

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

#### 1.1. Product identifier

|                               |                                                            |
|-------------------------------|------------------------------------------------------------|
| Product form                  | : Substance (UVCB)                                         |
| Trade name                    | : RADIACID 0968                                            |
| IUPAC name                    | : Fatty acids, C16-18 and C18-unsatd., branched and linear |
| EC no.                        | : 273-295-9                                                |
| CAS No.                       | : 68955-98-6                                               |
| REACH registration No.        | : 01-2119493909-16                                         |
| C&L notification reference no | : not applicable (REACH registered substance)              |

#### 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 dimerized fatty acids consortium related substances | Industrial       | SU0, SU1, SU3, SU5, SU6b, SU8, SU9, SU10, SU11, SU12, SU17, SU18, SU19, SU23, PC19, PC20, PC21, PC36, PC37, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC12, PROC13, PROC14, PROC15, PROC16, PROC17, PROC19, PROC21, PROC24, ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7, ERC8a, ERC8b, ERC8c, ERC8d, ERC8f, ERC10a, ERC10b, ERC11a                                                                                                                                    |
| Supplementary overview of industrial uses of non classified commercial fatty acids         | Industrial       | SU0, SU1, SU2a, SU2b, SU3, SU4, SU5, SU6a, SU6b, SU7, SU8, SU9, SU10, SU11, SU12, SU13, SU14, SU15, SU16, SU17, SU18, SU19, SU23, PC1, PC2, PC7, PC9a, PC9b, PC9c, PC11, PC13, PC14, PC16, PC17, PC18, PC19, PC20, PC21, PC23, PC24, PC25, PC26, PC29, PC30, PC32, PC33, PC34, PC35, PC37, PC39, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15, PROC16, PROC17, PROC21, PROC25, ERC1, ERC2, ERC3, ERC4, ERC5, ERC6b, ERC6d, ERC8a, ERC8b, ERC8d, ERC8e, ERC10a, ERC10b, ERC11a, ERC11b |
| General overview of professional uses of dimerized fatty acids related substances          | Professional     | SU0, SU1, SU8, SU9, SU10, SU22, PC8, PC20, PC21, PC27, PC36, PC37, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC14, PROC15, PROC16, PROC17, PROC19, PROC20, PROC21, ERC2, ERC4, ERC5, ERC7, ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f, ERC9a, ERC9b                                                                                                                                                                                                                                |
| General overview of consumer uses of dimerized fatty acids related substances              | Consumer         | SU21, PC1, PC3, PC4, PC8, PC9a, PC9b, PC9c, PC12, PC13, PC18, PC23, PC24, PC27, PC31, PC35, PC36, PC37, PC39, ERC2, ERC7, ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f, ERC9a, ERC9b, ERC11a                                                                                                                                                                                                                                                                                                                                          |

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 product does not meet the PBT and vPvB classification criteria

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 : UVCB

| Name                                                     | Product identifier                                                     | %   |
|----------------------------------------------------------|------------------------------------------------------------------------|-----|
| Fatty acids, C16-18 and C18-unsatd., branched and linear | CAS No.: 68955-98-6<br>EC no.: 273-295-9<br>REACH-no: 01-2119493909-16 | 100 |

## 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 for 15 minutes. Consult an ophthalmologist if irritation persists. |
| First-aid measures after ingestion    | : Rinse mouth thoroughly with water. Call a poison center or a doctor if you feel unwell.                   |

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

|                                   |                                                    |
|-----------------------------------|----------------------------------------------------|
| Symptoms/effects                  | : No supplementary information available.          |
| Symptoms/effects after inhalation | : On heating: Irritation of the respiratory tract. |

### 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 a water jet since it may cause the fire to spread.                                                                                              |

### 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           | : 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. Caution : this product can cause the floor to be slippery. Wash contaminated clothing before reuse. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 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. Do not allow product to spread into the environment.

### 6.3. Methods and material for containment and cleaning up

|                         |                                                                                                                                                                                                                                                                                                                          |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| For containment         | : Knock down/dilute dust cloud with water spray.                                                                                                                                                                                                                                                                         |
| Methods for cleaning up | : Spills of this product present a serious slipping hazard. If melted: allow liquid to solidify before taking it up. Sweep or shovel spills into appropriate container for disposal. Clean contaminated surfaces with a soap solution. Flush/dilute with water. Clear up spills immediately and dispose of waste safely. |
| Other information       | : No supplementary information available.                                                                                                                                                                                                                                                                                |

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

|                               |                                                                                                       |
|-------------------------------|-------------------------------------------------------------------------------------------------------|
| Precautions for safe handling | : Avoid contact with skin and eyes. Keep away from open flames, hot surfaces and sources of ignition. |
| Handling temperature          | : $\geq 10$ °C above melting point                                                                    |
| Hygiene measures              | : Wash contaminated clothing before reuse.                                                            |

