios: ES083, ES084, ES111, ES112.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Textile application: dipping and pouring

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.
Frequency and duration of use : Emission days: ≥220 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.048% (OECD ESD Series No. 7 for textile finishing).
air: 2.5% (EU TGD 2003).
Soil: 1% (ERC05).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.79%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.
Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 075	<i>Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC08, PC18, PC20, PC34, PC35)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Treatment of articles by dipping and pouring		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Textile application: dipping and pouring	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.0045 mg/l. Risk characterisation ratio (PEC/PNEC): 0.225. Freshwater sediment: 0.211 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.225. Marine water: 0.000622 mg/l. Risk characterisation ratio (PEC/PNEC): 0.311. Marine water sediment: 0.029 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.311. Sewage Treatment Plant: 0.00334 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.069 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.395.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Treatment of articles by dipping and pouring	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Textile dyes and impregnating products (PC34)
List of use descriptors : **Identified use name: ES076:** Use at industrial sites - Textile application: dipping and pouring [TEGEWA]: SU05; PC34; PROC13; ERC06b
Process Category: PROC13
Sector of end use: SU05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC06b
Market sector by type of chemical product: PC34
Environmental contributing scenarios : **Textile application: dipping and pouring - ERC06b**
Health Contributing scenarios : **Treatment of articles by dipping and pouring - PROC13**

Number of the ES : 076

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Textile application: dipping and pouring

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.
Frequency and duration of use : Emission days: ≥220 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.048% (OECD ESD Series No. 7 for textile finishing).
air: 2.5% (EU TGD 2003).
Soil: 0.025% (ERC06b).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 076	<i>Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Textile dyes and impregnating products (PC34)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Treatment of articles by dipping and pouring		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Textile application: dipping and pouring	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00289 mg/l. Risk characterisation ratio (PEC/PNEC): 0.145. Freshwater sediment: 0.043 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.145. Marine water: 0.000288 mg/l. Risk characterisation ratio (PEC/PNEC): 0.144. Marine water sediment: 0.00425 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.144. Sewage Treatment Plant: 0.00343 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00603 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Treatment of articles by dipping and pouring	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC34)
List of use descriptors : **Identified use name: ES077:** Use at industrial sites - textile coating [TEGEWA]: SU05; PC20, PC34; PROC10; ERC04
Process Category: PROC10
Sector of end use: SU05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC20, PC34
Environmental contributing scenarios : **textile coating** - ERC04
Health Contributing scenarios : **Roller application or brushing** - PROC10

Number of the ES : 077

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: textile coating

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.
Frequency and duration of use : Emission days: ≥220 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.048% (OECD ESD Series No. 7 for textile finishing).
air: 2.5% (EU TGD 2003).
Soil: 5% (ERC04).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.
Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 077	<i>Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC34)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Roller application or brushing		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: textile coating	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00289 mg/l. Risk characterisation ratio (PEC/PNEC): 0.145. Freshwater sediment: 0.043 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.145. Marine water: 0.000288 mg/l. Risk characterisation ratio (PEC/PNEC): 0.144. Marine water sediment: 0.00425 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.144. Sewage Treatment Plant: 0.00343 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00603 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Roller application or brushing	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC32, PC34)
List of use descriptors : **Identified use name: ES078:** Use at industrial sites - textile coating [TEGEWA]: SU05; PC32, PC34; PROC10; ERC05
Process Category: PROC10
Sector of end use: SU05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC32, PC34
Environmental contributing scenarios : **textile coating** - ERC05
Health Contributing scenarios : **Roller application or brushing** - PROC10

Number of the ES : 078

Additional information : Contributing scenarios: ES083, ES084, ES111, ES112.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: textile coating

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.
Frequency and duration of use : Emission days: ≥220 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.048% (OECD ESD Series No. 7 for textile finishing).
air: 2.5% (EU TGD 2003).
Soil: 1% (ERC05).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 078	<i>Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC32, PC34)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Roller application or brushing		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: textile coating	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00289 mg/l. Risk characterisation ratio (PEC/PNEC): 0.145. Freshwater sediment: 0.043 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.145. Marine water: 0.000288 mg/l. Risk characterisation ratio (PEC/PNEC): 0.144. Marine water sediment: 0.00425 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.144. Sewage Treatment Plant: 0.00343 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00603 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Roller application or brushing	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC34)
List of use descriptors : **Identified use name: ES079:** Use at industrial sites - textile coating [TEGEWA]: SU05; PC20, PC34; PROC10; ERC06b
Process Category: PROC10
Sector of end use: SU05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC06b
Market sector by type of chemical product: PC20, PC34
Environmental contributing scenarios : **textile coating** - ERC06b
Health Contributing scenarios : **Roller application or brushing** - PROC10

Number of the ES	: 079
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Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: textile coating

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.
Frequency and duration of use : Emission days: ≥10 days per year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Release factor after on-site risk management:
water: 0.048% (OECD ESD Series No. 7 for textile finishing).
air: 2.5% (EU TGD 2003).
Soil: 0.025% (ERC06b).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

Conditions and measures related to personal protection, hygiene and health evaluation

octanoic acid	Exposure Scenario: 079	<i>Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC34)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Roller application or brushing		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: textile coating	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00289 mg/l. Risk characterisation ratio (PEC/PNEC): 0.145. Freshwater sediment: 0.043 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.145. Marine water: 0.000288 mg/l. Risk characterisation ratio (PEC/PNEC): 0.144. Marine water sediment: 0.00425 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.144. Sewage Treatment Plant: 0.00343 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00603 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers: 2: Roller application or brushing	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC23, PC32)
List of use descriptors : **Identified use name: ES080:** Use at industrial sites - Handling (leather) [TEGEWA]: SU05; PC20, PC23, PC32; PROC08a, PROC08b, PROC09; ERC04, ERC05, ERC06b
Process Category: PROC08a, PROC08b, PROC09
Sector of end use: SU05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05, ERC06b
Market sector by type of chemical product: PC20, PC32, PC34
Environmental contributing scenarios : **Use of non-reactive processing aid at industrial site (no inclusion into or onto article)** - ERC04
Transfer of non-processing aids from/to vessels - ERC05
Use of reactive processing aid at industrial site (no inclusion into or onto article) - ERC06b
Health Contributing scenarios : **Contributing scenarios** - PROC08a, PROC08b, PROC09

Number of the ES : 080

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

Amounts used : Daily amount per site: ≤0.05 tonnes/day (M SpERC (kg/d)).
Annual amount per site: ≤11.0 tonnes/year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Negligible wastewater emissions as process operates without water contact.

Release factor after on-site risk management:
water: 0% (Estimated release factor).
air: 0% (Estimated release factor).
Soil: 5% (ERC04).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Transfer of non-processing aids from/to vessels

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25.0 tonnes/year.
Frequency and duration of use : Emission days: ≥220 days per year.

octanoic acid	Exposure Scenario: 080	Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC23, PC32)
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Negligible wastewater emissions as process operates without water contact. Release factor after on-site risk management: water: 0% (Estimated release factor). air: 0% (Estimated release factor). Soil: 1% (ERC05).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.	
Contributing scenario controlling environmental exposure for 3: Use of reactive processing aid at industrial site (no inclusion into or onto article)		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25.0 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Release factor after on-site risk management: water: 0% (Estimated release factor). air: 0% (Estimated release factor). Soil: 0.025% (ERC06b).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 4: Contributing scenarios		
CS04: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09		

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: 1: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)**

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Marine water: 0.000254 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.

Marine water sediment: 0.00375 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.127.

Sewage Treatment Plant: 0 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00509 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.108.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Transfer of non-processing aids from/to vessels

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Marine water: 0.000254 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.

Marine water sediment: 0.00375 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.127.

Sewage Treatment Plant: 0 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00509 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.108.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 3: Use of reactive processing aid at industrial site (no inclusion into or onto article)

Exposure assessment (environment): : EUSES 2.1.2

octanoic acid	Exposure Scenario: 080	Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC23, PC32)
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 4: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC23)

List of use descriptors : **Identified use name: ES081:** Use at industrial sites - use in wet end [TEGEWA]: SU05; PC20, PC23; PROC13; ERC04, ERC05, ERC06b
Process Category: PROC13
Sector of end use: SU05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05, ERC06b
Market sector by type of chemical product: PC20, PC23

Environmental contributing scenarios : **Use of non-reactive processing aid at industrial site (no inclusion into or onto article) - ERC04**
Use of non processing/exhausting aids in wet end - ERC05
Use of reactive processing aid at industrial site (no inclusion into or onto article) - ERC06b

Health Contributing scenarios : **Process in wet end: bring them into contact with hides - PROC13**

Number of the ES : 081

Additional information : Contributing scenarios: ES113.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

Amounts used : Daily amount per site: ≤0.05 tonnes/day.
Annual amount per site: ≤11 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 2% (ERC04).
air: 100% (ERC04).
Soil: 5% (ERC04).

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 98%.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

octanoic acid	Exposure Scenario: 081	Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC23)
Contributing scenario controlling environmental exposure for 2: Use of non processing/exhausting aids in wet end		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Release factor after on-site risk management: water: 1% (ERC05). air: 50% (ERC05). Soil: 1% (ERC05).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes. Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 98%.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of reactive processing aid at industrial site (no inclusion into or onto article)		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Release factor after on-site risk management: water: 0.5% (ERC06b). air: 0.1% (ERC06b). Soil: 0.025% (ERC06b).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes. Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 90%.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
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octanoic acid	Exposure Scenario: 081	<i>Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC23)</i>
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 4: Process in wet end: bring them into contact with hides		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00882 mg/l. Risk characterisation ratio (PEC/PNEC): 0.441. Freshwater sediment: 0.13 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Marine water: 0.00088 mg/l. Risk characterisation ratio (PEC/PNEC): 0.440. Marine water sediment: 0.013 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.441. Sewage Treatment Plant: 0.063 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.022 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.469.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Use of non processing/exhausting aids in wet end	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00969 mg/l. Risk characterisation ratio (PEC/PNEC): 0.485. Freshwater sediment: 0.143 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.485. Marine water: 0.000968 mg/l. Risk characterisation ratio (PEC/PNEC): 0.484. Marine water sediment: 0.014 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.484. Sewage Treatment Plant: 0.071 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.025 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.52.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

octanoic acid	Exposure Scenario: 081	Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC20, PC23)
Exposure estimation and reference to its source - Environment: 3: Use of reactive processing aid at industrial site (no inclusion into or onto article)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00612 mg/l. Risk characterisation ratio (PEC/PNEC): 0.306. Freshwater sediment: 0.09 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.306. Marine water: 0.000611 mg/l. Risk characterisation ratio (PEC/PNEC): 0.305. Marine water sediment: 0.00902 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.306. Sewage Treatment Plant: 0.036 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.014 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.294.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 4: Process in wet end: bring them into contact with hides		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC23, PC32)
List of use descriptors : **Identified use name: ES082:** Use at industrial sites - use for leather finishing [TEGEWA]: SU05; PC23, PC32; PROC10; ERC04, ERC05
Process Category: PROC10
Sector of end use: SU05
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05
Market sector by type of chemical product: PC23, PC32
Environmental contributing scenarios : **Use of processing aids in finishing formulations: roller application or brushing on crust - ERC04**
Use of (non reactive) finishing products: roller application or brushing on crust - ERC05
Health Contributing scenarios : **Roller application or brushing - PROC10**

