

RAVENOL

Revision date: 15 Jun 2022 Version: 2 Print date: 15 Jun 2022

### 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 Multi ATF HVS Fluid** 

Article No.: 1211144

# **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
	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:

Reaction product of alkylthioalcohol and substituted phoshorus compound

Hazard state	ments for environmental hazards
H412	Harmful to aquatic life with long lasting effects.
Supplementa	I hazard information
EUH208	Contains 4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate. May produce an allergic reaction.
Precautionar	y statements Prevention
P273	Avoid release to the environment.
Precautionar	y statements Disposal
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

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

\*



RAVENOL

Revision date: 15 Jun 2022 Version: 2 Print date: 15 Jun 2022

### **SECTION 3: Composition/information on ingredients**

#### \* 3.2. Mixtures

### Hazardous ingredients / Hazardous impurities / Stabilisers:

arataous mg.carcing,	Aazardous impurities / Stabilisers:	
Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 64742-54-7 EC No.: 265-157-1 REACH No.: 01-2119484627-25	Distillates (petroleum), hydrotreated heavy paraffinic; Base oil - not specified Asp. Tox. 1 (H304) Danger	35 - < 60 weight-%
CAS No.: 64741-88-4 EC No.: 265-090-8 REACH No.: 01-2119488706-23	<b>Distillates (petroleum), solvent-refined heavy paraffinic</b> The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	20 - < 35 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-%
CAS No.: 125643-61-0 EC No.: 406-040-9 Index No.: 607-530-00-7 REACH No.: 01-0000015551-76	Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4- hydroxyphenyl) propionate Aquatic Chronic 4 (H413)	0 - < 1.5 weight-%
EC No.: 424-820-7 REACH No.: 01-0000017126-75	Reaction product of alkylthioalcohol and substituted phoshorus compound         Acute Tox. 4 (H312), Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Skin Corr. 1B (H314)	0 - < 0.24 weight-%
<b>CAS No.:</b> 192268-65-8 <b>EC No.:</b> 421-820-9	Gemisch aus: Triphenylthio-phosphat und tertiären butylierten Phenylderivaten Aquatic Chronic 4 (H413), Repr. 2 (H361d) Warning	0 - < 0.2 weight-%
CAS No.: 93882-40-7 EC No.: 299-434-3 REACH No.: 01-2120735527-50 Full text of H- and EUH-phras	<b>4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate</b> Aquatic Chronic 2 (H411), Eye Irrit. 2 (H319), Skin Sens. 1 (H317) Warning	0 - < 0.12 weight-%

### **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. **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:

pa

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 4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate. 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.



RAVENOĽ

Revision date: 15 Jun 2022 Version: 2 Print date: 15 Jun 2022

### **SECTION 5: Firefighting measures**

### \* 5.1. Extinguishing media

#### Suitable extinguishing media:

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

Carbon dioxide (CO2) 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

#### Hazardous combustion products:

Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx), 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.

### 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.

\*



Revision date: 15 Jun 2022 Version: 2 Print date: 15 Jun 2022

### **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

### **Protective measures**

### Advices on safe handling:

Personal protection equipment: see 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

#### 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
bis(nonylphenyl)amine CAS No.: 36878-20-3 EC No.: 253-249-4	5 mg/kg bw/ day	<ol> <li>DNEL worker</li> <li>Long-term - dermal, systemic effects</li> </ol>
Isomer mixture of C7-9-alkyl-3- (3,5-di- trans-butyl-4-hydroxyphenyl) propionate CAS No.: 125643-61-0 EC No.: 406-040-9	2.33 mg/m <sup>3</sup>	<ol> <li>DNEL worker</li> <li>Long-term - inhalation, systemic effects</li> </ol>
Reaction product of alkylthioalcohol and substituted phoshorus compound <b>EC No.:</b> 424-820-7	1.76 mg/m <sup>3</sup>	<ol> <li>DNEL worker</li> <li>Long-term - inhalation, systemic effects</li> </ol>
Reaction product of alkylthioalcohol and substituted phoshorus compound <b>EC No.:</b> 424-820-7	0.5 mg/kg bw/ day	<ol> <li>DNEL worker</li> <li>Long-term - dermal, systemic effects</li> </ol>
Gemisch aus: Triphenylthio-phosphat und tertiären butylierten Phenylderivaten CAS No.: 192268-65-8 EC No.: 421-820-9	1.2 mg/m <sup>3</sup>	<ol> <li>DNEL worker</li> <li>Long-term - inhalation, systemic effects</li> </ol>