### 7.2. Conditions for safe storage, including any incompatibilities

|                              |                                                                                                                                      |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Heat and ignition sources    | : KEEP AWAY FROM: Ignition sources.                                                                                                  |
| 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 materials for containers. Aluminium. Glass. Stainless steel. Do not store in corrodable metal.                            |

### 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. Safety glasses.

##### 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                                  | : Liquid                                                                                                        |
| Colour                                          | : yellowish to brown.                                                                                           |
| Appearance (room temperature)                   | : Paste.                                                                                                        |
| Odour                                           | : Almost odourless.                                                                                             |
| Odour threshold                                 | : Not available                                                                                                 |
| Melting point                                   | : No supplementary information available                                                                        |
| Freezing point                                  | : < 45 °C                                                                                                       |
| Boiling point                                   | : > 250 °C                                                                                                      |
| HMIS Flammability                               | : Not available                                                                                                 |
| Explosive properties                            | : Not explosive.                                                                                                |
| Oxidising properties                            | : Not oxidising.                                                                                                |
| Lower explosion limit                           | : Not available                                                                                                 |
| Upper explosion limit                           | : Not available                                                                                                 |
| Flash point                                     | : > 200 °C (ASTM D92)                                                                                           |
| Auto-ignition temperature                       | : > 300 °C                                                                                                      |
| Decomposition temperature                       | : Flash point                                                                                                   |
| pH                                              | : < 7                                                                                                           |
| Viscosity, kinematic                            | : Not available                                                                                                 |
| Solubility                                      | : Water: < 0.005 g/100ml (25°C)                                                                                 |
| Partition coefficient n-octanol/water (Log Kow) | : Not available                                                                                                 |
| Partition coefficient n-octanol/water (Log Pow) | : > 5 (est.)                                                                                                    |
| Vapour pressure                                 | : < 0.01 hPa (20°C)                                                                                             |
| Vapour pressure at 50 °C                        | : Not available                                                                                                 |
| Density                                         | : ca. 889 kg/m <sup>3</sup> (50°C)<br>ca. 875.5 kg/m <sup>3</sup> (70°C)<br>ca. 855.4 kg/m <sup>3</sup> (100°C) |
| Relative density                                | : Not available                                                                                                 |
| Relative vapour density at 20°C                 | : Not available                                                                                                 |
| Particle characteristics                        | : Not applicable                                                                                                |

### 9.2. Other information

#### Other safety characteristics

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

## 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 |

#### RADIACID 0968 (68955-98-6)

|               |                        |
|---------------|------------------------|
| LD50 oral rat | > 2000 mg/kg Non-toxic |
|---------------|------------------------|

|                                   |                             |
|-----------------------------------|-----------------------------|
| Skin corrosion/irritation         | : Not classified<br>pH: < 7 |
| Serious eye damage/irritation     | : Not classified<br>pH: < 7 |
| 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            |

### 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

### RADIACID 0968 (68955-98-6)

|                               |                                                            |
|-------------------------------|------------------------------------------------------------|
| Persistence and degradability | Readily biodegradable, according to appropriate OECD test. |
| ThOD                          | 2.9 g O <sub>2</sub> /g substance                          |

## 12.3. Bioaccumulative potential

### RADIACID 0968 (68955-98-6)

|                                                 |            |
|-------------------------------------------------|------------|
| Partition coefficient n-octanol/water (Log Pow) | > 5 (est.) |
|-------------------------------------------------|------------|

## 12.4. Mobility in soil

### RADIACID 0968 (68955-98-6)

|                 |                   |
|-----------------|-------------------|
| Surface tension | ≈ 0.03 N/m (20°C) |
|-----------------|-------------------|

## 12.5. Results of PBT and vPvB assessment

### RADIACID 0968 (68955-98-6)

The product does not meet the PBT and vPvB classification criteria

## 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

### RADIACID 0968 (68955-98-6)

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

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Disposal : No supplementary information available

Regional waste regulation : No supplementary information available.

Product/Packaging disposal recommendations : Practice good housekeeping - spillage can be slippery on smooth surface either wet or dry. Scoop absorbed substance into closing containers. Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment.