Number of the ES	: 082
Additional information	: Contributing scenarios: ES113.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of processing aids in finishing formulations: roller application or brushing on crust

Amounts used	: Daily amount per site: ≤0.05 tonnes/day. Annual amount per site: ≤11 tonnes/year.
Frequency and duration of use	: Emission days: ≥220 days per year.
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m ³ /d. Release factor after on-site risk management: water: 1.5% (EU TGD 2003). air: 0% (EU TGD 2003). Soil: 0.01% (EU TGD 2003).
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m ³ /d. Application of the STP sludge on agricultural soil: Yes. Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 90%.
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of (non reactive) finishing products: roller application or brushing on crust

Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.
Frequency and duration of use	: Emission days: ≥220 days per year.

octanoic acid	Exposure Scenario: 082	Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC23, PC32)
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Release factor after on-site risk management: water: 1.5% (EU TGD 2003). air: 0% (EU TGD 2003). Soil: 0.01% (EU TGD 2003).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes. Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 90%.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 3: Roller application or brushing		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of processing aids in finishing formulations: roller application or brushing on crust		
Exposure assessment (environment):	EUSES 2.1.2	
Exposure estimation	Freshwater: 0.00725 mg/l . Risk characterisation ratio (PEC/PNEC): 0.362. Freshwater sediment: 0.107 mg/kg dwt . Risk characterisation ratio (PEC/PNEC): 0.363. Marine water: 0.000724 mg/l . Risk characterisation ratio (PEC/PNEC): 0.362. Marine water sediment: 0.011 mg/kg dwt . Risk characterisation ratio (PEC/PNEC): 0.362. Sewage Treatment Plant: 0.047 mg/l . Risk characterisation ratio (PEC/PNEC): <0.01 . Soil: 0.017 mg/kg dwt . Risk characterisation ratio (PEC/PNEC): 0.353.	
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octanoic acid	Exposure Scenario: 082	Use at industrial sites; Manufacture of textiles, leather, fur (SU05); Various products (PC23, PC32)
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 2: Use of (non reactive) finishing products: roller application or brushing on crust		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.013 mg/l. Risk characterisation ratio (PEC/PNEC): 0.663. Freshwater sediment: 0.196 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.663. Marine water: 0.00133 mg/l. Risk characterisation ratio (PEC/PNEC): 0.663. Marine water sediment: 0.02 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.663. Sewage Treatment Plant: 0.107 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.032 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.667.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 3: Roller application or brushing		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Service life - workers; Various articles (AC01, AC02)
List of use descriptors : **Identified use name: ES083:** Service life - Professional - exposure from textile articles [TEGEWA]: AC01, AC02; PROC21; ERC10a
Process Category: PROC21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC10a
Article category related to subsequent service life: AC01, AC02
Environmental contributing scenarios : **exposure from textile articles - ERC10a**
Health Contributing scenarios : **Use of long life textiles with low release, outdoor - PROC21**

Number of the ES : 083
Additional information : Contributing scenarios: ES075, ES078.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: exposure from textile articles

Amounts used : Daily local widespread use amount: ≤0.0000072 tonnes/day.
Other conditions affecting environmental exposure : Release factor after on-site risk management :
water: 3.2% (ERC10a).
air: 0.05% (ERC10a).
Soil: 3.2% (ERC10a).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular considerations on the waste treatment operations.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.
Conditions and measures related to personal protection, hygiene and health evaluation
Personal protection :
- Substance/Task appropriate gloves.
- Skin coverage with appropriate barrier material based on potential for contact with the chemicals
- Substance/task appropriate respiratory protection.
- Optional face shield.
- Use suitable eye protection.

octanoic acid	Exposure Scenario: 083	Service life - workers; Various articles (AC01, AC02)
Contributing scenario controlling worker exposure for 2: Use of long life textiles with low release, outdoor		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: exposure from textile articles	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000143 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Use of long life textiles with low release, outdoor	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Service life - workers; Fabrics, textiles and apparel (AC05)
List of use descriptors : **Identified use name: ES084:** Service life - Professional - exposure from textile articles [TEGEWA]: AC05; PROC21; ERC11a
Process Category: PROC21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC11a
Article category related to subsequent service life: AC01, AC02
Environmental contributing scenarios : **exposure from textile articles - ERC11a**
Health Contributing scenarios : **Use of long life textiles with low release, indoor - PROC21**

Number of the ES : 084
Additional information : Contributing scenarios: ES075, ES078.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: exposure from textile articles

Amounts used : Daily local widespread use amount: ≤0.0000072 tonnes/day.
Other conditions affecting environmental exposure : Release factor after on-site risk management :
water: 0.05% (ERC11a).
air: 0.05% (ERC11a).
Soil: 0% (ERC11a).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular considerations on the waste treatment operations.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure :
- Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.
Conditions and measures related to personal protection, hygiene and health evaluation
Personal protection :
- Substance/Task appropriate gloves.
- Skin coverage with appropriate barrier material based on potential for contact with the chemicals
- Substance/task appropriate respiratory protection.
- Optional face shield.
- Use suitable eye protection.

octanoic acid	Exposure Scenario: 084	Service life - workers; Fabrics, textiles and apparel (AC05)
Contributing scenario controlling worker exposure for 2: Use of long life textiles with low release, indoor		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: exposure from textile articles	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.000000224 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Use of long life textiles with low release, indoor	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Formulation or re-packing

List of use descriptors : **Identified use name: ES085:** Formulation or re-packing - Formulation of construction chemicals [EFCC]: PROC03, PROC05, PROC08b, PROC09; ERC02
Process Category: PROC03, PROC05, PROC08b, PROC09
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02

Environmental contributing scenarios : **Formulation of construction chemicals - ERC02**
Formulation of construction chemicals - ERC02
Formulation of construction chemicals - ERC02

Health Contributing scenarios : **Contributing scenarios - PROC03, PROC05, PROC08b, PROC09**

Number of the ES : 085

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Formulation of construction chemicals

Amounts used : Daily amount per site: ≤0.23 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.

Release factor after on-site risk management:
water: 0.5% (EFCC SPERC 2.1a.v1).
air: 1% (EFCC SPERC 2.1a.v1).
Soil: 0% (EFCC SPERC 2.1a.v1).

Technical conditions and measures at process level (source) to prevent release : Process with efficient use of raw materials.
Negligible wastewater emissions as process operates without water contact.
Negligible air emissions as process operates in a contained system.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant : Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Formulation of construction chemicals

Amounts used : Daily amount per site: ≤0.23 tonnes/day.
Annual amount per site: ≤50 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Trained staff, spill protection including waste reuse.

Release factor after on-site risk management:
water: 0.5% (EFCC SPERC 2.1b.v1).
air: 0.1% (EFCC SPERC 2.1b.v1).
Soil: 0% (EFCC SPERC 2.1b.v1).

octanoic acid	Exposure Scenario: 085	Formulation or re-packing
Technical conditions and measures at process level (source) to prevent release	: Process with efficient use of raw materials. Negligible wastewater emissions as process operates without water contact. Negligible air emissions as process operates in a contained system.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant : Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Formulation of construction chemicals		
Amounts used	: Daily amount per site: ≤0.23 tonnes/day. Annual amount per site: ≤50 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Release factor after on-site risk management: water: 0.5% (EFCC SPERC 2.1c.v1). air: 0% (EFCC SPERC 2.1c.v1). Soil: 0% (EFCC SPERC 2.1c.v1).	
Technical conditions and measures at process level (source) to prevent release	: Process with efficient use of raw materials. Negligible wastewater emissions as process operates without water contact. Negligible air emissions as process operates in a contained system.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant : Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 4: Contributing scenarios		
CS04: Mixing or blending in batch processes - PROC05 CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS06: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09 CS07: Mixing or blending in batch processes - PROC05 CS08: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS09: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09 CS10: Mixing or blending in batch processes - PROC05 CS11: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC09 CS12: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - PROC03		
Date of issue/Date of revision	: 09/09/2019	Version : 1 / en 310/390

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Formulation of construction chemicals

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00966 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.483.

Freshwater sediment: 0.143 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.483.

Marine water: 0.000965 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.482.

Marine water sediment: 0.014 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.483.

Sewage Treatment Plant: 0.071 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.023 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.480.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Formulation of construction chemicals

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00966 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.483.

Freshwater sediment: 0.143 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.483.

Marine water: 0.000965 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.482.

Marine water sediment: 0.014 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.483.

Sewage Treatment Plant: 0.071 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.023 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.479.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 3: Formulation of construction chemicals

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00966 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.483.

Freshwater sediment: 0.143 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.483.

Marine water: 0.000965 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.482.

Marine water sediment: 0.014 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.483.

octanoic acid	Exposure Scenario: 085	Formulation or re-packing
Sewage Treatment Plant: 0.071 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.023 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.479.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 4: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites

List of use descriptors : **Identified use name: ES086:** Use at industrial sites - Use of construction chemicals; indoor, outdoor [EFCC]: PROC07, PROC08b, PROC10, PROC13, PROC14; ERC04, ERC05
Process Category: PROC07, PROC08b, PROC10, PROC13, PROC14
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05

Environmental contributing scenarios : **Use of construction chemicals; indoor, outdoor** - ERC04
Use of construction chemicals; indoor, outdoor - ERC04
Use of construction chemicals; indoor, outdoor - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC07, PROC08b, PROC10, PROC13, PROC14

Number of the ES : 086

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of construction chemicals; indoor, outdoor

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Indoor use.
Negligible wastewater emissions as process operates without water contact.

Release factor after on-site risk management:
water: 0% (EFCC SPERC 4.1a.v1).
air: 98.5% (EFCC SPERC 4.1a.v1).
Soil: 0% (EFCC SPERC 4.1a.v1).

