

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

1.1. Product identifier

Product form	: Substance
Trade name	: RADIANOL 4709
EC no.	: 200-338-0
CAS No.	: 57-55-6
REACH registration No.	: 01-2119456809-23
C&L notification reference no	: 02-2119881154-37-0000
Label declarations for feed use	: Feed material

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

Relevant identified uses

Main use category	: Industrial use
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Title	Life cycle stage	Use descriptors
General overview of industrial uses of Propylene Glycol	Industrial	SU3, SU9, SU10, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC12, PROC13, PROC14, PROC15, PROC21, PROC23, ERC1, ERC2, ERC3, ERC4, ERC6c, ERC6d, ERC7, ERC8d
General overview of professional uses of Propylene Glycol	Professional	SU22, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC14, PROC15, PROC19, PROC20, ERC4, ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC9a, ERC9b
General overview of consumer uses of Propylene Glycol	Consumer	SU21, PC1, PC3, PC4, PC9a, PC9b, PC9c, PC12, PC16, PC17, PC18, PC23, PC24, PC27, PC28, PC29, PC31, PC35, PC39, ERC8a, ERC8d, ERC9a, ERC9b

Full text of use descriptors: see section 16

Uses advised against

Title	Use descriptors	Reason
Consumer uses advised against		Consumer uses advised against: Use in electronic cigarettes and artificial (theater) fog
Professional uses advised against		Widespread uses by professional workers advised against: Use in artificial (theater) fog

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)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

No labelling applicable

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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]
Propane-1,2-diol	CAS No.: 57-55-6 EC no.: 200-338-0 REACH-no: 01-2119456809-23	≥ 99	Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.
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. If irritation persists, consult a doctor.
First-aid measures after eye contact : Rinse immediately with plenty of water. Consult an ophthalmologist if irritation persists.

First-aid measures after ingestion : Rinse mouth out with water. Get medical advice/attention if you feel unwell. 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 : EXPOSURE TO HIGH CONCENTRATIONS: Dry/sore throat. Coughing. Feeling of weakness.
Symptoms/effects after skin contact : ON CONTINUOUS EXPOSURE/CONTACT: Red skin. Dry skin.
Symptoms/effects after eye contact : Redness of the eye tissue.
Symptoms/effects after ingestion : AFTER INGESTION OF HIGH QUANTITIES: Nausea. Abdominal pain.
Chronic symptoms : Change in the haemogramme/blood composition. Decreased renal function.

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. Water. Water spray. 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. INDIRECT FIRE HAZARD: Heating may cause a fire or explosion. Temperature above flashpoint: higher fire/explosion hazard.
Explosion hazard : No direct explosion hazard.

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions : No specific fire-fighting instructions required.
Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus (EN 136 + EN 137).
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. Exposure to fire/heat: have neighbourhood close doors and windows.
Exposure to fire/heat: consider evacuation. Wash contaminated clothing before reuse.

For non-emergency personnel

Protective equipment : See "Material-Handling" to select protective clothing.
Emergency procedures : Mark the danger area. No naked flames. Wash contaminated clothing before reuse.

For emergency responders

Protective equipment : For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent soil and water pollution.

6.3. Methods and material for containment and cleaning up

- For containment : Plug the leak, cut off the supply. Contain released product, collect/pump into suitable containers.
- Methods for cleaning up : Clean contaminated surfaces with a soap solution. Flush/dilute with water. Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or powdered limestone.
- Other information : No supplementary information available.

6.4. Reference to other sections

Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with applicable regulations. Wash contaminated clothing before reuse. Keep container tightly closed. Thoroughly clean/dry the installation before use.
- Handling temperature : ≤ 40 °C

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Hygroscopic. Keep container tightly closed.
- Heat and ignition sources : KEEP AWAY FROM: heat sources. water/moisture.
- Information on mixed storage : KEEP AWAY FROM: Acids. strong acids. bases. strong bases.
- Storage area : Keep container in a well-ventilated place. Store at ambient temperature. Keep out of direct sunlight. Meet the legal requirements.
- Special rules on packaging : Store in a closed container. Suitably labelled. Meet the legal requirements.
- Packaging materials : SUITABLE MATERIAL: stainless steel. mild steel. steel with plastic inner lining. MATERIAL TO AVOID: plastics.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

RADIANOL 4709 (57-55-6)

United Kingdom - Occupational Exposure Limits

WEL TWA (OEL TWA)	474 mg/m ³ (Total vapour and particulates)
	10 mg/m ³ (Particulates)
	150 ppm
WEL STEL (OEL STEL)*	1422 mg/m ³
	450 ppm

DNEL and PNEC

RADIANOL 4709 (57-55-6)	
PNEC (Water)	
PNEC aqua (freshwater)	260 mg/l (JSM)
PNEC aqua (marine water)	26 mg/l (JSM)
PNEC aqua (intermittent, freshwater)	183 mg/l (JSM)
PNEC (Sediment)	
PNEC sediment (freshwater)	572 mg/kg dwt (JSM)
PNEC sediment (marine water)	57.2 mg/kg dwt (JSM)
PNEC (Soil)	
PNEC soil	50 mg/kg dwt (JSM)
PNEC (Oral)	
PNEC oral (secondary poisoning)	1133 mg/kg food (JSM)
PNEC (STP)	
PNEC sewage treatment plant	20000 mg/l (JSM)