Revision date: 15 Jun 2022 Version: 2 Print date: 15 Jun 2022

Substance name	DNEL value	
Substance name	DNEL Value	<ol> <li>DNEL type</li> <li>Exposure route</li> </ol>
4,4'-thiodiethylene hydrogen -2- octadecenylsuccinate CAS No.: 93882-40-7 EC No.: 299-434-3	3.526 mg/m <sup>3</sup>	Exposure route     DNEL worker     Q Long-term – inhalation, systemic effects
4,4'-thiodiethylene hydrogen -2- octadecenylsuccinate CAS No.: 93882-40-7 EC No.: 299-434-3	2 mg/kg bw/ day	<ol> <li>DNEL worker</li> <li>Long-term - dermal, systemic effects</li> </ol>
Substance name	PNEC Value	① PNEC type
Distillates (petroleum), solvent-refined heavy paraffinic CAS No.: 64741-88-4 EC No.: 265-090-8	9.33 mg/kg	① PNEC secondary poisoning
bis(nonylphenyl)amine CAS No.: 36878-20-3 EC No.: 253-249-4	412 μg/L	${f 1}$ PNEC aquatic, freshwater
bis(nonylphenyl)amine CAS No.: 36878-20-3 EC No.: 253-249-4	41.2 μg/L	① PNEC aquatic, marine water
bis(nonylphenyl)amine CAS No.: 36878-20-3 EC No.: 253-249-4	1 mg/L	① PNEC aquatic, intermittent release
Reaction product of alkylthioalcohol and substituted phoshorus compound <b>EC No.:</b> 424-820-7	0.9 μg/L	<ol> <li>PNEC aquatic, freshwater</li> </ol>
Reaction product of alkylthioalcohol and substituted phoshorus compound <b>EC No.:</b> 424-820-7	0.09 μg/L	<ol> <li>PNEC aquatic, marine water</li> </ol>
Reaction product of alkylthioalcohol and substituted phoshorus compound <b>EC No.:</b> 424-820-7	5 mg/L	<ol> <li>PNEC sewage treatment plant</li> </ol>
Reaction product of alkylthioalcohol and substituted phoshorus compound <b>EC No.:</b> 424-820-7	0.159 mg/kg bw/day	<ol> <li>PNEC sediment, freshwater</li> </ol>
Reaction product of alkylthioalcohol and substituted phoshorus compound <b>EC No.:</b> 424-820-7	0.0159 mg/kg bw/day	① PNEC sediment, marine water
4,4'-thiodiethylene hydrogen -2- octadecenylsuccinate CAS No.: 93882-40-7 EC No.: 299-434-3	9.5 μg/L	<ol> <li>PNEC aquatic, freshwater</li> </ol>
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





RAVENOL

Revision date: 15 Jun 2022 Version: 2 Print date: 15 Jun 2022

#### 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 respirative 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 **Odour:** characteristic

#### Colour: red

#### Safety relevant basis data

Parameter	Value	at °C	1 Method
			② Remark
рН	not applicable		
Melting point	not determined		
Freezing point	not determined		
Initial boiling point and boiling range	not determined		
Decomposition temperature	not determined		
Flash point	230 °C		
Evaporation rate	not determined		
Auto-ignition temperature	not determined		
Upper/lower flammability or explosive limits	not determined		
Vapour pressure	not determined		
Vapour density	not determined		
Density	848 kg/m³	15 °C	
Relative density	not determined		
Bulk density	not determined		
Water solubility	practically insoluble		
Partition coefficient: n-octanol/water	not determined		
Dynamic viscosity	not determined		
Kinematic viscosity	37.1 mm²/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.

