

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

### 1.1. Product identifier

|                               |                               |
|-------------------------------|-------------------------------|
| Product form                  | : Substance                   |
| Trade name                    | : RADIASURF 7912              |
| IUPAC name                    | : 2,3-dihydroxypropyl laurate |
| EC no.                        | : 205-526-6                   |
| CAS No.                       | : 142-18-7                    |
| REACH registration No.        | : 01-2119978215-31            |
| C&L notification reference no | : 02-2119692940-29-0000       |

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

#### Relevant identified uses

Main use category : Industrial use

| Title                                                           | Life cycle stage | Use descriptors                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General overview of industrial uses of glycerol fatty esters    | Industrial       | SU3, PC1, PC8, PC9a, PC12, PC14, PC18, PC19, PC20, PC21, PC23, PC24, PC32, PC34, PC35, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC12, PROC13, PROC14, PROC15, PROC16, PROC17, PROC18, PROC21, PROC24, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7 |
| General overview of professional uses of glycerol fatty esters  | Professional     | SU22, PC12, PC21, PC27, PC31, PC35, PC39, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC14, PROC15, PROC16, PROC17, PROC18, PROC19, PROC20, PROC21, ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f, ERC9a, ERC9b, ERC10a, ERC11a                           |
| General overview of consumer uses of glycerol fatty esters      | Consumer         | SU21, PC1, PC3, PC4, PC8, PC9a, PC9b, PC9c, PC12, PC13, PC15, PC16, PC17, PC18, PC20, PC23, PC24, PC25, PC27, PC28, PC31, PC32, PC34, PC35, PC37, PC39, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7, ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f, ERC9a, ERC9b, ERC10a, ERC11a     |
| General overview of manufacturing uses of glycerol fatty esters |                  | SU3, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC14, PROC15, PROC21, ERC1                                                                                                                                                                   |
| General overview of formulation uses of glycerol fatty esters   |                  | SU3, PC0, PC2, PC9a, PC12, PC18, PC20, PC23, PC24, PC32, PC34, PC39, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC12, PROC13, PROC14, PROC15, PROC21, ERC2, ERC3                                                                                     |

Full text of use descriptors: see section 16

### 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](mailto:sds@oleon.com), [www.oleon.com](http://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

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] |
|-----------------------------|----------------------------------------------------------------------|-------|-----------------------------------------------------------------|
| 2,3-dihydroxypropyl laurate | CAS No.: 142-18-7<br>EC no.: 205-526-6<br>REACH-no: 01-2119978215-31 | ≤ 100 | 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 ( <a href="http://www.who.int/ipcs/poisons/centre/directory/en">www.who.int/ipcs/poisons/centre/directory/en</a> ). |

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

|                  |                                           |
|------------------|-------------------------------------------|
| Symptoms/effects | : No supplementary information available. |
|------------------|-------------------------------------------|

### 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 | : Do not use water jet.                                                                                                                                      |

### 5.2. Special hazards arising from the substance or mixture

|                  |                                                                                                                                                                                 |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fire hazard      | : DIRECT FIRE HAZARD: Not easily 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.                                              |

### 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. Dust production: have neighbourhood close doors and windows. Exposure to fire/heat: have neighbourhood close doors and windows. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment. |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### For non-emergency personnel

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

#### 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         | : Knock down/dilute dust cloud with water spray.                                                                                                                                                                                          |
| Methods for cleaning up | : Carefully collect the spill/leftovers. If melted: allow liquid to solidify before taking it up. Scoop solid spill into closing containers or synthetic bags. Clean contaminated surfaces with a soap solution. Flush/dilute with water. |
| 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

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: 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 : No supplementary information available.

#### Germany

Storage class (LGK, TRGS 510)

: LGK 11 - Combustible solids

Joint storage table

|          |         |          |          |           |
|----------|---------|----------|----------|-----------|
| LGK 1    | LGK 2A  | LGK 2B   | LGK 3    | LGK 4.1A  |
| LGK 4.1B | LGK 4.2 | LGK 4.3  | LGK 5.1A | LGK 5.1B  |
| LGK 5.1C | LGK 5.2 | LGK 6.1A | LGK 6.1B | LGK 6.1C  |
| LGK 6.1D | LGK 6.2 | LGK 7    | LGK 8A   | LGK 8B    |
| LGK 10   | LGK 11  | LGK 12   | LGK 13   | LGK 10-13 |