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 regulated for transport             |               |               |               |               |
| <b>14.2. UN proper shipping name</b>    |               |               |               |               |
| Not regulated                           | Not regulated | Not regulated | Not regulated | Not regulated |
| <b>14.3. Transport hazard class(es)</b> |               |               |               |               |
| Not regulated                           | Not regulated | Not regulated | Not regulated | Not regulated |
| <b>14.4. Packing group</b>              |               |               |               |               |
| Not regulated                           | Not regulated | Not regulated | Not regulated | Not regulated |
| <b>14.5. Environmental hazards</b>      |               |               |               |               |
| Not regulated                           | Not regulated | Not regulated | Not regulated | Not regulated |
| Marine pollutant: no                    |               |               |               |               |

## 14.6. Special precautions for user

### Overland transport

Not regulated

### Transport by sea

Not regulated

### Air transport

Not regulated

### Inland waterway transport

Not regulated

### Rail transport

Not regulated

## 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, KECL, NCI, NZIoC, PICCS, TCSI, TECI_DIW, TR EAEU, TSCA                |
| KKDIK number (Turkey)    | : 05-0000212494-44-0000                                                                                             |
| 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. 3875). |
| VOC content              | : < 1 % (1999/13/EC; 2004/42/EC; 2010/75/EU; SR 814.018)                              |

#### Netherlands

|                                                   |                                           |
|---------------------------------------------------|-------------------------------------------|
| ABM category                                      | : B(4) - 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  
 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  
 TECI\_DIW = Thailand Existing Chemicals Inventory - Department of Industrial Works List  
 TR EAEU = Eurasian Economic Union Unified list of chemicals  
 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)                                                                  |
| ERC10b                       | Widespread use of articles with high or intended release (outdoor)                                                     |
| ERC11a                       | Widespread use of articles with low release (indoor)                                                                   |
| ERC11b                       | Widespread use of articles with high or intended 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)                                                                           |
| PC1                          | Adhesives, sealants                                                                                                    |
| PC11                         | Explosives                                                                                                             |

**Full text of use descriptors**

|        |                                               |
|--------|-----------------------------------------------|
| PC12   | Fertilizers                                   |
| PC13   | Fuels                                         |
| PC14   | 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                          |
| PC26   | Paper and board treatment products            |
| PC27   | Plant protection products                     |
| PC29   | Pharmaceuticals                               |
| PC3    | Air care products                             |
| PC30   | Photo-chemicals                               |
| PC31   | Polishes and wax blends                       |
| PC32   | Polymer preparations and compounds            |
| PC33   | Semiconductors                                |
| PC34   | Textile dyes, and impregnating products       |
| PC35   | Washing and cleaning products                 |
| PC36   | Water softeners                               |
| PC37   | Water treatment chemicals                     |
| PC39   | Cosmetics, personal care products             |
| PC4    | Anti-Freeze and De-icing products             |
| PC7    | Base metals and alloys                        |
| 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  |

**Full text of use descriptors**

|        |                                                                                                                                                                      |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PROC13 | Treatment of articles by dipping and pouring                                                                                                                         |
| PROC14 | Tabletting, compression, extrusion, pelettisation, granulation                                                                                                       |
| PROC15 | Use as laboratory reagent                                                                                                                                            |
| PROC16 | Use of fuels                                                                                                                                                         |
| PROC17 | Lubrication at high energy conditions in metal working operations                                                                                                    |
| 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                                                                                |
| PROC25 | Other hot work operations with metals                                                                                                                                |
| 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                                                                                                                                       |
| SU10   | Formulation [mixing] of preparations and/or re-packaging (excluding alloys)                                                                                          |
| SU11   | Manufacture of rubber products                                                                                                                                       |
| SU12   | Manufacture of plastics products, including compounding and conversion                                                                                               |
| SU13   | Manufacture of other non-metallic mineral products, e.g. plasters, cement                                                                                            |
| SU14   | Manufacture of basic metals, including alloys                                                                                                                        |
| SU15   | Manufacture of fabricated metal products, except machinery and equipment                                                                                             |
| SU16   | Manufacture of computer, electronic and optical products, electrical equipment                                                                                       |
| SU17   | General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment                                                                                |
| SU18   | Manufacture of furniture                                                                                                                                             |
| SU19   | Building and construction work                                                                                                                                       |
| SU21   | Consumer uses: Private households (= general public = consumers)                                                                                                     |
| SU22   | Professional uses: Public domain (administration, education, entertainment, services, craftsmen)                                                                     |

**Full text of use descriptors**

|      |                                                                                    |
|------|------------------------------------------------------------------------------------|
| SU23 | Electricity, steam, gas water supply and sewage treatment                          |
| SU2a | Mining, (including offshore industries)                                            |
| SU2b | Offshore industries                                                                |
| SU3  | Industrial uses: Uses of substances as such or in preparations at industrial sites |
| SU4  | Manufacture of food products                                                       |
| SU5  | Manufacture of textiles, leather, fur                                              |
| SU6a | Manufacture of wood and wood products                                              |
| SU6b | Manufacture of pulp, paper and paper products                                      |
| SU7  | Printing and reproduction of recorded media                                        |
| SU8  | Manufacture of bulk, large scale chemicals (including petroleum products)          |
| SU9  | Manufacture of fine chemicals                                                      |

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.