Technical conditions and measures at process level (source) to prevent release : Product applied to a substrate to form a solid matrix.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of construction chemicals; indoor, outdoor

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

octanoic acid	Exposure Scenario: 086	Use at industrial sites
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use. Negligible wastewater emissions as process operates without water contact. Release factor after on-site risk management: water: 0% (EFCC SPERC 4.1b.v1). air: 98.5% (EFCC SPERC 4.1b.v1). Soil: 0% (EFCC SPERC 4.1b.v1).	
Technical conditions and measures at process level (source) to prevent release	: Product applied to a substrate to form a solid matrix.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Use of construction chemicals; indoor, outdoor		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use. Negligible wastewater emissions as process operates without water contact. Release factor after on-site risk management: water: 0% (EFCC SPERC 5.1a.v1). air: 1.7% (EFCC SPERC 5.1a.v1). Soil: 0% (EFCC SPERC 5.1a.v1).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	

Contributing scenario controlling worker exposure for 4: Contributing scenarios

CS04: Industrial spraying - PROC07

CS05: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b

CS06: Roller application or brushing - PROC10

CS07: Treatment of articles by dipping and pouring - PROC13

CS08: Tableting, compression, extrusion, pelletisation, granulation - PROC14

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: 1: Use of construction chemicals; indoor, outdoor****Exposure assessment (environment):** : EUSES 2.1.2**Exposure estimation** : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.Marine water: 0.000254 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.Marine water sediment: 0.00375 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.127.Sewage Treatment Plant: 0 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.Soil: 0.00876 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.185.**Remark** : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).**Exposure estimation and reference to its source - Environment: 2: Use of construction chemicals; indoor, outdoor****Exposure assessment (environment):** : EUSES 2.1.2**Exposure estimation** : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.Marine water: 0.000254 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.Marine water sediment: 0.00375 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.127.Sewage Treatment Plant: 0 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.Soil: 0.00876 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.185.**Remark** : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

octanoic acid	Exposure Scenario: 086	Use at industrial sites
Exposure estimation and reference to its source - Environment: 3: Use of construction chemicals; indoor, outdoor		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00516 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.109.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 4: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites

List of use descriptors : **Identified use name: ES087:** Use at industrial sites - Use of construction chemicals; indoor, outdoor, without spraying [EFCC]: PROC08b, PROC10, PROC13, PROC14; ERC04, ERC05
Process Category: PROC08b, PROC10, PROC13, PROC14
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05

Environmental contributing scenarios : **Use of construction chemicals; indoor** - ERC04
Use of construction chemicals; indoor - ERC04
Use of construction chemicals; indoor - ERC05

Health Contributing scenarios : **Contributing scenarios** - PROC08b, PROC10, PROC13, PROC14

Number of the ES : 087

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of construction chemicals; indoor

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
Indoor use.
Negligible wastewater emissions as process operates without water contact.

Release factor after on-site risk management:
water: 0% (EFCC SPERC 4.1a.v1).
air: 98.5% (EFCC SPERC 4.1a.v1).
Soil: 0% (EFCC SPERC 4.1a.v1).

Technical conditions and measures at process level (source) to prevent release : Product applied to a substrate to form a solid matrix.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of construction chemicals; indoor

Amounts used : Daily amount per site: ≤0.11 tonnes/day.
Annual amount per site: ≤25 tonnes/year.

Frequency and duration of use : Emission days: ≥220 days per year.

octanoic acid	Exposure Scenario: 087	Use at industrial sites
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use. Negligible wastewater emissions as process operates without water contact. Release factor after on-site risk management: water: 0% (EFCC SPERC 4.1b.v1). air: 98.5% (EFCC SPERC 4.1b.v1). Soil: 0% (EFCC SPERC 4.1b.v1).	
Technical conditions and measures at process level (source) to prevent release	: Product applied to a substrate to form a solid matrix.	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.	
Contributing scenario controlling environmental exposure for 3: Use of construction chemicals; indoor		
Amounts used	: Daily amount per site: ≤0.11 tonnes/day. Annual amount per site: ≤25 tonnes/year.	
Frequency and duration of use	: Emission days: ≥220 days per year.	
Other conditions affecting environmental exposure	: Receiving surface water flow: ≥18000 m³/d. Indoor use. Negligible wastewater emissions as process operates without water contact. Release factor after on-site risk management: water: 0% (EFCC SPERC 5.1a.v1). air: 1.7% (EFCC SPERC 5.1a.v1). Soil: 0% (EFCC SPERC 5.1a.v1).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%) Discharge rate: ≥2000 m³/d. Application of the STP sludge on agricultural soil: Yes.	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	

Contributing scenario controlling worker exposure for 4: Contributing scenarios

CS04: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b

CS05: Roller application or brushing - PROC10

CS06: Treatment of articles by dipping and pouring - PROC13

CS07: Tableting, compression, extrusion, pelletisation, granulation - PROC14

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: 1: Use of construction chemicals; indoor****Exposure assessment (environment):** : EUSES 2.1.2**Exposure estimation** : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.Marine water: 0.000254 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.Marine water sediment: 0.00375 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.127.Sewage Treatment Plant: 0 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.Soil: 0.00876 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.185.**Remark** : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).**Exposure estimation and reference to its source - Environment: 2: Use of construction chemicals; indoor****Exposure assessment (environment):** : EUSES 2.1.2**Exposure estimation** : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.Marine water: 0.000254 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.Marine water sediment: 0.00375 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.127.Sewage Treatment Plant: 0 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.Soil: 0.00876 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.185.**Remark** : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

octanoic acid	Exposure Scenario: 087	Use at industrial sites
Exposure estimation and reference to its source - Environment: 3: Use of construction chemicals; indoor		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00516 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.109.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 4: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers
List of use descriptors : **Identified use name: ES088:** Widespread use by professional workers - Use of construction chemicals; indoor [EFCC]: PROC08a, PROC10, PROC11, PROC13; ERC08a, ERC08c
Process Category: PROC08a, PROC10, PROC11, PROC13
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08c
Environmental contributing scenarios : **Use of construction chemicals; indoor** - ERC08a
Use of construction chemicals; indoor - ERC08c
Health Contributing scenarios : **Contributing scenarios** - PROC08a, PROC10, PROC11, PROC13

Number of the ES : 088

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of construction chemicals; indoor

Amounts used : Daily local widespread use amount: ≤0.000011 tonnes/day.
Other conditions affecting environmental exposure : Indoor use.
Release factor after on-site risk management:
water: 1% (EFCC SPERC 8A.1a.v1).
air: 98% (EFCC SPERC 8A.1a.v1).
Soil: 0% (EFCC SPERC 8A.1a.v1).
Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to emission of volatiles to air.
Upon curing, substances evaporate to the ambient air.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%).
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of construction chemicals; indoor

Amounts used : Daily local widespread use amount: ≤0.000011 tonnes/day.
Other conditions affecting environmental exposure : Indoor use.
Release factor after on-site risk management:
water: 1% (EFCC SPERC 8C.1a.v1).
air: 98% (EFCC SPERC 8C.1a.v1).
Soil: 0% (EFCC SPERC 8C.1a.v1).
Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to embedding substances into a matrix.
Upon curing, substances are included into matrix without intended release to the environment.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)

octanoic acid	Exposure Scenario: 088	Widespread use by professional workers
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 3: Contributing scenarios		
CS03: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a		
CS04: Roller application or brushing - PROC10		
CS05: Non industrial spraying - PROC11		
CS06: Treatment of articles by dipping and pouring - PROC13		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of construction chemicals; indoor	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

octanoic acid		Exposure Scenario: 088	Widespread use by professional workers
Exposure estimation and reference to its source - Environment: 2: Use of construction chemicals; indoor			
Exposure assessment (environment):	:	EUSES 2.1.2	
Exposure estimation	:	Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	:	Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 3: Contributing scenarios			
Exposure assessment (human):	:	Qualitative approach used to conclude safe use.	
Exposure estimation	:	Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	:	The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers
List of use descriptors : **Identified use name: ES089:** Widespread use by professional workers - Use of construction chemicals; indoor, without spraying [EFCC]: PROC08a, PROC10, PROC13; ERC08a, ERC08c
Process Category: PROC08a, PROC10, PROC13
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08c
Environmental contributing scenarios : **Use of construction chemicals; indoor** - ERC08a
Use of construction chemicals; indoor - ERC08c
Health Contributing scenarios : **Contributing scenarios** - PROC08a, PROC10, PROC13

Number of the ES : 089

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of construction chemicals; indoor

Amounts used : Daily local widespread use amount: ≤0.000011 tonnes/day.
Other conditions affecting environmental exposure : Indoor use.
Release factor after on-site risk management:
water: 0% (EFCC SPERC 8A.1a.v1).
air: 98.5% (EFCC SPERC 8A.1a.v1).
Soil: 0% (EFCC SPERC 8A.1a.v1).
Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to emission of volatiles to air.
Upon curing, substances evaporate to the ambient air.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%).
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of construction chemicals; indoor

Amounts used : Daily local widespread use amount: ≤0.000011 tonnes/day.
Other conditions affecting environmental exposure : Indoor use.
Release factor after on-site risk management:
water: 1% (EFCC SPERC 8C.1a.v1).
air: 0% (EFCC SPERC 8C.1a.v1).
Soil: 0% (EFCC SPERC 8C.1a.v1).
Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to embedding substances into a matrix.
Upon curing, substances are included into matrix without intended release to the environment.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)

octanoic acid	Exposure Scenario: 089	Widespread use by professional workers
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 3: Contributing scenarios		
CS03: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a		
CS04: Roller application or brushing - PROC10		
CS05: Treatment of articles by dipping and pouring - PROC13		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of construction chemicals; indoor		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid		Exposure Scenario: 089	Widespread use by professional workers
Exposure estimation and reference to its source - Environment: 2: Use of construction chemicals; indoor			
Exposure assessment (environment):	:	EUSES 2.1.2	
Exposure estimation	:	Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000689 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	:	Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 3: Contributing scenarios			
Exposure assessment (human):	:	Qualitative approach used to conclude safe use.	
Exposure estimation	:	Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	:	The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers
List of use descriptors : **Identified use name: ES090:** Widespread use by professional workers - Use of construction chemicals; outdoor [EFCC]: PROC08a, PROC10, PROC11, PROC13; ERC08d, ERC08f
Process Category: PROC08a, PROC10, PROC11, PROC13
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08d, ERC08f
Environmental contributing scenarios : **Use of construction chemicals; outdoor** - ERC08d
Use of construction chemicals; outdoor - ERC08f
Health Contributing scenarios : **Contributing scenarios** - PROC08a, PROC10, PROC11, PROC13

Number of the ES : 090

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of construction chemicals; outdoor

Amounts used : Daily local widespread use amount: ≤0.000011 tonnes/day.
Other conditions affecting environmental exposure : Outdoor use.
Release factor after on-site risk management:
water: 1% (EFCC SPERC 8D.1a.v1).
air: 98% (EFCC SPERC 8D.1a.v1).
Soil: 0% (EFCC SPERC 8D.1a.v1).
Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to emission of volatiles to air. Upon curing, substances evaporate to the ambient air.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%).
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of construction chemicals; outdoor

