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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 ATF ZMS

Article No.:

1211102

#### 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
Hazardous to the aquatic environment (Aquatic Chronic 3)	H412: Harmful to aquatic life with long lasting effects.	Calculation method.

#### \* 2.2. Label elements

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

Hazard components for labelling:

1-(tert-dodecylthio)propan-2-ol

Hazard statements for environmental hazards	
H412	Harmful to aquatic life with long lasting effects.

Supplemental hazard information	
EUH208	Contains 1-(tert-dodecylthio)propan-2-ol, 1,2-propanediol, 3-amino, N, N-dicardi alkyl derivs., C14-18 alpha-olefin epoxide, reaction products with boric acid, Benzene, polypropene derivs., sulfonated, calcium salts, Reaction products of amines, dicoco alkyl and glycolic acid. May produce an allergic reaction.

Precautionary statements Prevention	
P273	Avoid release to the environment.

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



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\* **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.: 398141-87-2 EC No.: 800-172-4 REACH No.: 01-2119969520-35	<b>Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich</b> Aquatic Chronic 2 (H411) 	0 - < 1.5 weight-%
CAS No.: 36878-20-3 EC No.: 253-249-4 REACH No.: 01-2119488911-28	<b>bis(nonylphenyl)amine</b> Aquatic Chronic 4 (H413)	0 - < 1.5 weight-%
EC No.: 471-920-1 REACH No.: 01-0000019770-68	<b>Reaction products of amines, dicoco alkyl and glycollic acid</b> Skin Sens. 1B (H317)  <b>Warning</b> <b>Specific concentration limit (SCL)</b> Skin Sens. 1B; H317: 9.4% ≤ C < 100%	0 - < 1 weight-%
CAS No.: 67124-09-8 EC No.: 266-582-5 REACH No.: 01-2119953277-30	<b>1-(tert-dodecylthio)propan-2-ol</b> Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Skin Sens. 1 (H317)   <b>Warning</b>	0 - < 1 weight-%
EC No.: 482-000-4 REACH No.: 01-0000020142-86	<b>1,2-propanediol, 3-amino, N, N-dicardi alkyl derivs.</b> Aquatic Chronic 3 (H412), Skin Sens. 1B (H317)  <b>Warning</b>	0 - < 1 weight-%
EC No.: 939-580-3 REACH No.: 01-2119976364-28	<b>C14-18 alpha-olefin epoxide, reaction products with boric acid</b> Skin Sens. 1B (H317)  <b>Warning</b>	0 - < 0.2 weight-%
CAS No.: 75975-85-8 EC No.: 616-278-7	<b>Benzene, polypropene derivs., sulfonated, calcium salts</b> Skin Sens. 1B (H317)  <b>Warning</b>	0 - < 0.2 weight-%
CAS No.: 1218787-32-6 EC No.: 620-540-6 REACH No.: 01-2119510877-33	<b>2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol</b> Acute Tox. 4 (H302), Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Eye Dam. 1 (H318), Skin Corr. 1C (H314)      <b>Danger</b> M-factor (acute): 10 M-factor (chronic): 1	0 - < 0.2 weight-%
CAS No.: 95-38-5 EC No.: 202-414-9 REACH No.: 01-2119777867-13	<b>2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol</b> Acute Tox. 4 (H302), Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Eye Dam. 1 (H318), STOT RE 2 (H373), Skin Corr. 1C (H314)       <b>Danger</b> M-factor (acute): 10	0 - < 0.02 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. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

**Following inhalation:**

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.



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**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**

Contains 1-(tert-dodecylthio)propan-2-ol, 1,2-propanediol, 3-amino, N, N-dicardi alkyl derivs., C14-18 alpha-olefin epoxide, reaction products with boric acid, Benzene, polypropene derivs., sulfonated, calcium salts, Reaction products of amines, dicoco alkyl and glycollic acid. May produce an allergic reaction.

**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.

**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.



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### 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.