Joint storage not permitted for

: LGK 1, LGK 5.1A, LGK 6.2, LGK 7

Joint storage with restrictions permitted for

: LGK 2A, LGK 3, LGK 4.1A, LGK 4.2, LGK 4.3, LGK 5.1B, LGK 5.1C, LGK 5.2, LGK 6.1A, LGK 6.1B

Joint storage permitted for

: LGK 2B, LGK 4.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13

#### Switzerland

Storage class (LK)

: NG - Non-hazardous

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

#### Personal protection equipment

##### Personal protective equipment:

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

##### Personal protective equipment symbol(s):



### Skin protection

#### Other skin protection

#### Materials for protective clothing:

Good resistance: Nitrile rubber

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                                                 |                                                    |
|-------------------------------------------------|----------------------------------------------------|
| Physical state                                  | : Solid                                            |
| Colour                                          | : White to beige.                                  |
| Appearance (room temperature)                   | : Solid in various shapes.                         |
| Odour                                           | : Characteristic. Almost odourless.                |
| Odour threshold                                 | : Not available                                    |
| Melting point                                   | : $\approx 54\text{ }^{\circ}\text{C}$             |
| Freezing point                                  | : Not available                                    |
| Boiling point                                   | : $> 250\text{ }^{\circ}\text{C}$                  |
| HMIS Flammability                               | : Not available                                    |
| Explosive properties                            | : Predicted negative.                              |
| Lower explosion limit                           | : Not applicable                                   |
| Upper explosion limit                           | : Not applicable                                   |
| Flash point                                     | : $\approx 230\text{ }^{\circ}\text{C}$ (ASTM D92) |
| Auto-ignition temperature                       | : $> 300\text{ }^{\circ}\text{C}$                  |
| Decomposition temperature                       | : Flash point                                      |
| pH                                              | : 5 – 8                                            |
| pH solution                                     | : Not available                                    |
| Viscosity, kinematic                            | : $\approx 14\text{ mm}^2/\text{s}$ (100°C)        |
| Solubility                                      | : Not available                                    |
| Partition coefficient n-octanol/water (Log Kow) | : Not available                                    |
| Partition coefficient n-octanol/water (Log Pow) | : $> 5$ (estimated value)                          |
| Vapour pressure                                 | : $< 0.01\text{ hPa}$ (20°C)                       |
| Vapour pressure at 50 °C                        | : Not available                                    |
| Density                                         | : $\approx 900\text{ kg/m}^3$                      |
| Relative density                                | : Not available                                    |
| Relative vapour density at 20°C                 | : Not applicable                                   |
| Particle size                                   | : Not available                                    |

### 9.2. Other information

#### Other safety characteristics

|                  |                                                                              |
|------------------|------------------------------------------------------------------------------|
| VOC content      | : $< 1\%$ (1999/13/EC; 2004/42/EC; 2010/75/EU; SR 814.018)                   |
| Other properties | : Soluble in oils/fats, Soluble in most organic solvents, Insoluble in water |

## 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 |

#### RADIASURF 7912 (142-18-7)

|               |                        |
|---------------|------------------------|
| LD50 oral rat | > 5000 mg/kg Non-toxic |
|---------------|------------------------|

|                                   |                               |
|-----------------------------------|-------------------------------|
| Skin corrosion/irritation         | : Not classified<br>pH: 5 – 8 |
| Serious eye damage/irritation     | : Not classified<br>pH: 5 – 8 |
| 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              |

#### RADIASURF 7912 (142-18-7)

|                      |                                 |
|----------------------|---------------------------------|
| Viscosity, kinematic | ≈ 14 mm <sup>2</sup> /s (100°C) |
|----------------------|---------------------------------|

### 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                                             | : No supplementary information available.      |
| Ecology - water                                           | : No data available concerning bioaccumulation |
| Hazardous to the aquatic environment, short-term (acute)  | : Not classified                               |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified                               |

### 12.2. Persistence and degradability

#### RADIASURF 7912 (142-18-7)

|                               |                    |
|-------------------------------|--------------------|
| Persistence and degradability | Rapidly degradable |
|-------------------------------|--------------------|

### 12.3. Bioaccumulative potential

#### RADIASURF 7912 (142-18-7)

|                                                 |                       |
|-------------------------------------------------|-----------------------|
| Partition coefficient n-octanol/water (Log Pow) | > 5 (estimated value) |
|-------------------------------------------------|-----------------------|

### 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

#### RADIASURF 7912 (142-18-7)

|                   |                                        |
|-------------------|----------------------------------------|
| Other information | No supplementary information available |
|-------------------|----------------------------------------|