Amounts used : Daily local widespread use amount: ≤0.000011 tonnes/day.
Other conditions affecting environmental exposure : Outdoor use.
Release factor after on-site risk management:
water: 1% (EFCC SPERC 8F.1a.v1).
air: 0% (EFCC SPERC 8F.1a.v1).
Soil: 0% (EFCC SPERC 8F.1a.v1).
Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to embedding substances into a matrix. Upon curing, substances are included into matrix without intended release to the environment.
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%).

octanoic acid	Exposure Scenario: 090	Widespread use by professional workers
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 3: Contributing scenarios		
CS03: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a		
CS04: Roller application or brushing - PROC10		
CS05: Non industrial spraying - PROC11		
CS06: Treatment of articles by dipping and pouring - PROC13		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of construction chemicals; outdoor		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000689 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid		Exposure Scenario: 090	Widespread use by professional workers
Exposure estimation and reference to its source - Environment: 2: Use of construction chemicals; outdoor			
Exposure assessment (environment):	:	EUSES 2.1.2	
Exposure estimation	:	Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000689 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	:	Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 3: Contributing scenarios			
Exposure assessment (human):	:	Qualitative approach used to conclude safe use.	
Exposure estimation	:	Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	:	The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Widespread use by professional workers

List of use descriptors : **Identified use name: ES091:** Widespread use by professional workers - Use of construction chemicals; outdoor, without spraying [EFCC]: PROC08a, PROC10, PROC13; ERC08d, ERC08f
Process Category: PROC08a, PROC10, PROC13
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08d, ERC08f

Environmental contributing scenarios : **Use of construction chemicals; outdoor** - ERC08d
Use of construction chemicals; outdoor - ERC08f

Health Contributing scenarios : **Contributing scenarios** - PROC08a, PROC10, PROC13

Number of the ES : 091

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of construction chemicals; outdoor

Amounts used : Daily local widespread use amount: ≤0.000011 tonnes/day.

Other conditions affecting environmental exposure : Outdoor use.

Release factor after on-site risk management:
water: 1% (EFCC SPERC 8D.1a.v1).
air: 98% (EFCC SPERC 8D.1a.v1).
Soil: 0% (EFCC SPERC 8D.1a.v1).

Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to emission of volatiles to air.
Upon curing, substances evaporate to the ambient air.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%).

Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of construction chemicals; outdoor

Amounts used : Daily local widespread use amount: ≤0.000011 tonnes/day.

Other conditions affecting environmental exposure : Outdoor use.

Release factor after on-site risk management:
water: 1% (EFCC SPERC 8F.1a.v1).
air: 0% (EFCC SPERC 8F.1a.v1).
Soil: 0% (EFCC SPERC 8F.1a.v1).

Technical conditions and measures at process level (source) to prevent release : Professional and consumer product use, leading to embedding substances into a matrix.
Upon curing, substances are included into matrix without intended release to the environment.

Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%).

octanoic acid	Exposure Scenario: 091	Widespread use by professional workers
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	: - Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 3: Contributing scenarios		
CS03: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - PROC08a		
CS04: Roller application or brushing - PROC10		
CS05: Treatment of articles by dipping and pouring - PROC13		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of construction chemicals; outdoor		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000689 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

octanoic acid		Exposure Scenario: 091	Widespread use by professional workers
Exposure estimation and reference to its source - Environment: 2: Use of construction chemicals; outdoor			
Exposure assessment (environment):	:	EUSES 2.1.2	
Exposure estimation	:	Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000689 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	:	Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 3: Contributing scenarios			
Exposure assessment (human):	:	Qualitative approach used to conclude safe use.	
Exposure estimation	:	Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	:	The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Use at industrial sites
List of use descriptors : **Identified use name: ES092:** Use at industrial sites - production of impregnated papers [VCI_Paper]: PROC05, PROC08b, PROC13, PROC15, PROC21; ERC05
Process Category: PROC05, PROC08b, PROC13, PROC15, PROC21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC05
Environmental contributing scenarios : **Paper articles: Packaging (excluding food packaging)** - ERC05
Health Contributing scenarios : **Contributing scenarios** - PROC05, PROC08b, PROC13, PROC15, PROC21

Number of the ES : 092
Additional information : Contributing scenarios: ES093.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Paper articles: Packaging (excluding food packaging)

Amounts used : Daily amount per site: ≤0.6 tonnes/day.
Annual amount per site: ≤150 tonnes/year.
Other conditions affecting environmental exposure : Receiving surface water flow: ≥18000 m³/d.
No water contact during use.
Release factor after on-site risk management:
water: 0% (ERC05).
air: 50% (ERC05).
Soil: 1% (ERC05).
Technical conditions and measures at process level (source) to prevent release : Collect water from equipment/container cleaning as waste: Yes. (Efficiency of at least 100%)
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Discharge rate: ≥2000 m³/d.
Application of the STP sludge on agricultural soil: Yes.
Conditions and measures related to external treatment of waste for disposal : No waste from process.

Contributing scenario controlling worker exposure for: All Contributing scenarios

Organisational measures to prevent/limit releases, dispersion and exposure : - Containment as appropriate.
- Minimise number of staff exposed.
- Segregation of the emitting process.
- Effective contaminant extraction.
- Good standard of general ventilation.
- Minimisation of manual phases.
- Avoid contact with contaminated tools and objects..
- Regular cleaning of equipment and work area.
- Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed.
- Training for staff on good practice.
- Good standard of personal hygiene.

octanoic acid	Exposure Scenario: 092	Use at industrial sites
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: - Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 2: Contributing scenarios		
CS02: Transfer of substance or mixture (charging and discharging) at dedicated facilities - PROC08b CS03: Mixing or blending in batch processes - PROC05 CS04: Treatment of articles by dipping and pouring - PROC13 CS05: Drying and storage - PROC21 CS06: Low energy manipulation and handling of substances bound in/on materials or articles - PROC21 CS07: Use as laboratory reagent - PROC15		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Paper articles: Packaging (excluding food packaging)	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.016 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.344.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Workers: 2: Contributing scenarios	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Service life - workers; Paper articles: Packaging (excluding food packaging) (AC08c)
List of use descriptors : **Identified use name: ES093:** Service life - Professional handling of impregnated packing paper [VCI_Paper]: AC08c; PROC21; ERC10b, ERC11b
Process Category: PROC21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC10b, ERC11b
Article category related to subsequent service life: AC08
Environmental contributing scenarios : **Professional handling of impregnated packing paper - ERC10b**
Professional handling of impregnated packing paper - ERC11b
Health Contributing scenarios : **Contributing scenarios - PROC21**

Number of the ES	: 093
Additional information	: Contributing scenarios: ES092.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Professional handling of impregnated packing paper

Amounts used	: Daily local widespread use amount: ≤0.000082 tonnes/day.
Other conditions affecting environmental exposure	: Release factor after on-site risk management : water: 100% (ERC10b). air: 100% (ERC10b). Soil: 100% (ERC10b).
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.

Contributing scenario controlling environmental exposure for 2: Professional handling of impregnated packing paper

Amounts used	: Daily local widespread use amount: ≤0.000082 tonnes/day.
Other conditions affecting environmental exposure	: Release factor after on-site risk management : water: 100% (ERC11b). air: 100% (ERC11b). Soil: 0% (ERC11b).
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.

octanoic acid	Exposure Scenario: 093	Service life - workers; Paper articles: Packaging (excluding food packaging) (AC08c)
Contributing scenario controlling worker exposure for: All Contributing scenarios		
Organisational measures to prevent/limit releases, dispersion and exposure	- Containment as appropriate. - Minimise number of staff exposed. - Segregation of the emitting process. - Effective contaminant extraction. - Good standard of general ventilation. - Minimisation of manual phases. - Avoid contact with contaminated tools and objects.. - Regular cleaning of equipment and work area. - Management/supervision in place to check that the RMMs in place are being used correctly and OCs followed. - Training for staff on good practice. - Good standard of personal hygiene.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	- Substance/Task appropriate gloves. - Skin coverage with appropriate barrier material based on potential for contact with the chemicals - Substance/task appropriate respiratory protection. - Optional face shield. - Use suitable eye protection.	
Contributing scenario controlling worker exposure for 3: Contributing scenarios		
CS03: Professional handling of impregnated packing paper - PROC21		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Professional handling of impregnated packing paper	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00307 mg/l. Risk characterisation ratio (PEC/PNEC): 0.153. Freshwater sediment: 0.045 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.153. Marine water: 0.000305 mg/l. Risk characterisation ratio (PEC/PNEC): 0.153. Marine water sediment: 0.00451 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.153. Sewage Treatment Plant: 0.00517 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00637 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.135.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).
Exposure estimation and reference to its source - Environment: 2: Professional handling of impregnated packing paper	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00307 mg/l. Risk characterisation ratio (PEC/PNEC): 0.153. Freshwater sediment: 0.045 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.153. Marine water: 0.000305 mg/l.
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octanoic acid	Exposure Scenario: 093	Service life - workers; Paper articles: Packaging (excluding food packaging) (AC08c)
	Risk characterisation ratio (PEC/PNEC): 0.153. Marine water sediment: 0.00451 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.153. Sewage Treatment Plant: 0.00517 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00637 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.135.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Workers: 3: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit to his use. If other OC/RMM are adopted, the user has to ensure that risks are managed to at least equivalent levels. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Air care products (PC03)
List of use descriptors : **Identified use name: ES094:** Consumer use - Air care products [AISE_C_001_v1]: PC03; ERC08a
Substance supplied to that use in form of: In a mixture
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC03
Environmental contributing scenarios : **Wide dispersive use; air care products; non-propellants** - ERC08a
Wide dispersive use; air care products; propellants - ERC08a
Health Contributing scenarios : **Contributing scenarios** - PC03

Number of the ES : 094

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Wide dispersive use; air care products; non-propellants

Amounts used : Daily local widespread use amount: ≤0.00016 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Indoor use/Outdoor use.
Spraying of involatile solids, which are finally disposed off via wastewater.
Release factor after on-site risk management :
water: 100% (AISE SPERC 8a.1.b.v2).
air: 0% (AISE SPERC 8a.1.b.v2).
Soil: 0% (AISE SPERC 8a.1.b.v2).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Wide dispersive use; air care products; propellants

Amounts used : Daily local widespread use amount: ≤0.00016 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use : Emission days: 365 days per year.

octanoic acid	Exposure Scenario: 094	Consumer use; Air care products (PC03)
Other conditions affecting environmental exposure	: Indoor use/Outdoor use. Substance applied in aqueous process solution with negligible volatilization. Spent process fluid discharged to wastewater for subsequent treatment. Release factor after on-site risk management : water: 100% (AISE SPERC 8a.1.a.v2). air: 0% (AISE SPERC 8a.1.a.v2). Soil: 0% (AISE SPERC 8a.1.a.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.	
Contributing scenario controlling consumer exposure for: All Contributing scenarios		
Conditions and measures related to information and behavioural advice to consumers	: Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.	
Contributing scenario controlling consumer exposure for 3: Contributing scenarios		
CS03: Consumer uses; Air care products (non-aerosol) - PC03		
CS04: Consumer uses; Air care products (aerosol) - PC03		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Wide dispersive use; air care products; non-propellants	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00358 mg/l. Risk characterisation ratio (PEC/PNEC): 0.179. Freshwater sediment: 0.053 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.179. Marine water: 0.000356 mg/l. Risk characterisation ratio (PEC/PNEC): 0.178. Marine water sediment: 0.00526 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.178. Sewage Treatment Plant: 0.01 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00763 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.161.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Wide dispersive use; air care products; propellants	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00358 mg/l. Risk characterisation ratio (PEC/PNEC): 0.179. Freshwater sediment: 0.053 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.179. Marine water: 0.000357 mg/l. Risk characterisation ratio (PEC/PNEC): 0.178.