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) RAVENOL Multi ATF HVS Fluid	Page 7/
Revision dates 15 km 2022 Mansians 2 Reint dates 15 km 2022	RAVENOL
Revision date: 15 Jun 2022 Version: 2 Print date: 15 Jun 2022	
<b>10.3. Possibility of hazardous reactions</b> No hazardous reaction when handled and stored according to provisions.	
<b>10.4. Conditions to avoid</b> To avoid thermal decomposition do not overheat.	
10.5. Incompatible materials	
Materials to avoid: Acid, Oxidising agent, Reducing agent	
10.6. Hazardous decomposition products	
Hazardous combustion products: Carbon monoxide, Carbon dioxide (CO2), During heating or in case of fire, toxic gases is possible.	Nitrogen oxides (NOx),
SECTION 11: Toxicological information	
11.1. Information on hazard classes as defined in Regulation	on (EC) No 1272/2008
Distillates (petroleum), hydrotreated heavy paraffinic; Base oil - not speci EC No.: 265-157-1	
LD <sub>50</sub> oral: 5,000 mg/kg (Rat) OECD 401	
LD <sub>50</sub> dermal: 5,000 mg/kg (Rabbit) OECD 402	
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): 5.53 mg/L 4 h (Rat) OECD 403	
Distillates (petroleum), solvent-refined heavy paraffinic CAS No.: 64741-	88-4 EC No.: 265-090-8
LD <sub>50</sub> oral: >5,000 mg/kg (rats)	
LD <sub>50</sub> dermal: >2,000 mg/kg (rabbits)	
bis(nonylphenyl)amine CAS No.: 36878-20-3 EC No.: 253-249-4	
LD <sub>50</sub> oral: >5,000 mg/kg (Rat)	
LD <sub>50</sub> dermal: >2,000 mg/kg (Rabbit)	
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L	
	onate CAS No.: 125643-61-0
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi EC No.: 406-040-9 LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)	onate CAS No.: 125643-61-0
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi         EC No.: 406-040-9         LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)         LD <sub>50</sub> dermal: >2,000 mg/kg (Ratte)	
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi         EC No.: 406-040-9         LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)         LD <sub>50</sub> dermal: >2,000 mg/kg (Ratte)         Reaction product of alkylthioalcohol and substituted phoshorus compound	
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi         EC No.: 406-040-9         LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)         LD <sub>50</sub> dermal: >2,000 mg/kg (Ratte)         Reaction product of alkylthioalcohol and substituted phoshorus compound         LD <sub>50</sub> oral: 2,000 mg/kg (rat)	
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi         EC No.: 406-040-9         LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)         LD <sub>50</sub> dermal: >2,000 mg/kg (Ratte)         Reaction product of alkylthioalcohol and substituted phoshorus compound         LD <sub>50</sub> oral: 2,000 mg/kg (rat)         LD <sub>50</sub> dermal: 500 mg/kg (rabbit)	<b>EC No.:</b> 424-820-7
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi         EC No.: 406-040-9         LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)         LD <sub>50</sub> dermal: >2,000 mg/kg (Ratte)         Reaction product of alkylthioalcohol and substituted phoshorus compound         LD <sub>50</sub> oral: 2,000 mg/kg (rat)         LD <sub>50</sub> dermal: 500 mg/kg (rabbit)         4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate       CAS No.: 93882-400	<b>EC No.:</b> 424-820-7
$\label{eq:loss} \begin{array}{l} \mbox{LC}_{50} \mbox{ Acute inhalation toxicity (dust/mist): >5 mg/L} \\ Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propieted in the second stress of the second stre$	<b>EC No.:</b> 424-820-7
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi         EC No.: 406-040-9         LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)         LD <sub>50</sub> dermal: >2,000 mg/kg (Ratte)         Reaction product of alkylthioalcohol and substituted phoshorus compound         LD <sub>50</sub> oral: 2,000 mg/kg (rat)         LD <sub>50</sub> dermal: 500 mg/kg (rabbit)         4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate       CAS No.: 93882-400	<b>EC No.:</b> 424-820-7
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi         EC No.: 406-040-9         LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)         LD <sub>50</sub> dermal: >2,000 mg/kg (Ratte)         Reaction product of alkylthioalcohol and substituted phoshorus compound         LD <sub>50</sub> oral: 2,000 mg/kg (rat)         LD <sub>50</sub> dermal: 500 mg/kg (rat)         LD <sub>50</sub> oral: 10,000 mg/kg (rat)         LD <sub>50</sub> oral: 10,000 mg/kg (rat)         LD <sub>50</sub> dermal: 3,160 mg/kg (rabbit)	<b>EC No.:</b> 424-820-7
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/LIsomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propiEC No.: 406-040-9LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)LD <sub>50</sub> dermal: >2,000 mg/kg (Ratte)Reaction product of alkylthioalcohol and substituted phoshorus compoundLD <sub>50</sub> oral: 2,000 mg/kg (rat)LD <sub>50</sub> dermal: 500 mg/kg (rabbit)4,4'-thiodiethylene hydrogen -2-octadecenylsuccinateCAS No.: 93882-40LD <sub>50</sub> dermal: 3,160 mg/kg (rabbit)Acute oral toxicity:Based on available data, the classification criteria are not met.	<b>EC No.:</b> 424-820-7
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/LIsomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propiEC No.: 406-040-9LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)LD <sub>50</sub> dermal: >2,000 mg/kg (Ratte)Reaction product of alkylthioalcohol and substituted phoshorus compoundLD <sub>50</sub> oral: 2,000 mg/kg (rat)LD <sub>50</sub> dermal: 500 mg/kg (rabbit)4,4'-thiodiethylene hydrogen -2-octadecenylsuccinateCAS No.: 93882-40LD <sub>50</sub> dermal: 3,160 mg/kg (rabbit)Acute oral toxicity:Based on available data, the classification criteria are not met.Acute dermal toxicity:	<b>EC No.:</b> 424-820-7
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/LIsomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propiEC No.: 406-040-9LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)LD <sub>50</sub> dermal: >2,000 mg/kg (Ratte)Reaction product of alkylthioalcohol and substituted phoshorus compoundLD <sub>50</sub> oral: 2,000 mg/kg (rat)LD <sub>50</sub> dermal: 500 mg/kg (rabbit)4,4'-thiodiethylene hydrogen -2-octadecenylsuccinateCAS No.: 93882-40LD <sub>50</sub> oral: 10,000 mg/kg (rat)LD <sub>50</sub> dermal: 3,160 mg/kg (rabbit)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.	<b>EC No.:</b> 424-820-7