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## SECTION 8: Exposure controls/personal protection

### \* 8.1. Control parameters

#### 8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
RU	2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol <b>CAS No.:</b> 95-38-5 <b>EC No.:</b> 202-414-9	③ 0.1 mg/m <sup>3</sup>

#### 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
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich <b>CAS No.:</b> 398141-87-2 <b>EC No.:</b> 800-172-4	24.7 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich <b>CAS No.:</b> 398141-87-2 <b>EC No.:</b> 800-172-4	350 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
bis(nonylphenyl)amine <b>CAS No.:</b> 36878-20-3 <b>EC No.:</b> 253-249-4	5 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
Reaction products of amines, dicoco alkyl and glycollic acid <b>EC No.:</b> 471-920-1	0.417 mg/cm <sup>2</sup>	① DNEL worker ② Acute - dermal, local effects
1-(tert-dodecylthio)propan-2-ol <b>CAS No.:</b> 67124-09-8 <b>EC No.:</b> 266-582-5	11.8 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
1-(tert-dodecylthio)propan-2-ol <b>CAS No.:</b> 67124-09-8 <b>EC No.:</b> 266-582-5	3.34 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
1-(tert-dodecylthio)propan-2-ol <b>CAS No.:</b> 67124-09-8 <b>EC No.:</b> 266-582-5	0.215 mg/cm <sup>2</sup>	① DNEL worker ② Acute - dermal, local effects
C14-18 alpha-olefin epoxide, reaction products with boric acid <b>EC No.:</b> 939-580-3	5.88 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
C14-18 alpha-olefin epoxide, reaction products with boric acid <b>EC No.:</b> 939-580-3	16.7 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol <b>CAS No.:</b> 1218787-32-6 <b>EC No.:</b> 620-540-6	2.112 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol <b>CAS No.:</b> 1218787-32-6 <b>EC No.:</b> 620-540-6	0.3 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects



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Substance name	DNEL value	① DNEL type ② Exposure route
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol <b>CAS No.:</b> 95-38-5 <b>EC No.:</b> 202-414-9	0.46 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
Substance name	PNEC Value	① PNEC type
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich <b>CAS No.:</b> 398141-87-2 <b>EC No.:</b> 800-172-4	2.4 µg/L	① PNEC aquatic, freshwater
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich <b>CAS No.:</b> 398141-87-2 <b>EC No.:</b> 800-172-4	0.33 µg/L	① PNEC aquatic, marine water
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich <b>CAS No.:</b> 398141-87-2 <b>EC No.:</b> 800-172-4	100 mg/L	① PNEC sewage treatment plant
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich <b>CAS No.:</b> 398141-87-2 <b>EC No.:</b> 800-172-4	0.433 mg/kg	① PNEC sediment, freshwater
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich <b>CAS No.:</b> 398141-87-2 <b>EC No.:</b> 800-172-4	0.0596 mg/kg	① PNEC soil, marine water
bis(nonylphenyl)amine <b>CAS No.:</b> 36878-20-3 <b>EC No.:</b> 253-249-4	412 µg/L	① PNEC aquatic, freshwater
bis(nonylphenyl)amine <b>CAS No.:</b> 36878-20-3 <b>EC No.:</b> 253-249-4	41.2 µg/L	① PNEC aquatic, marine water
bis(nonylphenyl)amine <b>CAS No.:</b> 36878-20-3 <b>EC No.:</b> 253-249-4	1 mg/L	① PNEC aquatic, intermittent release
Reaction products of amines, dicoco alkyl and glycollic acid <b>EC No.:</b> 471-920-1	400 µg/L	① PNEC aquatic, freshwater
Reaction products of amines, dicoco alkyl and glycollic acid <b>EC No.:</b> 471-920-1	40 µg/L	① PNEC aquatic, marine water
Reaction products of amines, dicoco alkyl and glycollic acid <b>EC No.:</b> 471-920-1	100 mg/L	① PNEC sewage treatment plant
1-(tert-dodecylthio)propan-2-ol <b>CAS No.:</b> 67124-09-8 <b>EC No.:</b> 266-582-5	6.4 µg/L	① PNEC aquatic, freshwater
1-(tert-dodecylthio)propan-2-ol <b>CAS No.:</b> 67124-09-8 <b>EC No.:</b> 266-582-5	0.64 µg/L	① PNEC aquatic, marine water
1-(tert-dodecylthio)propan-2-ol <b>CAS No.:</b> 67124-09-8 <b>EC No.:</b> 266-582-5	100 mg/L	① PNEC sewage treatment plant
1-(tert-dodecylthio)propan-2-ol <b>CAS No.:</b> 67124-09-8 <b>EC No.:</b> 266-582-5	5.8 µg/L	① PNEC aquatic, intermittent release
C14-18 alpha-olefin epoxide, reaction products with boric acid <b>EC No.:</b> 939-580-3	0.2 mg/L	① PNEC aquatic, freshwater
C14-18 alpha-olefin epoxide, reaction products with boric acid <b>EC No.:</b> 939-580-3	0.02 mg/L	① PNEC aquatic, marine water