8.2. Exposure controls

Personal protection equipment

Personal protective equipment:

Gloves. Protective clothing. Safety glasses.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Eye protection not required in normal conditions

Skin protection

Skin and body protection:

Protective clothing (EN 14605 or EN 13034)

Hand protection:

Protective gloves against chemicals (EN 374)

Other skin protection

Materials for protective clothing:

Good resistance: Nitrile rubber

Respiratory protection

Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Appearance (room temperature)	: Liquid.
Molecular mass	: 76.1 g/mol
Odour	: Almost odourless.
Odour threshold	: Not available
Melting point	: < -20 °C (1013 hPa, EU Method A.1: Melting/freezing point)
Freezing point	: Not available
Boiling point	: 184 °C (1003 hPa, EU Method A.2: Boiling point)
HMIS Flammability	: Not available
Explosive properties	: Predicted negative.
Oxidising properties	: Predicted negative.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 102 °C
Auto-ignition temperature	: > 400 °C (1000 - 1014 hPa, EU Method A.15: Auto-ignition Temperature (liquids and gases), T2)
Decomposition temperature	: Not available
pH	: 6.5 – 7.5 (50 %)
Viscosity, kinematic	: 41.811 mm ² /s
Viscosity, dynamic	: 43.4 mPa·s (25 °C)
Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Soluble in 1,4-dioxane. Soluble in pine oil. Water: 20 °C, complete, EU Method A.6: Water solubility Ethanol: complete Ether: 12 g/100ml Acetone: complete
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: -1.1 (Experimental value, EU Method A.8: Partition Coefficient, 20.5 °C)
Vapour pressure	: 0.2 hPa (25 °C, EU Method A.4: Vapour Pressure)
Vapour pressure at 50 °C	: 1.8 hPa (Antoine equation)
Saturation concentration	: 0.54 g/m ³
Density	: 1038 kg/m ³ (20 °C, EU Method A.3: Relative Density)
Relative density	: 1.03 (20 °C, EU Method A.3: Relative Density)
Relative vapour density at 20°C	: 2.6
Relative density of saturated gas/air mixture	: 1
Particle characteristics	: Not applicable

9.2. Other information

Information with regard to physical hazard classes

Explosion limits	: 2.6 – 12.6 Vol-% 80 – 400 g/m ³
Critical temperature	: 352 °C

Other safety characteristics

Relative evaporation rate (butylacetate=1)	: < 0.1
Specific conductivity	: 4.4 µS/m
VOC content	: 100 % (1999/13/EC; 2004/42/EC; 2010/75/EU; SR 814.018)
Refractive index	: ca. 1.432 (25°C)

Other properties : Gas/vapour heavier than air at 20°C, Clear, Hygroscopic, Slightly volatile
Additional information : This product is absent from Annex 1 and Annex 2 of the Swiss ordinance 814.018 (OVOC)

SECTION 10: Stability and reactivity

10.1. Reactivity

On burning: release of carbon monoxide/carbon dioxide.

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

RADIANOL 4709 (57-55-6)

LD50 oral rat	> 2000 mg/kg Non-toxic
LD50 dermal rabbit	> 2000 mg/kg bodyweight (24 h, Rabbit, Experimental value, Dermal, 14 day(s))

Skin corrosion/irritation : Not classified
pH: 6.5 – 7.5 (50 %)
Serious eye damage/irritation : Not classified
pH: 6.5 – 7.5 (50 %)
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

RADIANOL 4709 (57-55-6)

Viscosity, kinematic	41.8 mm ² /s
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11.2. Information on other hazards

Endocrine disrupting properties

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

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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 2024/573). Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590).

Ecology - water : No data available concerning bioaccumulation

Ecology - water : Not harmful to crustacea (Daphnia). Not harmful to fishes. Groundwater pollutant. Not harmful to algae. Not harmful to bacteria.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

RADIANOL 4709 (57-55-6)

LC50 - Fish [1]	40613 mg/l (96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Measured concentration)
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12.2. Persistence and degradability

RADIANOL 4709 (57-55-6)

Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.96 – 1.1 g O ₂ /g substance
Chemical oxygen demand (COD)	1.6 g O ₂ /g substance
ThOD	1.7 g O ₂ /g substance
Biodegradation	81.7 % (OECD 301F, 28d, CO ₂ evolution; JSM)

12.3. Bioaccumulative potential

RADIANOL 4709 (57-55-6)

Bioconcentration factor (BCF REACH)	1.4 l/kg (Lyman, 1982)
Partition coefficient n-octanol/water (Log Pow)	-1.1 (Experimental value, EU Method A.8: Partition Coefficient, 20.5 °C)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

RADIANOL 4709 (57-55-6)

Surface tension	71.6 mN/m (22 °C, 1.01 g/l, EU Method A.5: Surface tension)
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RADIANOL 4709 (57-55-6)

Organic Carbon Normalized Adsorption Coefficient (Log K _{oc})	2.9 (JSM)
Ecology - soil	Biodegradability in soil: no data available.

