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## Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

#### 1.1. Product identifier

Trade name/designation:

RAVENOL DCT-DSG LV Fluid

Article No.:

1212107

UFI:

3AW7-C2DY-Y981-1K5F

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

Use of the substance/mixture:

Lubricant

#### 1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Ravensberger Schmierstoffvertrieb GmbH

Produktsicherheit

Jöllenbecker Str. 2

33824 Werther

Germany

Telephone: +49 5203 9719 0

Telefax: +49 5203 9719 40

E-mail: kontakt@ravenol.de

Website: www.ravenol.de

E-mail (competent person): sdb@ravenol.de

#### 1.4. Emergency telephone number

24 hr. emergency phone number, 24h: +49 700 24 112 112 (Contract ID: RAV) / +1 872 5888271  
(Contract ID: RAV)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
Acute toxicity (inhalative) (Acute Tox. 4)	H332: Harmful if inhaled.	Calculation method.
Hazardous to the aquatic environment (Aquatic Chronic 4)	H413: May cause long lasting harmful effects to aquatic life.	Calculation method.

#### 2.2. Label elements

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

Hazard pictograms:



GHS07

Exclamation mark

Signal word: Warning



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**Hazard components for labelling:**

Reaction product of alkylthioalcohol and substituted phosphorus compound; Dec-1-ene, dimers, hydrogenated

**Hazard statements for health hazards**

H332 Harmful if inhaled.

**Hazard statements for environmental hazards**

H413 May cause long lasting harmful effects to aquatic life.

**Supplemental hazard information**

EUH208 Contains 4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate. May produce an allergic reaction.

**Precautionary statements Prevention**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

**Precautionary statements Response**

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER if you feel unwell.

**Precautionary statements Disposal**

P501 Dispose of contents/container to an appropriate recycling or disposal facility.

**2.3. Other hazards****Other adverse effects:**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Hazardous ingredients / Hazardous impurities / Stabilisers:**

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 68649-11-6 EC No.: 500-228-5	<b>Dec-1-ene, dimers, hydrogenated</b> Acute Tox. 4 (H332), Asp. Tox. 1 (H304) <b>Danger</b>	20 - < 35 weight-%
CAS No.: 68037-01-4 EC No.: 500-183-1 REACH No.: 01-2119486452-34	<b>1-decene, homopolymer, hydrogenated</b> Asp. Tox. 1 (H304) <b>Danger</b>	15 - < 30 weight-%
EC No.: 701-204-9 REACH No.: 01-2119960832-33	<b>Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic)</b> Eye Irrit. 2 (H319), Skin Irrit. 2 (H315) <b>Warning</b>	1 - < 2 weight-%
EC No.: 424-820-7 REACH No.: 01-0000017126-75	<b>Reaction product of alkylthioalcohol and substituted phosphorus compound</b> Acute Tox. 4 (H312), Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Skin Corr. 1B (H314) <b>Danger</b> M-factor (acute): 10 M-factor (chronic): 10	0 - < 0.5 weight-%
CAS No.: 93882-40-7 EC No.: 299-434-3 REACH No.: 01-2120735527-50	<b>4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate</b> Aquatic Chronic 2 (H411), Eye Irrit. 2 (H319), Skin Sens. 1 (H317) <b>Warning</b>	0 - < 0.25 weight-%

Full text of H- and EUH-phrases: see section 16.

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information:**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing.



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If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

**Following inhalation:**

Harmful if inhaled. Provide fresh air. Consult a doctor immediately.

**In case of skin contact:**

After contact with skin, wash immediately with plenty of water and soap. Consult a doctor immediately.

**After eye contact:**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

**Following ingestion:**

Rinse mouth thoroughly with water. Do NOT induce vomiting. Consult a doctor immediately.

**Self-protection of the first aider:**

Use personal protection equipment. No direct artificial respiration to be given by first aider.

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

Harmful if inhaled.

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

Treat symptomatically. Observe risk of aspiration if vomiting occurs.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media:**

Co-ordinate fire-fighting measures to the fire surroundings.

Carbon dioxide (CO<sub>2</sub>)

Extinguishing powder

alcohol resistant foam

Use water spray jet to protect personnel and to cool endangered containers.

**Unsuitable extinguishing media:**

Full water jet

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

During heating or in case of fire, toxic gases is possible.