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Substance name	PNEC Value	① PNEC type
C14-18 alpha-olefin epoxide, reaction products with boric acid <b>EC No.:</b> 939-580-3	100 mg/L	① PNEC sewage treatment plant
C14-18 alpha-olefin epoxide, reaction products with boric acid <b>EC No.:</b> 939-580-3	8,556 mg/kg	① PNEC sediment, freshwater
C14-18 alpha-olefin epoxide, reaction products with boric acid <b>EC No.:</b> 939-580-3	855.6 mg/kg	① PNEC sediment, marine water
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol <b>CAS No.:</b> 1218787-32-6 <b>EC No.:</b> 620-540-6	0.214 µg/L	① PNEC aquatic, freshwater
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol <b>CAS No.:</b> 1218787-32-6 <b>EC No.:</b> 620-540-6	0.0214 µg/L	① PNEC aquatic, marine water
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol <b>CAS No.:</b> 1218787-32-6 <b>EC No.:</b> 620-540-6	1.5 mg/L	① PNEC sewage treatment plant
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol <b>CAS No.:</b> 1218787-32-6 <b>EC No.:</b> 620-540-6	0.87 µg/L	① PNEC aquatic, intermittent release
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol <b>CAS No.:</b> 95-38-5 <b>EC No.:</b> 202-414-9	0.03 µg/L	① PNEC aquatic, freshwater
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol <b>CAS No.:</b> 95-38-5 <b>EC No.:</b> 202-414-9	0.27 µg/L	① PNEC sewage treatment plant

## 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: ≥ 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.





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## SECTION 9: Physical and chemical properties

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

#### Appearance

**Physical state:** Liquid

**Colour:** blue

**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	242 °C		
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	844 kg/m <sup>3</sup>	15 °C	
Relative density	<i>not determined</i>		
Bulk density	<i>not determined</i>		
Water solubility	practically insoluble		
Partition coefficient: n-octanol/water	<i>not determined</i>		
Dynamic viscosity	<i>not determined</i>		
Kinematic viscosity	58 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.





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## SECTION 11: Toxicological information

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

<b>Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich</b>	<b>CAS No.:</b> 398141-87-2
<b>EC No.:</b> 800-172-4	
<b>LD<sub>50</sub> oral:</b> 10,000 mg/kg (rat)	
<b>LD<sub>50</sub> dermal:</b> 4,000 – 8,000 mg/kg (rabbit)	
<b>bis(nonylphenyl)amine</b>	<b>CAS No.:</b> 36878-20-3 <b>EC No.:</b> 253-249-4
<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	
<b>Reaction products of amines, dicoco alkyl and glycollic acid</b>	<b>EC No.:</b> 471-920-1
<b>LD<sub>50</sub> oral:</b> 2,500 mg/kg (Rat)	
<b>LD<sub>50</sub> dermal:</b> 2,000 mg/kg (Rat)	
<b>1-(tert-dodecylthio)propan-2-ol</b>	<b>CAS No.:</b> 67124-09-8 <b>EC No.:</b> 266-582-5
<b>LD<sub>50</sub> oral:</b> 5,000 mg/kg (Rat)	
<b>LD<sub>50</sub> dermal:</b> 2,000 mg/kg (Rat)	
<b>1,2-propanediol, 3-amino, N, N-dicardi alkyl derivs.</b>	<b>EC No.:</b> 482-000-4
<b>LD<sub>50</sub> oral:</b> >2,500 mg/kg	
<b>LD<sub>50</sub> dermal:</b> >2,000 mg/kg	
<b>C14-18 alpha-olefin epoxide, reaction products with boric acid</b>	<b>EC No.:</b> 939-580-3
<b>LD<sub>50</sub> oral:</b> >16,000 mg/kg (Rat)	
<b>LD<sub>50</sub> dermal:</b> >2,000 mg/kg (Rat)	
<b>2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol</b>	<b>CAS No.:</b> 1218787-32-6
<b>EC No.:</b> 620-540-6	
<b>LD<sub>50</sub> oral:</b> ≥1,200 – ≤2,000 mg/kg (Rat)	
<b>2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol</b>	<b>CAS No.:</b> 95-38-5 <b>EC No.:</b> 202-414-9
<b>LD<sub>50</sub> oral:</b> 1,265 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	