12.5. Results of PBT and vPvB assessment

RADIANOL 4709 (57-55-6)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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.
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12.7. Other adverse effects

RADIANOL 4709 (57-55-6)

Other information	No supplementary information available
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal	: Prevent dispersion by covering with dry absorbent, Scoop solid spill into closing containers, Scoop absorbed substance into closing containers, Clean contaminated surfaces with an excess of water and soap solution, Wash clothing and equipment after handling
Regional waste regulation	: No supplementary information available.
Product/Packaging disposal recommendations	: Do not discharge into drains or the environment. Dispose of at authorized waste collection point. Remove waste in accordance with local and/or national regulations.
Additional information	: Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
Ecological waste information	: Do not discharge into drains or the environment. Remove to an authorized waste treatment plant.
European List of Waste (LoW, EC 2000/532)	: 15 01 04 - metallic packaging

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

ADR	IMDG	IATA	ADN	RID
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

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

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 (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Not listed on the COUNCIL REGULATION (EC) of dual-use items.

VOC Directive (2004/42)

VOC content : 100 % (1999/13/EC; 2004/42/EC; 2010/75/EU; SR 814.018)

Explosives Precursors Regulation (EU 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 (EC 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)

National regulations

Chemical inventories : Compliant with AICIS, DSL, EU REACH, IECSC, INSQ, Japan ENCS, Japan ISHL, KECL, NCI, NZIoC, PICCS, TCSI, TECL_DIW, TECL_FDA, TR EAEU, TSCA

KKDIK number (Turkey) : 05-0000296806-08-0000

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)

France

Occupational diseases	
Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols; glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 280).

VOC content : 100 % (1999/13/EC; 2004/42/EC; 2010/75/EU; SR 814.018)

Netherlands

ABM category : B(5) - low hazard for aquatic organisms

SZW List of Carcinogenic Substances : The substance is not listed

SZW List of Mutagenic Substances : The substance is not listed

SZW List of Reprotoxic Substances – Breastfeeding : The substance is not listed

SZW List of Reprotoxic Substances – Fertility : The substance is not listed

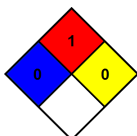
SZW List of Reprotoxic Substances – Development : The substance is not listed

15.2. Chemical safety assessment

The chemical safety assessment has been carried out, an exposure scenario is not applicable (substance is not classified).

SECTION 16: Other information

Training advice : No supplementary information available.

Chemical inventories legend	: AICIS = Australian Inventory of Industrial Chemicals DSL = Canadian Domestic 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 Japan ENCS = Japanese Existing Chemical Substances (ISHL) Japan ISHL = Japanese Existing and New Chemical Substances (CSCL) KECL = Korean Existing Chemical List NCI = Vietnam National Chemical Inventory NZIoC = New Zealand Inventory of Chemicals PICCS = Philippines Inventory of Chemicals and Chemical Substances TCSI = Taiwan Chemical Substance Inventory TECL_DIW = Thailand Existing Chemicals Inventory - Department of Industrial Works List TECL_FDA = Thailand Existing Chemicals Inventory - Food and Drug Administration List TR EAEU = Eurasian Economic Union Unified list of chemicals TSCA = USA Toxic Substances Control Act
SDS changed sections	: 5 - Firefighting measures;6 - Accidental release measures;7 - Handling and storage
SDS Reason for revision	: No supplementary information available
WHMIS Classification	: Uncontrolled - Uncontrolled product according to WHMIS classification criteria
HMIS Health	: 2 Moderate Hazard - Temporary or minor injury may occur
HMIS Flammability	: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
HMIS Physical	: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
HMIS Personal Protection	: H - Splash goggles, Gloves, Synthetic apron, Vapor respirator
NFPA health hazard	: 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.
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 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)
ERC6c	Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC6d	Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC7	Use of functional fluid at industrial site
ERC8a	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC8b	Widespread use of 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)

Full text of use descriptors

ERC8e	Widespread use of reactive processing aid (no inclusion into or 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
PC17	Hydraulic Fluids
PC18	Ink and Toners
PC23	Leather treatment products
PC24	Lubricants, greases, release products
PC27	Plant protection products
PC28	Perfumes, fragrances
PC29	Pharmaceuticals
PC3	Air care products
PC31	Polishes and wax blends
PC35	Washing and cleaning products
PC39	Cosmetics, personal care products
PC4	Anti-Freeze and De-icing 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
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
PROC23	Open processing and transfer operations at substantially elevated temperature
PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Full text of use descriptors

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)
SU10	Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU21	Consumer uses: Private households (= general public = consumers)
SU22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU3	Industrial uses: Uses of substances as such or in preparations at industrial sites
SU9	Manufacture of fine chemicals

The classification complies with : ATP 8

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.