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octanoic acid	Exposure Scenario: 094	Consumer use; Air care products (PC03)
Marine water sediment: 0.00527 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.179. Sewage Treatment Plant: 0.01 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00764 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.161.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Consumers: 3: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: Not applicable.
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Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Washing and cleaning products (PC35)
List of use descriptors : **Identified use name: ES095:** Consumer use - Washing and cleaning products [AISE_C_002_v1]: PC35; ERC08a
Substance supplied to that use in form of: In a mixture
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC35
Environmental contributing scenarios : **Wide dispersive use; 'Down the Drain' cleaning and maintenance products - ERC08a**
Wide dispersive use; air care products; non-propellants - ERC08a
Wide dispersive use; air care products; propellants - ERC08a
Health Contributing scenarios : **Contributing scenarios - PC35**

Number of the ES : 095

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Wide dispersive use; 'Down the Drain' cleaning and maintenance products

Amounts used : Daily local widespread use amount: ≤0.00016 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Indoor use/Outdoor use.
Substance applied in aqueous process solution with negligible volatilization.
Spent process fluid discharged to wastewater for subsequent treatment.

Release factor after on-site risk management :
water: 100% (AISE SPERC 8a.1.a.v2).
air: 0% (AISE SPERC 8a.1.a.v2).
Soil: 0% (AISE SPERC 8a.1.a.v2).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Wide dispersive use; air care products; non-propellants

Amounts used : Daily local widespread use amount: ≤0.00016 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use : Emission days: 365 days per year.

octanoic acid	Exposure Scenario: 095	Consumer use; Washing and cleaning products (PC35)
Other conditions affecting environmental exposure	: Indoor use/Outdoor use. Spraying of involatile solids, which are finally disposed off via wastewater. Release factor after on-site risk management : water: 100% (AISE SPERC 8a.1.b.v2). air: 0% (AISE SPERC 8a.1.b.v2). Soil: 0% (AISE SPERC 8a.1.b.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Wide dispersive use; air care products; propellants		
Amounts used	: Daily local widespread use amount: ≤0.00016 tonnes/day. Fraction of EU tonnage used in region: 0.04 Fraction of Regional tonnage used locally: 0.00075	
Frequency and duration of use	: Emission days: 365 days per year.	
Other conditions affecting environmental exposure	: Indoor use/Outdoor use. Spray application with complete evaporation of volatiles. Release factor after on-site risk management : water: 0% (AISE SPERC 8a.1.c.v2). air: 100% (AISE SPERC 8a.1.c.v2). Soil: 0% (AISE SPERC 8a.1.c.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling consumer exposure for: All Contributing scenarios		
Conditions and measures related to information and behavioural advice to consumers	: Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.	
Contributing scenario controlling consumer exposure for 4: Contributing scenarios		
CS04: Consumer uses; Laundry products CS05: Consumer uses; Fabric conditioners CS06: Consumer uses; Surface cleaners; Non spray application CS07: Consumer uses; liquid surface cleaner; spray application CS08: Consumer uses; Machine dishwashing products CS09: Consumer uses; Hand dishwashing products		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Wide dispersive use; 'Down the Drain' cleaning and maintenance products		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00358 mg/l. Risk characterisation ratio (PEC/PNEC): 0.179. Freshwater sediment: 0.053 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.179. Marine water: 0.000357 mg/l.	
Date of issue/Date of revision	: 09/09/2019	Version : 1 / en 342/390

octanoic acid	Exposure Scenario: 095	Consumer use; Washing and cleaning products (PC35)
Risk characterisation ratio (PEC/PNEC): 0.178. Marine water sediment: 0.00527 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.179. Sewage Treatment Plant: 0.01 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00764 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.161.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 2: Wide dispersive use; air care products; non-propellants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00358 mg/l. Risk characterisation ratio (PEC/PNEC): 0.179.	
	Freshwater sediment: 0.053 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.179.	
	Marine water: 0.000356 mg/l. Risk characterisation ratio (PEC/PNEC): 0.178.	
	Marine water sediment: 0.00526 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.178.	
	Sewage Treatment Plant: 0.01 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00763 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.161.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Wide dispersive use; air care products; propellants		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128.	
	Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

<i>octanoic acid</i>	Exposure Scenario: 095	Consumer use; Washing and cleaning products (PC35)
Exposure estimation and reference to its source - Consumers: 4: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: Not applicable.
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Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Polishes and wax blends (PC31)
List of use descriptors : **Identified use name: ES096:** Consumer use - Polishes and wax blends [AISE_C_003_v1]: PC31; ERC08a
Substance supplied to that use in form of: In a mixture
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC31
Environmental contributing scenarios : **Wide dispersive use; polishes and wax blends - ERC08a**
Health Contributing scenarios : **Contributing scenarios - PC31**

Number of the ES : 096

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Wide dispersive use; polishes and wax blends

Amounts used : Daily local widespread use amount: ≤0.00016 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Release factor after on-site risk management :
water: 100% (ERC08a).
air: 100% (ERC08a).
Soil: 0% (ERC08a).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 2: Contributing scenarios

CS02: Consumer uses; Polishes and wax blends; Non spray application - PC31
CS03: Consumer uses; Polishes and wax blends; spray application - PC31

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Wide dispersive use; polishes and wax blends

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00358 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.179.

Freshwater sediment: 0.053 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.179.

Marine water: 0.000357 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.178.

Marine water sediment: 0.00527 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.179.

Sewage Treatment Plant: 0.01 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00764 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.161.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Consumers: 2: Contributing scenarios

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General : Not applicable.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Biocidal products (PC08)
List of use descriptors : **Identified use name: ES097:** Consumer use - Biocidal products [AISE_C_004_v1]: PC08; ERC08a
Substance supplied to that use in form of: In a mixture
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC08
Environmental contributing scenarios : **Wide dispersive use; biocidal products - ERC08a**
Health Contributing scenarios : **Biocidal products - PC08**

Number of the ES : 097

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Wide dispersive use; biocidal products

Amounts used : Daily local widespread use amount: ≤ 0.00016 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Release factor after on-site risk management :
water: 100% (ERC08a).
air: 100% (ERC08a).
Soil: 0% (ERC08a).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 2: Biocidal products

Section 3 - Exposure estimation and reference to its source

octanoic acid	Exposure Scenario: 097	Consumer use; Biocidal products (PC08)
Exposure estimation and reference to its source - Environment: 1: Wide dispersive use; biocidal products		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00358 mg/l. Risk characterisation ratio (PEC/PNEC): 0.179. Freshwater sediment: 0.053 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.179. Marine water: 0.000357 mg/l. Risk characterisation ratio (PEC/PNEC): 0.178. Marine water sediment: 0.00527 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.179. Sewage Treatment Plant: 0.01 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00764 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.161.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	

Exposure estimation and reference to its source - Consumers: 2: Biocidal products		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: Not applicable.
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Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Lubricants, greases, release products (PC24)
List of use descriptors : **Identified use name: ES098:** General consumer use of lubricants and greases in vehicles or machinery [ATIEL-ATC Group B [c]]: PC24; ERC09a, ERC09b
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b
Market sector by type of chemical product: PC24
Environmental contributing scenarios : **General consumer use of lubricants and greases in vehicles or machinery -** ERC09a, ERC09b
Health Contributing scenarios : **Lubricants, greases, release products -** PC24

Number of the ES : 098

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General consumer use of lubricants and greases in vehicles or machinery

Amounts used : Daily local widespread use amount: ≤0.000094 tonnes/day.
Other conditions affecting environmental exposure : Consumer use: limited emissions to air; limited disposal via wastewater.
Release factor after on-site risk management:
water: 0.05% (ATIEL-ATC SPERC 9.Bc.v1).
air: 0.5% (ATIEL-ATC SPERC 9.Bc.v1).
Soil: 0.01% (ATIEL-ATC SPERC 9.Bc.v1).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 2: Lubricants, greases, release products

Use as a lubricant in a closed system, including filling, draining and maintenance

Section 3 - Exposure estimation and reference to its source

octanoic acid	Exposure Scenario: 098	Consumer use; Lubricants, greases, release products (PC24)
Exposure estimation and reference to its source - Environment: 1: General consumer use of lubricants and greases in vehicles or machinery		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000293 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Consumers: 2: Lubricants, greases, release products		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	
Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES		
General	: Not applicable.	

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Lubricants, greases, release products (PC24)
List of use descriptors : **Identified use name: ES099:** Consumer use of lubricants and greases in open systems [ATIEL-ATC Group C [c]]: PC24; ERC08a, ERC08d
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d
Market sector by type of chemical product: PC24
Environmental contributing scenarios : **Consumer use of lubricants and greases in open systems [ATIEL-ATC Group C [c]]** - ERC08a, ERC08d
Health Contributing scenarios : **Lubricants, greases, release products** - PC24

Number of the ES : 099

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Consumer use of lubricants and greases in open systems [ATIEL-ATC Group C [c]]

Amounts used : Daily local widespread use amount: ≤0.000094 tonnes/day.
Other conditions affecting environmental exposure : Consumer use: limited emissions to air; limited disposal via wastewater.

Release factor after on-site risk management :
water: 0.05% (ATIEL-ATC SPERC 8.Cc.v1).
air: 0.5% (ATIEL-ATC SPERC 8.Cc.v1).
Soil: 0.01% (ATIEL-ATC SPERC 8.Cc.v1).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 2: Lubricants, greases, release products

Use as a lubricant in an open system.