#### 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:

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

#### 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 1-(tert-dodecylthio)propan-2-ol, 1,2-propanediol, 3-amino, N, N-dicardi alkyl derivs., C14-18 alpha-olefin epoxide, reaction products with boric acid, Benzene, polypropene derivs., sulfonated, calcium salts, Reaction products of amines, dicoco alkyl and glycollic acid. 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.



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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**

<b>Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich</b>	<b>CAS No.: 398141-87-2</b>
<b>EC No.: 800-172-4</b>	
<b>EC<sub>50</sub>:</b> 4.6 mg/L 2 d (crustaceans)	
<b>NOEC:</b> 630 mg/L 2 d (crustaceans)	
<b>bis(nonylphenyl)amine</b>	<b>CAS No.: 36878-20-3 EC No.: 253-249-4</b>
<b>LC<sub>50</sub>:</b> >100 mg/L 4 d (fish)	
<b>EC<sub>50</sub>:</b> >100 mg/L 2 d (crustaceans)	
<b>EC<sub>50</sub>:</b> 600 mg/L 3 d (Algae/water plant)	
<b>Reaction products of amines, dicoco alkyl and glycollic acid</b>	<b>EC No.: 471-920-1</b>
<b>LC<sub>50</sub>:</b> 77 mg/L 2 d (crustaceans)	
<b>NOEC:</b> 56 mg/L 21 d (crustaceans)	
<b>EC<sub>50</sub>:</b> 160 mg/L 3 d (Algae/water plant)	
<b>NOEC:</b> 20 mg/L 3 d (Algae/water plant)	
<b>1-(tert-dodecylthio)propan-2-ol</b>	<b>CAS No.: 67124-09-8 EC No.: 266-582-5</b>
<b>NOEC:</b> 0.32 mg/L (crustaceans)	
<b>EC<sub>50</sub>:</b> 100 mg/L (Algae/water plant)	
<b>NOEC:</b> 100 mg/L (Algae/water plant)	
<b>1,2-propanediol, 3-amino, N, N-dicardi alkyl derivs.</b>	<b>EC No.: 482-000-4</b>
<b>LC<sub>50</sub>:</b> >100 mg/L 4 d (fish)	
<b>NOEC:</b> 100 mg/L 4 d (fish)	
<b>EC<sub>50</sub>:</b> 230 mg/L 2 d (crustaceans)	
<b>NOEC:</b> 32 mg/L 2 d (crustaceans)	
<b>EC<sub>50</sub>:</b> 10 mg/L 3 d (Algae/water plant)	
<b>NOEC:</b> 3.2 mg/L 3 d (Algae/water plant)	
<b>C14-18 alpha-olefin epoxide, reaction products with boric acid</b>	<b>EC No.: 939-580-3</b>
<b>LC<sub>50</sub>:</b> >100 mg/L 4 d (fish)	
<b>LC<sub>50</sub>:</b> >100 mg/L 3 d (Algae/water plant)	
<b>EC<sub>50</sub>:</b> >100 mg/L 2 d (crustaceans)	
<b>2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol</b>	<b>CAS No.: 1218787-32-6</b>
<b>EC No.: 620-540-6</b>	
<b>LC<sub>50</sub>:</b> ≥0.1 mg/L 4 d (fish)	
<b>EC<sub>50</sub>:</b> 0.043 mg/L 2 d (crustaceans)	
<b>EC<sub>50</sub>:</b> 0.0867 mg/L 3 d (Algae/water plant)	
<b>2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol</b>	<b>CAS No.: 95-38-5 EC No.: 202-414-9</b>
<b>LC<sub>50</sub>:</b> 0.3 mg/L 4 d (fish)	
<b>ErC<sub>50</sub>:</b> 0.2989 mg/L 3 d (Algae/water plant, Desmodemus subspicatus)	
<b>EC<sub>50</sub>:</b> 0.136 mg/L 2 d (crustaceans, Daphnia magna (Big water flea))	

**Aquatic toxicity:**

Harmful to aquatic life with long lasting effects.