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|                                           |                                                                                                                                                            |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Disposal                                  | : Scoop solid spill into closing containers, Powdered: do not use compressed air for pumping over spills, Clean contaminated surfaces with a soap solution |
| Regional waste regulation                 | : No supplementary information available.                                                                                                                  |
| 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) | : No supplementary information available                                                                                                                   |

## SECTION 14: Transport information

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

| ADR                                     | IMDG           | IATA           | ADN            | RID            |
|-----------------------------------------|----------------|----------------|----------------|----------------|
| <b>14.1. UN number or ID number</b>     |                |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable | Not applicable |
| <b>14.2. UN proper shipping name</b>    |                |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable | Not applicable |
| <b>14.3. Transport hazard class(es)</b> |                |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable | Not applicable |
| <b>14.4. Packing group</b>              |                |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable | Not applicable |
| <b>14.5. Environmental hazards</b>      |                |                |                |                |
| 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 : < 1 % (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, Japan ENCS, Japan ISHL, KECL, NCI, NZIoC, PICCS, TCSI, TECI_DIW, TECI_FDA, TR EAEU, TSCA |
| KKDIK number (Turkey)    | : 05-0000296754-66-0000                                                                                                                |
| K-REACH (Korea)          | : 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)                    |

### Austria

Toxic Substances Ordinance 2000 : Is not subject to the Toxic Substances Ordinance 2000.

### Germany

|                          |                                                                                      |
|--------------------------|--------------------------------------------------------------------------------------|
| Water hazard class (WGK) | : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 690). |
| VOC content              | : < 1 % (1999/13/EC; 2004/42/EC; 2010/75/EU; SR 814.018)                             |

### Netherlands

|                                                      |                                                                                                       |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| ABM category                                         | : A(4) - low hazard 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                                                                         |

### Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

## 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<br>DSL = Canadian Domestic Substances List<br>EU REACH = European Union REACH Regulation 1907/2006<br>IECSC = Inventory of Existing Chemicals Substances in China<br>Japan ENCS = Japanese Existing Chemical Substances (ISHL)<br>Japan ISHL = Japanese Existing and New Chemical Substances (CSCL)<br>KECL = Korean Existing Chemical List<br>NCI = Vietnam National Chemical Inventory<br>NZIoC = New Zealand Inventory of Chemicals<br>PICCS = Philippines Inventory of Chemicals and Chemical Substances<br>TCSI = Taiwan Chemical Substance Inventory<br>TECI_DIW = Thailand Existing Chemicals Inventory - Department of Industrial Works List<br>TECI_FDA = Thailand Existing Chemicals Inventory - Food and Drug Administration List<br>TR EAEU = Eurasian Economic Union Unified list of chemicals<br>TSCA = USA Toxic Substances Control Act |
| SDS Reason for revision     | : No supplementary information available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Other information           | : No supplementary information available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Full text of use descriptors |                                                                                                                        |
|------------------------------|------------------------------------------------------------------------------------------------------------------------|
| ERC1                         | Manufacture of the substance                                                                                           |
| ERC10a                       | Widespread use of articles with low release (outdoor)                                                                  |
| ERC11a                       | Widespread use of articles with low release (indoor)                                                                   |
| 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)                     |
| 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)                             |
| 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)                                                                           |

### Full text of use descriptors

|        |                                                                |
|--------|----------------------------------------------------------------|
| PC0    | Other                                                          |
| PC1    | Adhesives, sealants                                            |
| PC12   | Fertilizers                                                    |
| PC13   | Fuels                                                          |
| PC14   | Metal surface treatment products                               |
| PC15   | Non-metal-surface treatment products                           |
| PC16   | Heat Transfer Fluids                                           |
| PC17   | Hydraulic Fluids                                               |
| PC18   | Ink and Toners                                                 |
| PC19   | Intermediate                                                   |
| PC2    | Adsorbents                                                     |
| PC20   | Metal surface treatment products                               |
| PC21   | Laboratory chemicals                                           |
| PC23   | Leather treatment products                                     |
| PC24   | Lubricants, greases, release products                          |
| PC25   | Metal working fluids                                           |
| 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                                  |
| PC37   | Water treatment chemicals                                      |
| PC39   | Cosmetics, personal care products                              |
| PC4    | Anti-Freeze and De-icing 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 |

### Full text of use descriptors

|        |                                                                                                                                                                      |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PROC15 | Use as laboratory reagent                                                                                                                                            |
| PROC16 | Use of fuels                                                                                                                                                         |
| 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)                                                              |
| 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                                                                                   |

The classification complies with : ATP 12

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.