Section 3 - Exposure estimation and reference to its source

octanoic acid	Exposure Scenario: 099	Consumer use; Lubricants, greases, release products (PC24)
Exposure estimation and reference to its source - Environment: 1: Consumer use of lubricants and greases in open systems [ATIEL-ATC Group C [c]]		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000293 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Consumers: 2: Lubricants, greases, release products		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	
Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES		
General	: Not applicable.	

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Various products (PC09a, PC09b, PC09c)
List of use descriptors : **Identified use name: ES100:** Consumer use - Consumer application of coatings [CEPE]: PC09a, PC09b, PC09c; ERC08a, ERC08c, ERC08d, ERC08f
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08c, ERC08d, ERC08f
Market sector by type of chemical product: PC09a, PC09b, PC09c
Environmental contributing scenarios : **Professional application of coatings and inks (VOCs)** - ERC08a, ERC08d
Professional application of coatings and inks (solids) - ERC08c
Professional application of coatings and inks (solids) - ERC08f
Health Contributing scenarios : **Contributing scenarios** - PC09a, PC09b, PC09c

Number of the ES : 100

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Professional application of coatings and inks (VOCs)

Amounts used : Daily local widespread use amount: ≤0.000036 tonnes/day.
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Indoor use/ Outdoor use.
Consumer use: limited emissions to air, limited disposal via wastewater.
Consumer product use with limited or no technical control of emission.

Release factor after on-site risk management:
water: 1% (CEPE SPERC 8a.1a.v1 + CEPE SPERC 8d.1a.v.1)
air: 99% (CEPE SPERC 8a.1a.v1 + CEPE SPERC 8d.1a.v.1)
Soil: 0.5% (CEPE SPERC 8a.1a.v1 + CEPE SPERC 8d.1a.v.1)
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Professional application of coatings and inks (solids)

Amounts used : Daily local widespread use amount: ≤0.000036 tonnes/day.
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Indoor use.
Consumer use: limited emissions to air, limited disposal via wastewater.
Consumer product use with limited or no technical control of emission.

Release factor after on-site risk management:
water: 1% (CEPE SPERC 8c.1a.v1).
air: 0% (CEPE SPERC 8c.1a.v1).
Soil: 0% (CEPE SPERC 8c.1a.v1).

octanoic acid	Exposure Scenario: 100	Consumer use; Various products (PC09a, PC09b, PC09c)
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Professional application of coatings and inks (solids)		
Amounts used	: Daily local widespread use amount: ≤0.000036 tonnes/day.	
Other conditions affecting environmental exposure	: Outdoor use. Consumer use: limited emissions to air, limited disposal via wastewater. Consumer product use with limited or no technical control of emission. Release factor after on-site risk management: water: 1% (CEPE SPERC 8f.1a.v1). air: 0% (CEPE SPERC 8f.1a.v1). Soil: 0.5% (CEPE SPERC 8f.1a.v1).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling consumer exposure for: All Contributing scenarios		
Conditions and measures related to information and behavioural advice to consumers	: Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.	
Contributing scenario controlling consumer exposure for 4: Contributing scenarios		
CS04: Preparation of material for application - PC09a CS05: Preparation of material for application - PC09b CS06: Preparation of material for application - PC09c CS07: Loading of application equipment - PC09a CS08: Loading of application equipment - PC09b CS09: Loading of application equipment - PC09c CS10: Application(s) - PC09a CS11: Application(s) - PC09b CS12: Application(s) - PC09c CS13: Film formation - PC09a CS14: Film formation - PC09b CS15: Film formation - PC09c CS16: Application equipment cleaning - PC09a CS17: Application equipment cleaning - PC09b CS18: Application equipment cleaning - PC09c CS19: Waste management - PC09a CS20: Waste management - PC09b CS21: Waste management - PC09c		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Professional application of coatings and inks (VOCs)			
Exposure assessment (environment):	: EUSES 2.1.2		
Date of issue/Date of revision		: 09/09/2019	Version : 1 / en 354/390

octanoic acid		Exposure Scenario: 100	Consumer use; Various products (PC09a, PC09b, PC09c)
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000224 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Environment: 2: Professional application of coatings and inks (solids)			
Exposure assessment (environment):	: EUSES 2.1.2		
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000224 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).		
Exposure estimation and reference to its source - Environment: 3: Professional application of coatings and inks (solids)			
Exposure assessment (environment):	: EUSES 2.1.2		
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000224 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.		
Date of issue/Date of revision		: 09/09/2019	Version : 1 / en 355/390

octanoic acid	Exposure Scenario: 100	Consumer use; Various products (PC09a, PC09b, PC09c)
	Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Consumers: 4: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: Not applicable.
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Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Cosmetics, personal care products (PC39)
List of use descriptors : **Identified use name: ES101:** Consumer use - End use of cosmetic products [CE_sector_C_001_v1]: PC39; ERC08a
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC39
Environmental contributing scenarios : **Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals) - ERC08a**
Wide Dispersive Use in Aerosol products for hair and skin care (Propellants) - ERC08a
Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants) - ERC08a
Health Contributing scenarios : **Cosmetics, personal care products - PC39**

Number of the ES : 101

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals)

Amounts used : Daily local widespread use amount: ≤ 0.000076 tonnes/day.
Fraction of EU tonnage used in region: 0.053
Fraction of main source to local environment: 0.00075
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Indoor use.
Substance applied in aqueous process solution with negligible volatilization.

Release factor after on-site risk management :
water: 100% (Cosmetics Europe SPERC 8a.1.a.v2).
air: 0% (Cosmetics Europe SPERC 8a.1.a.v2).
Soil: 0% (Cosmetics Europe SPERC 8a.1.a.v2).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Wide Dispersive Use in Aerosol products for hair and skin care (Propellants)

Amounts used : Daily local widespread use amount: ≤ 0.000076 tonnes/day.
Fraction of EU tonnage used in region: 0.053
Fraction of main source to local environment: 0.00075
Frequency and duration of use : Emission days: 365 days per year.

octanoic acid	Exposure Scenario: 101	Consumer use; Cosmetics, personal care products (PC39)
Other conditions affecting environmental exposure	: Indoor use. Spray application with complete evaporation of volatiles. Release factor after on-site risk management : water: 0% (Cosmetics Europe SPERC 8a.1.b.v2). air: 100% (Cosmetics Europe SPERC 8a.1.b.v2). Soil: 0% (Cosmetics Europe SPERC 8a.1.b.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling environmental exposure for 3: Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants)		
Amounts used	: Daily local widespread use amount: ≤0.000076 tonnes/day. Fraction of EU tonnage used in region: 0.053 Fraction of main source to local environment: 0.00075	
Frequency and duration of use	: Emission days: 365 days per year.	
Other conditions affecting environmental exposure	: Indoor use. Spraying of involatile solids, which are finally disposed off via wastewater. Release factor after on-site risk management : water: 100% (Cosmetics Europe SPERC 8a.1.c.v2). air: 0% (Cosmetics Europe SPERC 8a.1.c.v2). Soil: 0% (Cosmetics Europe SPERC 8a.1.c.v2).	
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)	
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling consumer exposure for: All Contributing scenarios		
Conditions and measures related to information and behavioural advice to consumers	: Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.	
Contributing scenario controlling consumer exposure for 4: Cosmetics, personal care products		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00303 mg/l. Risk characterisation ratio (PEC/PNEC): 0.151. Freshwater sediment: 0.045 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.151. Marine water: 0.000301 mg/l. Risk characterisation ratio (PEC/PNEC): 0.151. Marine water sediment: 0.00445 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.151. Sewage Treatment Plant: 0.00478 mg/l.	
Date of issue/Date of revision	: 09/09/2019	Version : 1 / en 358/390

octanoic acid	Exposure Scenario: 101	Consumer use; Cosmetics, personal care products (PC39)
	Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00627 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.133.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 2: Wide Dispersive Use in Aerosol products for hair and skin care (Propellants)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Environment: 3: Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00303 mg/l. Risk characterisation ratio (PEC/PNEC): 0.151. Freshwater sediment: 0.045 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.151. Marine water: 0.000301 mg/l. Risk characterisation ratio (PEC/PNEC): 0.151. Marine water sediment: 0.00445 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.151. Sewage Treatment Plant: 0.00478 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00627 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.133.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Consumers: 4: Cosmetics, personal care products		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**General**

: Not applicable.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Plant protection products (PC27)
List of use descriptors : **Identified use name: ES102:** Consumer use - Spray application of plant protection products containing co-formulants [ECPA_PPP_GES3]: PC027; ERC08a, ERC08d
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d
Market sector by type of chemical product: PC27
Environmental contributing scenarios : **Spray application of plant protection products containing co-formulants (indoor or outdoor) - ERC08a, ERC08d**
Health Contributing scenarios : **Contributing scenarios - PC27**

Number of the ES : 102

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Spray application of plant protection products containing co-formulants (indoor or outdoor)

Amounts used : Daily local widespread use amount: 0.00026 tonnes/day.
Other conditions affecting environmental exposure : Spray application of plant protection products.
Release factor after on-site risk management:
water: 0% (ECPA SPERC 8d.2.v2).
air: 100% (ECPA SPERC 8d.2.v2).
Soil: 0% (ECPA SPERC 8d.2.v2).
Waste: 0.01% (ECPA, 2007).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 2: Contributing scenarios

CS02: Spray application of agrochemical plant protection products - PC27

Section 3 - Exposure estimation and reference to its source

octanoic acid	Exposure Scenario: 102	Consumer use; Plant protection products (PC27)
Exposure estimation and reference to its source - Environment: 1: Spray application of plant protection products containing co-formulants (indoor or outdoor)		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.018 mg/l. Risk characterisation ratio (PEC/PNEC): 0.903.	
	Freshwater sediment: 0.046 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.157.	
	Marine water: 0.0018 mg/l. Risk characterisation ratio (PEC/PNEC): 0.902.	
	Marine water sediment: 0.014 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.484.	
	Sewage Treatment Plant: 0 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.	
	Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Consumers: 2: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	
Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES		
General	: Not applicable.	