**Additional ecotoxicological information:**

Do not allow uncontrolled discharge of product into the environment.



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\* **12.2. Persistence and degradability**

**bis(nonylphenyl)amine** CAS No.: 36878-20-3 EC No.: 253-249-4

**Biodegradation:** —

**Biodegradation:**

Not readily biodegradable (according to OECD criteria)

\* **12.3. Bioaccumulative potential**

**bis(nonylphenyl)amine** CAS No.: 36878-20-3 EC No.: 253-249-4

**Log K<sub>OW</sub>:** 7.6

**Bioconcentration factor (BCF):** 1,584.89

**Reaction products of amines, dicoco alkyl and glycollic acid** EC No.: 471-920-1

**Bioconcentration factor (BCF):** 222

**1-(tert-dodecylthio)propan-2-ol** CAS No.: 67124-09-8 EC No.: 266-582-5

**Bioconcentration factor (BCF):** 105.5

**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**

**Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich** CAS No.: 398141-87-2  
 EC No.: 800-172-4

**Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

**bis(nonylphenyl)amine** CAS No.: 36878-20-3 EC No.: 253-249-4

**Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

**Reaction products of amines, dicoco alkyl and glycollic acid** EC No.: 471-920-1

**Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

**1-(tert-dodecylthio)propan-2-ol** CAS No.: 67124-09-8 EC No.: 266-582-5

**Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

**1,2-propanediol, 3-amino, N, N-dicardi alkyl derivs.** EC No.: 482-000-4

**Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

**C14-18 alpha-olefin epoxide, reaction products with boric acid** EC No.: 939-580-3

**Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

**Benzene, polypropene derivs., sulfonated, calcium salts** CAS No.: 75975-85-8 EC No.: 616-278-7

**Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

**2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol** CAS No.: 1218787-32-6  
 EC No.: 620-540-6

**Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

**2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol** CAS No.: 95-38-5 EC No.: 202-414-9

**Results of PBT and vPvB assessment:** 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.



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## 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.
<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 juveniles 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 (12. BImSchV)

##### for substances contained in the product:

Hazard categories:

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

##### Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

##### Remark:

To follow: 5.2.5



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## 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 kræftfremkaldende



### [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 van kankerverwekkende, mutagene en voor de voortplanting giftige stoffen (SZW)  
Algemeene beoordelingsmethodiek Water (ABM)  
Nederlandse emissierichtlijn (NeR)  
NIET-Limitatieve lijst aan voor de voortplanting giftige stoffen - Borstvoeding  
NIET-Limitatieve lijst aan voor de voortplanting giftige stoffen - Vruchtbaarheid  
NIET-Limitatieve lijst aan 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  
(Arbidsomstandighedenwet)  
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

1.1.	Product identifier
1.3.	Details of the supplier of the safety data sheet
1.4.	Emergency telephone number
2.1.	Classification of the substance or mixture
2.2.	Label elements
2.3.	Other hazards
3.2.	Mixtures
4.2.	Most important symptoms and effects, both acute and delayed



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6.1.	Personal precautions, protective equipment and emergency procedures
8.1.	Control parameters
9.1.	Information on basic physical and chemical properties
9.2.	Other information
10.6.	Hazardous decomposition products
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
11.2.	Information on other hazards
12.1.	Toxicity
12.2.	Persistence and degradability
12.3.	Bioaccumulative potential
12.5.	Results of PBT and vPvB assessment
12.6.	Endocrine disrupting properties
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes
16.4.	Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]
16.5.	Relevant R-, H- and EUH-phrases (Number and full text)

## 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
Hazardous to the aquatic environment (Aquatic Chronic 3)	H412: Harmful to aquatic life with long lasting effects.	Calculation method.

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

Hazard statements	
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
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.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

## 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



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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.

\* Data changed compared with the previous version.