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/LIsomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propiEC No.: 406-040-9LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)LD <sub>50</sub> dermal: >2,000 mg/kg (Ratte)Reaction product of alkylthioalcohol and substituted phoshorus compoundLD <sub>50</sub> oral: 2,000 mg/kg (rat)LD <sub>50</sub> dermal: 500 mg/kg (rabbit)4,4'-thiodiethylene hydrogen -2-octadecenylsuccinateCAS No.: 93882-40LD <sub>50</sub> oral: 10,000 mg/kg (rat)LD <sub>50</sub> dermal: 3,160 mg/kg (rabbit)Acute oral toxicity: Based on available data, the classification criteria are not met.Acute inhalation toxicity: Based on available data, the classification criteria are not met.Acute inhalation toxicity: Based on available data, the classification criteria are not met.	<b>EC No.:</b> 424-820-7
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi         EC No.: 406-040-9         LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)         Reaction product of alkylthioalcohol and substituted phoshorus compound         LD <sub>50</sub> oral: 2,000 mg/kg (rat)         LD <sub>50</sub> dermal: 500 mg/kg (rabbit)         4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate       CAS No.: 93882-40         LD <sub>50</sub> dermal: 3,160 mg/kg (rabbit)         Acute oral toxicity:         Based on available data, the classification criteria are not met.         Acute inhalation toxicity:         Based on available data, the classification criteria are not met.         Acute inhalation toxicity:         Based on available data, the classification criteria are not met.         Acute inhalation 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.	<b>EC No.:</b> 424-820-7
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi         EC No.: 406-040-9         LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)         Reaction product of alkylthioalcohol and substituted phoshorus compound         LD <sub>50</sub> oral: 2,000 mg/kg (rat)         LD <sub>50</sub> dermal: 500 mg/kg (rabbit)         4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate         CAS No.: 93882-40         LD <sub>50</sub> dermal: 3,160 mg/kg (rat)         LD <sub>50</sub> dermal: 3,160 mg/kg (rabbit)         Acute oral 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.         Skin corrosion/irritation:         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.	<b>EC No.:</b> 424-820-7
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi         EC No.: 406-040-9         LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)         Reaction product of alkylthioalcohol and substituted phoshorus compound         LD <sub>50</sub> oral: 2,000 mg/kg (rat)         LD <sub>50</sub> dermal: 500 mg/kg (rabbit)         4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate       CAS No.: 93882-40         LD <sub>50</sub> dermal: 3,160 mg/kg (rabbit)         4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate       CAS No.: 93882-40         LD <sub>50</sub> dermal: 3,160 mg/kg (rabbit)         Acute oral 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.         Skin corrosion/irritation:         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.         Serious eye damage/irritation:         Based on available data, the classification criter	EC No.: 424-820-7
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyI-3- (3,5-di-trans-butyI-4-hydroxyphenyI) propi         EC No.: 406-040-9         LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)         Reaction product of alkyIthioalcohol and substituted phoshorus compound         LD <sub>50</sub> dermal: >2,000 mg/kg (ratb)         4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate       CAS No.: 93882-40         LD <sub>50</sub> dermal: 3,160 mg/kg (rabbit)         4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate       CAS No.: 93882-40         LD <sub>50</sub> dermal: 3,160 mg/kg (rabbit)         Acute oral 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.         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 produ         Germ cell mutagenicity:         Based on available data, the classification criteria are not met.	EC No.: 424-820-7
LC <sub>50</sub> Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi         EC No.: 406-040-9         LD <sub>50</sub> oral: >2,000 mg/kg (Ratte)         Reaction product of alkylthioalcohol and substituted phoshorus compound         LD <sub>50</sub> oral: 2,000 mg/kg (rat)         LD <sub>50</sub> dermal: 500 mg/kg (rabbit)         4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate       CAS No.: 93882-40         LD <sub>50</sub> oral: 10,000 mg/kg (rat)         LD <sub>50</sub> dermal: 3,160 mg/kg (rabbit)         Acute oral 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.         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 produ         Germ cell mutagenicity:         Based on available data, the classification criteria are not met.         Respiratory or skin sensitisation:         <	EC No.: 424-820-7
LC50 Acute inhalation toxicity (dust/mist): >5 mg/L         Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propi         EC No.: 406-040-9         LD50 oral: >2,000 mg/kg (Ratte)         Reaction product of alkylthioalcohol and substituted phoshorus compound         LD50 oral: 2,000 mg/kg (rat)         LD50 dermal: 500 mg/kg (rabbit)         4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate       CAS No.: 93882-40         LD50 dermal: 3,160 mg/kg (rabbit)         4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate       CAS No.: 93882-40         LD50 dermal: 3,160 mg/kg (rabbit)         Acute oral 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.         Serious eye damage/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.         Germ cell mutagenicity:         Based on available data, the classification criteria are not	EC No.: 424-820-7