The formation of combustible vapours is possible at temperatures above: Flash point

When hot, product develops flammable vapours.

**Hazardous combustion products:**

Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>), Gases/vapours, toxic

During heating or in case of fire, toxic gases is possible.

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus. Protective clothing.

**5.4. Additional information**

Do not inhale explosion and combustion gases. Move undamaged containers from immediate hazard area if it can be done safely. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

**6.1.1. For non-emergency personnel**

**Personal precautions:**

Use personal protection equipment. Special danger of slipping by leaking/spilling product.

**Protective equipment:**

Personal protection equipment: see section 8

**Emergency procedures:**

Eliminate all ignition sources if safe to do so. Remove persons to safety. Provide adequate ventilation.

**6.1.2. For emergency responders**

**Personal protection equipment:**

Use personal protection equipment.



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## 6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

### For containment:

Suitable material for taking up: Sand, Kieselguhr, Universal binder, Chemical binding agents, containing acids

Prevent spread over a wide area (e.g. by containment or oil barriers).

### For cleaning up:

Remove from the water surface (e.g. skimming, sucking). Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

### Other information:

Treat the recovered material as prescribed in the section on waste disposal.

## 6.4. Reference to other sections

Safe handling: see section 7

Disposal: see section 13

Personal protection equipment: see section 8

## 6.5. Additional information

Clear spills immediately. Use appropriate container to avoid environmental contamination.

# SECTION 7: Handling and storage

## 7.1. Precautions for safe handling

### Protective measures

#### Advices on safe handling:

Wear personal protection equipment (refer to section 8).

When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Clear spills immediately. Use appropriate container to avoid environmental contamination.

#### Fire prevent measures:

No special fire protection measures are necessary.

#### Environmental precautions:

Shafts and sewers must be protected from entry of the product.

#### Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

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

### Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place.

### Requirements for storage rooms and vessels:

Suitable container/equipment material: Floors should be impervious, resistant to liquids and easy to clean. Shafts and sewers must be protected from entry of the product.

Keep/Store only in original container.

### Hints on storage assembly:

not required

**Storage class (TRGS 510, Germany):** 10 - Combustible liquids that cannot be assigned to any of the above storage classes

### Further information on storage conditions:

Store in a cool dry place. Keep away from heat.

## 7.3. Specific end use(s)

### Recommendation:

Observe technical data sheet.

# SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

### 8.1.1. Occupational exposure limit values

No data available



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**8.1.2. Biological limit values**

No data available

**8.1.3. DNEL-/PNEC-values**

Substance name	DNEL value	① DNEL type ② Exposure route
Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic) <b>EC No.:</b> 701-204-9	11.75 mg/cm <sup>2</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic) <b>EC No.:</b> 701-204-9	3.33 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
Reaction product of alkylthioalcohol and substituted phosphorus compound <b>EC No.:</b> 424-820-7	1.76 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
Reaction product of alkylthioalcohol and substituted phosphorus compound <b>EC No.:</b> 424-820-7	0.5 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate <b>CAS No.:</b> 93882-40-7 <b>EC No.:</b> 299-434-3	3.526 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate <b>CAS No.:</b> 93882-40-7 <b>EC No.:</b> 299-434-3	2 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects

Substance name	PNEC Value	① PNEC type
Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic) <b>EC No.:</b> 701-204-9	460 µg/L	① PNEC aquatic, freshwater
Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic) <b>EC No.:</b> 701-204-9	46 µg/L	① PNEC aquatic, marine water
Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic) <b>EC No.:</b> 701-204-9	1,000 mg/L	① PNEC sewage treatment plant
Reaction product of alkylthioalcohol and substituted phosphorus compound <b>EC No.:</b> 424-820-7	0.9 µg/L	① PNEC aquatic, freshwater
Reaction product of alkylthioalcohol and substituted phosphorus compound <b>EC No.:</b> 424-820-7	0.09 µg/L	① PNEC aquatic, marine water
Reaction product of alkylthioalcohol and substituted phosphorus compound <b>EC No.:</b> 424-820-7	5 mg/L	① PNEC sewage treatment plant
Reaction product of alkylthioalcohol and substituted phosphorus compound <b>EC No.:</b> 424-820-7	0.159 mg/kg bw/day	① PNEC sediment, freshwater
Reaction product of alkylthioalcohol and substituted phosphorus compound <b>EC No.:</b> 424-820-7	0.0159 mg/kg bw/day	① PNEC sediment, marine water