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Plant protection products (PC27)
List of use descriptors : **Identified use name: ES103:** Consumer use - Use as a co-formulant in plant protection products, seed and granular applications [ECPA_PPP_GES4]: PC027; ERC08a, ERC08d
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d
Market sector by type of chemical product: PC27
Environmental contributing scenarios : **Direct application of plant protection products (e.g. granules or treated seeds) to soil** - ERC08a, ERC08d
Health Contributing scenarios : **Contributing scenarios** - PC27

Number of the ES : 103

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Direct application of plant protection products (e.g. granules or treated seeds) to soil

Amounts used : Daily local widespread use amount: 0.00026 tonnes/day.
Other conditions affecting environmental exposure : Direct application of plant protection products (e.g. granules or treated seeds) to soil.
Release factor after on-site risk management:
water: 0% (ECPA SPERC 8d.1.v2).
air: 0% (ECPA SPERC 8d.1.v2).
Soil: 100% (ECPA SPERC 8d.1.v2).
Waste: 0.01% (OECD, 2009).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 2: Contributing scenarios

CS02: Manual spreading of granular plant protection products or treated seeds - PC27
CS03: Manual spreading of granular plant protection products or treated seeds - PC27

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Direct application of plant protection products (e.g. granules or treated seeds) to soil

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation :

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Consumers: 2: Contributing scenarios

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General : Not applicable.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Fertilizers (PC12)
List of use descriptors : **Identified use name: ES104:** Consumer use - Consumer end-use of fertilisers [FARM_FE_C_001_v1]: PC012; ERC08a, ERC08b, ERC08d, ERC08e
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08b, ERC08d, ERC08e
Market sector by type of chemical product: PC12
Environmental contributing scenarios : **Consumer end-use of fertilisers** - ERC08a, ERC08d
Consumer end-use of fertilizers - ERC08b, ERC08e
Health Contributing scenarios : **Contributing scenarios** - PC12

Number of the ES : 104

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Consumer end-use of fertilisers

Amounts used : Daily local widespread use amount: ≤0.000082 tonnes/day.
Other conditions affecting environmental exposure : Release factor after on-site risk management:
water: 100% (ERC08d).
air: 100% (ERC08d).
Soil: 20% (ERC08d).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions.
Low risk assumed for waste life stage.
Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Consumer end-use of fertilizers

Amounts used : Daily local widespread use amount: ≤0.000082 tonnes/day.
Other conditions affecting environmental exposure : Release factor after on-site risk management:
water: 2% (ERC08e).
air: 0.1% (ERC08e).
Soil: 1% (ERC08e).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : ERC based assessment demonstrating control of risk with default conditions.
Low risk assumed for waste life stage.
Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 3: Contributing scenarios

CS03: Consumer end-use of fertilisers - PC12

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Consumer end-use of fertilisers

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00307 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.153.

Freshwater sediment: 0.045 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.153.

Marine water: 0.000305 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.153.

Marine water sediment: 0.00451 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.153.

Sewage Treatment Plant: 0.00517 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00637 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.135.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Consumer end-use of fertilizers

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.00256 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Marine water: 0.000255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.127.

Marine water sediment: 0.00376 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Sewage Treatment Plant: 0.000103 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00512 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.108.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Consumers: 3: Contributing scenarios

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General : Not applicable.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Washing and cleaning products (PC35)
List of use descriptors : **Identified use name: ES105:** Consumer use - Washing and cleaning products [IFRA_GES6]: PC35; ERC08a, ERC08d
Substance supplied to that use in form of: In a mixture
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d
Market sector by type of chemical product: PC35
Environmental contributing scenarios : **Use of washing and cleaning products** - ERC08a, ERC08d
Health Contributing scenarios : **Contributing scenarios** - PC35

Number of the ES : 105

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of washing and cleaning products

Amounts used	: Daily local widespread use amount: ≤0.0000082 tonnes/day. Fraction of EU tonnage used in region: 0.04 Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use	: Emission days: 365 days per year.
Other conditions affecting environmental exposure	: Indoor use/Outdoor use. Substance applied in aqueous process solution with negligible volatilization. Spent process fluid discharged to wastewater for subsequent treatment. Release factor after on-site risk management: water: 100% (AISE SPERC 8a.1.a.v2). air: 0% (AISE SPERC 8a.1.a.v2) Soil: 0% (AISE SPERC 8a.1.a.v2).
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers	: Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.
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Contributing scenario controlling consumer exposure for 2: Contributing scenarios

CS02: Laundry and dish-washing products - PC35
CS03: Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) - PC35
CS04: Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) - PC35

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: 1: Use of washing and cleaning products****Exposure assessment
(environment):** : EUSES 2.1.2**Exposure estimation** : Freshwater: 0.0026 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.13.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.13.

Marine water: 0.000259 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.129.

Marine water sediment: 0.00382 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.13.

Sewage Treatment Plant: 0.000515 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00522 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.11.**Remark** : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).**Exposure estimation and reference to its source - Consumers: 2: Contributing scenarios****Exposure assessment
(human):** : Qualitative approach used to conclude safe use.**Exposure estimation** : Not applicable.**Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES****General** : Not applicable.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Air care products (PC03)
List of use descriptors : **Identified use name: ES106:** Consumer use - Air care products [IFRA_GES7]: PC03; ERC08a
Substance supplied to that use in form of: In a mixture
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC03
Environmental contributing scenarios : **Air care products - ERC08a**
Health Contributing scenarios : **Contributing scenarios - PC03**

Number of the ES : 106

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Air care products

Amounts used : Daily local widespread use amount: ≤ 0.0000082 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Indoor use/Outdoor use.
Spraying of involatile solids, which are finally disposed off via wastewater.
Release factor after on-site risk management:
water: 100% (AISE SPERC 8a.1.b.v2).
air: 0% (AISE SPERC 8a.1.b.v2)
Soil: 0% (AISE SPERC 8a.1.b.v2).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 2: Contributing scenarios

CS02: Air care, instant action (aerosol sprays) - PC03
CS03: Air care, continuous action (solid and liquid) - PC03

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Air care products

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.0026 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.13.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.13.

Marine water: 0.000259 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.129.

Marine water sediment: 0.00382 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.13.

Sewage Treatment Plant: 0.000514 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00522 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.11.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Consumers: 2: Contributing scenarios

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General : Not applicable.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Biocidal products (PC08)
List of use descriptors : **Identified use name: ES107:** Consumer use - Biocidal products [IFRA_GES8]: PC08; ERC08a, ERC08d
Substance supplied to that use in form of: In a mixture
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d
Market sector by type of chemical product: PC08
Environmental contributing scenarios : **Biocidal products** - ERC08a, ERC08d
Health Contributing scenarios : **Insecticides (liquid electric, spray neat) and repellents for consumer use** - PC08

Number of the ES : 107

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Biocidal products

Amounts used : Daily local widespread use amount: ≤0.0000082 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Indoor use/Outdoor use.
Substance applied in aqueous process solution with negligible volatilization.
Spent process fluid discharged to wastewater for subsequent treatment.

Release factor after on-site risk management:
water: 100% (AISE SPERC 8a.1.a.v2).
air: 0% (AISE SPERC 8a.1.a.v2)
Soil: 0% (AISE SPERC 8a.1.a.v2).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 2: Insecticides (liquid electric, spray neat) and repellents for consumer use

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Biocidal products

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.0026 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.13.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.13.

Marine water: 0.000259 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.129.

Marine water sediment: 0.00382 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.13.

Sewage Treatment Plant: 0.000515 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00522 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.11.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Consumers: 2: Insecticides (liquid electric, spray neat) and repellents for consumer use

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General : Not applicable.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Polishes and wax blends (PC31)
List of use descriptors : **Identified use name: ES108:** Consumer use - Polishes and wax blends
[IFRA_GES9]: PC31; ERC08a
Substance supplied to that use in form of: In a mixture
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC31
Environmental contributing scenarios : Polishes and wax blends
Health Contributing scenarios : Contributing scenarios - PC31

Number of the ES : 108

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Polishes and wax blends

Amounts used : Daily local widespread use amount: ≤0.0000082 tonnes/day.
Fraction of EU tonnage used in region: 0.04
Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use : Emission days: 365 days per year.
Other conditions affecting environmental exposure : Indoor use/Outdoor use.
Spraying of involatile solids, which are finally disposed off via wastewater.

Release factor after on-site risk management:
water: 100% (AISE SPERC 8a.1.b.v2).
air: 0% (AISE SPERC 8a.1.b.v2)
Soil: 0% (AISE SPERC 8a.1.b.v2).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 2: Contributing scenarios

Polishes, wax/cream (floor, furniture, shoes) - PC31
CS03: Polishes, spray (furniture, shoes) - PC31

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Polishes and wax blends

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.0026 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.13.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.13.

Marine water: 0.000259 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.129.

Marine water sediment: 0.00382 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.13.

Sewage Treatment Plant: 0.000514 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00522 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.11.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Consumers: 2: Contributing scenarios

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General : Not applicable.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Cosmetics, personal care products (PC39)
List of use descriptors : **Identified use name: ES109:** Consumer use - End use of cosmetic products [IFRA_GES10]: PC39; ERC08a
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC39
Environmental contributing scenarios : **End use of cosmetic products - ERC08a**
Health Contributing scenarios : **Cosmetics, personal care products - PC39**

Number of the ES : 109

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: End use of cosmetic products

Amounts used	: Daily local widespread use amount: ≤0.0000082 tonnes/day. Fraction of EU tonnage used in region: 0.053 Fraction of Regional tonnage used locally: 0.00075
Frequency and duration of use	: Emission days: 365 days per year.
Other conditions affecting environmental exposure	: Indoor use. Substance applied in aqueous process solution with negligible volatilization. Release factor after on-site risk management: water: 100% (Cosmetics Europe SPERC 8a.1.a.v2). air: 0% (Cosmetics Europe SPERC 8a.1.a.v2) Soil: 0% (Cosmetics Europe SPERC 8a.1.a.v2).
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers	: Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.
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Contributing scenario controlling consumer exposure for 2: Cosmetics, personal care products

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: End use of cosmetic products

Exposure assessment (environment): : EUSES 2.1.2

Exposure estimation : Freshwater: 0.0026 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.13.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.13.

Marine water: 0.000259 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.129.

Marine water sediment: 0.00382 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.13.

Sewage Treatment Plant: 0.000515 mg/l.
Risk characterisation ratio (PEC/PNEC): <0.01.

Soil: 0.00522 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.11.

Remark : Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Consumers: 2: Cosmetics, personal care products

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General : Not applicable.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Service life - consumers; Plastic articles (AC13)
List of use descriptors : **Identified use name: ES110:** Service life - Consumers - service life plastic articles [IFRA_GES10]: PC39; ERC08a
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC10a, ERC11a
Article category related to subsequent service life: AC13
Environmental contributing scenarios : **service life plastic articles** - ERC10a, ERC11a
Health Contributing scenarios : **Plastic articles**

Number of the ES : 110
Additional information : Contributing scenarios: ES060, ES061, ES062, ES063, ES064, ES065, ES066.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: service life plastic articles

Amounts used : Daily local widespread use amount: ≤0.000024 tonnes/day.
Other conditions affecting environmental exposure : Release factor after on-site risk management:
water: 0.5% (OECD ESD Series No. 3 for plastic additives).
air: 0.05% (ERC10a).
Soil: 3.2% (ERC10a).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular considerations on the waste treatment operations.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 2: Plastic articles

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: service life plastic articles

Exposure assessment (environment): : EUSES 2.1.2
Exposure estimation : Freshwater: 0.00255 mg/l.
Risk characterisation ratio (PEC/PNEC): 0.128.