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Substance name	PNEC Value	① PNEC type
4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate CAS No.: 93882-40-7 EC No.: 299-434-3	9.5 µg/L	① PNEC aquatic, freshwater
4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate CAS No.: 93882-40-7 EC No.: 299-434-3	0.95 µg/L	① PNEC aquatic, marine water
4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate CAS No.: 93882-40-7 EC No.: 299-434-3	100 mg/L	① PNEC sewage treatment plant
4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate CAS No.: 93882-40-7 EC No.: 299-434-3	95 µg/L	① PNEC aquatic, intermittent release

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

See section 7. No additional measures necessary.

### 8.2.2. Personal protection equipment



#### Eye/face protection:

During transfer: Eye glasses with side protection  
 Wear eye/face protection. EN 166

#### Skin protection:

Hand protection

Suitable material: NBR (Nitrile rubber), PVC (polyvinyl chloride), CR (polychloroprene, chloroprene rubber)

Thickness of the glove material:  $\geq 0,4$  mm

Breakthrough time: 480 min

Breakthrough times and swelling properties of the material must be taken into consideration.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Tested protective gloves must be worn: EN ISO 374

Suitable protective clothing: Protective clothing

#### Respiratory protection:

Usually no personal respiratory protection necessary.

### 8.2.3. Environmental exposure controls

See section 7. No additional measures necessary.

## SECTION 9: Physical and chemical properties

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

#### Appearance

**Physical state:** Liquid

**Colour:** yellow

**Odour:** characteristic

#### Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	<i>not applicable</i>		
Melting point	<i>not determined</i>		
Freezing point	<i>not determined</i>		
Initial boiling point and boiling range	<i>not determined</i>		
Decomposition temperature	<i>not determined</i>		
Flash point	204 °C		



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Parameter	Value	at °C	① Method ② Remark
Evaporation rate	<i>not determined</i>		
Auto-ignition temperature	<i>not determined</i>		
Upper/lower flammability or explosive limits	<i>not determined</i>		
Vapour pressure	<i>not determined</i>		
Vapour density	<i>not determined</i>		
Density	835 kg/m <sup>3</sup>	15 °C	
Relative density	<i>not applicable</i>		
Bulk density	<i>not applicable</i>		
Water solubility	practically insoluble		
Partition coefficient: n-octanol/water	<i>not applicable</i>		
Dynamic viscosity	<i>not determined</i>		
Kinematic viscosity	23.8 mm <sup>2</sup> /s	40 °C	

## 9.2. Other information

Not applicable.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No known hazardous reactions. Risk of explosion if heated under confinement.

### 10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

### 10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

### 10.4. Conditions to avoid

To avoid thermal decomposition do not overheat.

### 10.5. Incompatible materials

Materials to avoid: Acid, Oxidizing agent, Reducing agent

### 10.6. Hazardous decomposition products

Hazardous combustion products: Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>),  
 During heating or in case of fire, toxic gases is possible.

### Further information

No information available.

## SECTION 11: Toxicological information

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

<b>1-decene, homopolymer, hydrogenated</b> CAS No.: 68037-01-4 EC No.: 500-183-1
<b>LD<sub>50</sub> oral:</b> >5,000 mg/kg (Rat)
<b>LD<sub>50</sub> dermal:</b> >2,000 mg/kg (Rabbit)
<b>LC<sub>50</sub> Acute inhalation toxicity (dust/mist):</b> >5 mg/L 4 h (Rat)
<b>Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic)</b> EC No.: 701-204-9
<b>LD<sub>50</sub> oral:</b> 5,000 mg/kg (Rat)
<b>LD<sub>50</sub> dermal:</b> 2,000 mg/kg (Rabbit)
<b>Reaction product of alkylthioalcohol and substituted phosphorus compound</b> EC No.: 424-820-7
<b>LD<sub>50</sub> oral:</b> 2,000 mg/kg (rat)
<b>LD<sub>50</sub> dermal:</b> 500 mg/kg (rabbit)
<b>4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate</b> CAS No.: 93882-40-7 EC No.: 299-434-3
<b>LD<sub>50</sub> oral:</b> 10,000 mg/kg (rat)
<b>LD<sub>50</sub> dermal:</b> 3,160 mg/kg (rabbit)



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**Acute oral toxicity:**

Based on available data, the classification criteria are not met.

**Acute dermal toxicity:**

Based on available data, the classification criteria are not met.

**Acute inhalation toxicity:**

Harmful if inhaled.

**Skin corrosion/irritation:**

Based on available data, the classification criteria are not met.

**Serious eye damage/irritation:**

Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation:**

Contains 4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate. May produce an allergic reaction.

**Germ cell mutagenicity:**

Based on available data, the classification criteria are not met.

**Carcinogenicity:**

Based on available data, the classification criteria are not met.

**Reproductive toxicity:**

Based on available data, the classification criteria are not met.

**STOT-single exposure:**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure:**

Based on available data, the classification criteria are not met.

**Aspiration hazard:**

Observe risk of aspiration if vomiting occurs.

For viscosity data, see section 9.

**Additional information:**

Frequently or prolonged contact with skin may cause dermal irritation.

**11.2. Information on other hazards****Endocrine disrupting properties:**

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

**SECTION 12: Ecological information****12.1. Toxicity****1-decene, homopolymer, hydrogenated CAS No.: 68037-01-4 EC No.: 500-183-1**LC<sub>50</sub>: >750 mg/L 4 d (fish)EC<sub>50</sub>: 190 mg/L 2 d (crustaceans, Daphnia pulex (water flea))EC<sub>50</sub>: >1,000 mg/L 3 d (Algae/water plant)**Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic) EC No.: 701-204-9**LC<sub>50</sub>: 1,000 mg/L 4 d (fish)EC<sub>50</sub>: 1,000 mg/L 2 d (crustaceans)

NOEC: 32 mg/L 21 d (crustaceans)

**Reaction product of alkylthioalcohol and substituted phosphorus compound EC No.: 424-820-7**LC<sub>50</sub>: 1.5 mg/L 4 d (fish)EC<sub>50</sub>: 0.09 mg/L 2 d (crustaceans)EC<sub>50</sub>: 0.31 mg/L 3 d (Algae/water plant)**4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate CAS No.: 93882-40-7 EC No.: 299-434-3**LC<sub>50</sub>: 100 mg/L 4 d (fish)EC<sub>50</sub>: 9.5 mg/L 2 d (crustaceans)

NOEC: 100 mg/L 3 d (Algae/water plant)

**Aquatic toxicity:**

May cause long lasting harmful effects to aquatic life.

**Additional ecotoxicological information:**

Do not allow uncontrolled discharge of product into the environment.





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## 12.2. Persistence and degradability

### Biodegradation:

Not readily biodegradable (according to OECD criteria)

## 12.3. Bioaccumulative potential

### Partition coefficient: n-octanol/water:

not applicable

### Accumulation / Evaluation:

The product has not been tested.

## 12.4. Mobility in soil

The product has not been tested.

## 12.5. Results of PBT and vPvB assessment

<b>Dec-1-ene, dimers, hydrogenated</b> CAS No.: 68649-11-6 EC No.: 500-228-5
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>1-decene, homopolymer, hydrogenated</b> CAS No.: 68037-01-4 EC No.: 500-183-1
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic)</b> EC No.: 701-204-9
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>Reaction product of alkylthioalcohol and substituted phosphorus compound</b> EC No.: 424-820-7
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate</b> CAS No.: 93882-40-7 EC No.: 299-434-3
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

## 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

## 12.7. Other adverse effects

No data available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Dispose of waste according to applicable legislation.

#### 13.1.1. Product/Packaging disposal

### Waste codes/waste designations according to EWC/AVV

#### Waste code packaging

#### Remark:

Dispose of waste according to applicable legislation.

### Waste treatment options

#### Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

#### Appropriate disposal / Package:

Non-contaminated packages may be recycled.

#### Other disposal recommendations:

Consult the appropriate local waste disposal expert about waste disposal.

### 13.2. Additional information

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

## SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.1. UN number or ID number</b>			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.



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Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.2. UN proper shipping name</b>			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
<b>14.3. Transport hazard class(es)</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.4. Packing group</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.5. Environmental hazards</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.6. Special precautions for user</b>			
not relevant	not relevant	not relevant	not relevant

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable.

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU legislation****Other regulations (EU):**

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive], Hazard categories:

- E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

Safety data sheet available on request.