Freshwater sediment: 0.038 mg/kg dwt.
Risk characterisation ratio (PEC/PNEC): 0.128.

Marine water: 0.000254 mg/l.

octanoic acid	Exposure Scenario: 110	Service life - consumers; Plastic articles (AC13)
Risk characterisation ratio (PEC/PNEC): 0.127.		
Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127.		
Sewage Treatment Plant: 0.00000741 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01.		
Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.		
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Consumers: 2: Plastic articles		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	
Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES		
General	: Not applicable.	

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Service life - consumers; Various articles (AC01, AC02)
List of use descriptors : **Identified use name: ES111:** Service life - Consumers - exposure from textile articles [TEGEWA]: AC01, AC02; ERC10a
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC10a
Article category related to subsequent service life: AC01, AC02
Environmental contributing scenarios : **exposure from textile articles - ERC10a**
Health Contributing scenarios : **Contributing scenarios**

Number of the ES : 111
Additional information : Contributing scenarios: ES075, ES078.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: exposure from textile articles

Amounts used : Daily local widespread use amount: ≤ 0.0000072 tonnes/day.
Other conditions affecting environmental exposure : Release factor after on-site risk management :
water: 3.2% (ERC10a).
air: 0.05% (ERC10a).
Soil: 3.2% (ERC10a).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular considerations on the waste treatment operations.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 2: Contributing scenarios

CS02: Use of long life textiles with low release, outdoor: Vehicles - AC01
CS03: Use of long life textiles with low release, outdoor: Machinery, mechanical appliances, electrical/electronic articles - AC02

Section 3 - Exposure estimation and reference to its source

octanoic acid	Exposure Scenario: 111	Service life - consumers; Various articles (AC01, AC02)
Exposure estimation and reference to its source - Environment: 1: exposure from textile articles		
Exposure assessment (environment):	: EUSES 2.1.2	
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000413 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Consumers: 2: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	
Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES		
General	: Not applicable.	

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Service life - consumers; Fabrics, textiles and apparel (AC05)
List of use descriptors : **Identified use name: ES112:** Service life - Consumers - exposure from textile articles [TEGEWA]: AC05; ERC11a
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC11a
Article category related to subsequent service life: AC05
Environmental contributing scenarios : **exposure from textile articles - ERC11a**
Health Contributing scenarios : **Use of long life textiles with low release, indoor**

Number of the ES	: 112
Additional information	: Contributing scenarios: ES075, ES078.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: exposure from textile articles

Amounts used	: Daily local widespread use amount: ≤0.0000072 tonnes/day.
Other conditions affecting environmental exposure	: Release factor after on-site risk management: water: 0.05% (ERC11a). air: 0.05% (ERC11a). Soil: 0% (ERC11a).
Conditions and measures related to sewage treatment plant	: Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal	: Particular considerations on the waste treatment operations.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers	: Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.
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Contributing scenario controlling consumer exposure for 2: Use of long life textiles with low release, indoor (AC05)

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: exposure from textile articles

Exposure assessment (environment):	: EUSES 2.1.2
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octanoic acid	Exposure Scenario: 112	Service life - consumers; Fabrics, textiles and apparel (AC05)
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.000000224 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.0051 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Consumers: 2: Use of long life textiles with low release, indoor		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: Not applicable.
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Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Service life - consumers; Leather articles (AC06)
List of use descriptors : **Identified use name: ES113:** Service life - Consumers - exposure from leather articles [TEGEWA]: AC06; ERC11a
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC11a
Article category related to subsequent service life: AC06
Environmental contributing scenarios : **exposure from leather articles - ERC11a**
Health Contributing scenarios : **use of leather articles**

Number of the ES : 113
Additional information : Contributing scenarios: ES081, ES082.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: exposure from leather articles

Amounts used : Daily local widespread use amount: ≤ 0.0000072 tonnes/day.
Other conditions affecting environmental exposure : Release factor after on-site risk management :
water: 0.05% (ERC11a).
air: 0.05% (ERC11a).
Soil: 0% (ERC11a).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular considerations on the waste treatment operations.

Contributing scenario controlling consumer exposure for: All Contributing scenarios

Conditions and measures related to information and behavioural advice to consumers : Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.

Contributing scenario controlling consumer exposure for 2: use of leather articles

(AC06)

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: exposure from leather articles

Exposure assessment (environment): : EUSES 2.1.2

octanoic acid	Exposure Scenario: 113	Service life - consumers; Leather articles (AC06)
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.000000224 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.	
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Consumers: 2: use of leather articles		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: Not applicable.
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Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Various products (PC01, PC09a, PC09b)
List of use descriptors : **Identified use name: ES114:** Consumer use - Use of construction chemicals; indoor [EFCC]: PC01, PC09a, PC09b; ERC08a, ERC08c
Substance supplied to that use in form of: In a mixture
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08c
Market sector by type of chemical product: PC01, PC09a, PC09b
Environmental contributing scenarios : **Use of construction chemicals; indoor** - ERC08a
Use of construction chemicals; indoor - ERC08c
Health Contributing scenarios : **Contributing scenarios** - PC01, PC09a, PC09b

Number of the ES : 114

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of construction chemicals; indoor

Amounts used : Daily local widespread use amount: ≤0.0000055 tonnes/day.
Other conditions affecting environmental exposure : Indoor use.
Professional and consumer product use, leading to emission of volatiles to air.
Upon curing, substances evaporate to the ambient air.

Release factor after on-site risk management :
water: 1% (EFCC SPERC 8A.1a.v1).
air: 98% (EFCC SPERC 8A.1a.v1).
Soil: 0% (EFCC SPERC 8A.1a.v1).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of construction chemicals; indoor

Amounts used : Daily local widespread use amount: ≤0.0000055 tonnes/day.
Other conditions affecting environmental exposure : Indoor use.
Professional and consumer product use, leading to embedding substances into a matrix.
Upon curing, substances are included into matrix without intended release to the environment.

Release factor after on-site risk management :
water: 1% (EFCC SPERC 8C.1a.v1).
air: 0% (EFCC SPERC 8C.1a.v1).
Soil: 0% (EFCC SPERC 8C.1a.v1).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)

octanoic acid	Exposure Scenario: 114	Consumer use; Various products (PC01, PC09a, PC09b)
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling consumer exposure for: All Contributing scenarios		
Conditions and measures related to information and behavioural advice to consumers	: Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.	
Contributing scenario controlling consumer exposure for 3: Contributing scenarios		
CS03: Application, Indoor - PC01		
CS04: Application, Indoor - PC09a		
CS05: Application, Indoor - PC09b		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of construction chemicals; indoor	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000345 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Use of construction chemicals; indoor	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.0000345 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.

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octanoic acid	Exposure Scenario: 114	Consumer use; Various products (PC01, PC09a, PC09b)
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Consumers: 3: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: Not applicable.
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Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mono-constituent substance
Product name : octanoic acid

Section 1 - Title

Short title of the exposure scenario : Consumer use; Various products (PC01, PC09a, PC09b)
List of use descriptors : **Identified use name: ES115:** Consumer use - Use of construction chemicals; outdoor [EFCC]: PC01, PC09a, PC09b; ERC08d, ERC08f
Substance supplied to that use in form of: In a mixture
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08d, ERC08f
Market sector by type of chemical product: PC01, PC09a, PC09b
Environmental contributing scenarios : **Use of construction chemicals; outdoor** - ERC08d
Use of construction chemicals; outdoor - ERC08f
Health Contributing scenarios : **Contributing scenarios** - PC01, PC09a, PC09b

Number of the ES : 115

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: Use of construction chemicals; outdoor

Amounts used : Daily local widespread use amount: ≤0.0000055 tonnes/day.
Other conditions affecting environmental exposure : Outdoor use.
Professional and consumer product use, leading to emission of volatiles to air.
Upon curing, substances evaporate to the ambient air.

Release factor after on-site risk management :
water: 1% (EFCC SPERC 8D.1a.v1).
air: 98% (EFCC SPERC 8D.1a.v1).
Soil: 0% (EFCC SPERC 8D.1a.v1).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)
Conditions and measures related to external treatment of waste for disposal : Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.

Contributing scenario controlling environmental exposure for 2: Use of construction chemicals; outdoor

Amounts used : Daily local widespread use amount: ≤0.0000055 tonnes/day.
Other conditions affecting environmental exposure : Outdoor use.
Professional and consumer product use, leading to embedding substances into a matrix.
Upon curing, substances are included into matrix without intended release to the environment.

Release factor after on-site risk management :
water: 1% (EFCC SPERC 8F.1a.v1).
air: 0% (EFCC SPERC 8F.1a.v1).
Soil: 0% (EFCC SPERC 8F.1a.v1).
Conditions and measures related to sewage treatment plant : Sewage Treatment Plant: Yes. (Efficiency of at least 87.47%)

octanoic acid	Exposure Scenario: 115	Consumer use; Various products (PC01, PC09a, PC09b)
Conditions and measures related to external treatment of waste for disposal	: Particular risks from waste treatment unlikely due to small fraction of used substance entering into the waste stage. Waste disposal according to national/local legislation is sufficient.	
Contributing scenario controlling consumer exposure for: All Contributing scenarios		
Conditions and measures related to information and behavioural advice to consumers	: Avoid contact with skin and eyes. Packaging with child-resistant fastening. Follow safety instructions. Avoid using at a product concentration greater than 1%. Ensure that splashes and spills are avoided by product design.	
Contributing scenario controlling consumer exposure for 3: Contributing scenarios		
CS03: Application, Outdoor - PC01		
CS04: Application, Outdoor - PC09a		
CS05: Application, Outdoor - PC09b		

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment: 1: Use of construction chemicals; outdoor	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000345 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Environment: 2: Use of construction chemicals; outdoor	
Exposure assessment (environment):	: EUSES 2.1.2
Exposure estimation	: Freshwater: 0.00255 mg/l. Risk characterisation ratio (PEC/PNEC): 0.128. Freshwater sediment: 0.038 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.128. Marine water: 0.000254 mg/l. Risk characterisation ratio (PEC/PNEC): 0.127. Marine water sediment: 0.00375 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.127. Sewage Treatment Plant: 0.00000345 mg/l. Risk characterisation ratio (PEC/PNEC): <0.01. Soil: 0.00509 mg/kg dwt. Risk characterisation ratio (PEC/PNEC): 0.108.

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octanoic acid	Exposure Scenario: 115	Consumer use; Various products (PC01, PC09a, PC09b)
Remark	: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).	
Exposure estimation and reference to its source - Consumers: 3: Contributing scenarios		
Exposure assessment (human):	: Qualitative approach used to conclude safe use.	
Exposure estimation	: Not applicable.	

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

General	: Not applicable.
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