**15.1.2. National regulations** **[DE] National regulations****Restrictions of occupation**

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

**Störfallverordnung****for substances contained in the product:**

Hazard categories:

- E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

**Technische Anleitung Luft (TA-Luft)****Remark:**

To follow: 5.2.5

**Water hazard class****WGK:**

2 - deutlich wassergefährdend

**Source:**

Self-classification (mixture; calculation rule).

Identification number 436

**Technische Regeln für Gefahrstoffe**

TRGS 510

TRGS 500


**Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)**

Berufsgenossenschaftliche Informationen (DGUV-Informationen) 868

Berufsgenossenschaftliche Regeln (DGUV-Regeln) 189, 190, 192, 195

**Other regulations, restrictions and prohibition regulations**

Altöl-Verordnung (AltöIV)

 **[DK] National regulations****Other regulations, restrictions and prohibition regulations**

Dänemark: Bekendtgørelse af lov om arbejdsmiljø: Beskæftigelsesministeriets lovbekendtgørelse nr. 1072 af 7. september 2010

Lister over stoffer og processer, der anses for at være kraeffremkaldende



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 **[FR] National regulations**

**Other regulations, restrictions and prohibition regulations**

Frankreich: Tableaux de maladies professionnelles  
 Nomenclature des installations classées pour la protection de l'environnement  
 Articles L. 4523-1 à L. 4523-17, L. 4611-1 à L. 4614-16, R. 4523-1 à R. 4523-17 et R. 4612-1 à R. 4615-21  
 du Code du travail

 **[NL] National regulations**

**Other regulations, restrictions and prohibition regulations**

Niederlande: Lijst vank kankerverwekkende, mutagene en voor de voortplanting giftige stoffen (SZW)  
 Algemeene beoordelingsmethodiek Water (ABM)  
 Nederlandse emissierichtlijn (NeR)  
 NIET-Limitatieve lijst an voor de voortplanting giftige stoffen - Borstvoeding  
 NIET-Limitatieve lijst an voor de voortplanting giftige stoffen - Vruchtbaarheid  
 NIET-Limitatieve lijst an voor de voortplanting giftige stoffen - Ontwikkeling  
 SZW-lijst van kankerverwekkende stoffen  
 SZW-lijst van mutagene stoffen  
 Wet van 18 maart 1999, houdende bepalingen ter verbetering van de arbeidsomstandigheden  
 (Arbeidsomstandighedenwet)  
 Wet op de ondernemingsraden 1971

 **[CH] National regulations**

**Other regulations, restrictions and prohibition regulations**

Mengenschwelle (Schweiz - StFV)  
 Gefahrencode  
 Brandverhütung, BVD (Schweiz)

**15.2. Chemical Safety Assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**15.3. Additional information**

No data available.

**SECTION 16: Other information**

**16.1. Indication of changes**

Not applicable.

**16.2. Abbreviations and acronyms**

See overview table at [www.euphrac.eu](http://www.euphrac.eu)  
 For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

**16.3. Key literature references and sources for data**

67/548/EEC - Dangerous Substances Directive  
 1999/45/EEC - Dangerous Preparations Directive  
 EC 1907/2006 - REACH Regulation  
 1272/2008 EC - Regulation on classification, labeling and packaging of substances and mixtures, and amending Directives 67/548/EEC and 1999/45/EC and Regulation (EC) No 1907/2006  
 Regulation (EC) No 1907/2006 (REACH), Annex II  
 European Chemicals Agency (ECHA), C & L classification and labeling inventory  
 European Chemicals Agency (ECHA), ECHA CHEM Registered substances  
 OECD The Global Portal to Information on Chemical Substances (ChemPortal)  
 Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA): GESTIS substance database and International limit values for chemical substances  
 Federal Environment Agency, Section IV 2.4: Documentation and Information Centre substances hazardous to water Rigoletto (catalog substances hazardous to water)

**16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]**

Hazard classes and hazard categories	Hazard statements	Classification procedure
Acute toxicity (inhalative) (Acute Tox. 4)	H332: Harmful if inhaled.	Calculation method.
Hazardous to the aquatic environment (Aquatic Chronic 4)	H413: May cause long lasting harmful effects to aquatic life.	Calculation method.



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**16.5. Relevant R-, H- and EUH-phrases (Number and full text)**

Hazard statements	
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

**16.6. Training advice**

No data available

**16.7. Additional information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.