RAVENOĽ

Revision date: 15 Jun 2022 Version: 2 Print date: 15 Jun 2022

#### 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

**Distillates (petroleum), hydrotreated heavy paraffinic; Base oil - not specified CAS No.:** 64742-54-7 **EC No.:** 265-157-1

**LC<sub>50</sub>:** 100 mg/L 4 d (fish)

**LC<sub>50</sub>:** 10,000 mg/L 4 d (crustaceans)

EC<sub>50</sub>: 10,000 mg/L 2 d (crustaceans)

NOEC: 100 mg/L 4 d (fish)

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

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

**Distillates (petroleum), solvent-refined heavy paraffinic CAS No.:** 64741-88-4 **EC No.:** 265-090-8 **LC<sub>50</sub>:** >100 mg/L 4 d (fish, Pimephales promelas)

EC<sub>50</sub>: >10,000 mg/L 2 d (crustaceans, Daphnia magna)

**NOEC:** >100 mg/L 4 d (fish, Pimephales promelas)

**NOEC:** ≥1,000 mg/L 2 d (crustaceans, Daphnia magna)

NOEC: >100 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata)

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

**LC<sub>50</sub>:** >100 mg/L 4 d (fish)

EC<sub>50</sub>: >100 mg/L 2 d (crustaceans)

EC<sub>50</sub>: 600 mg/L 3 d (Algae/water plant)

Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propionate CAS No.: 125643-61-0 EC No.: 406-040-9

**NOEC:** >3 mg/L 3 d (Algae/water plant, Alge)

EC<sub>50</sub>: >100 mg/L 2 d (crustaceans, Daphnie)

Reaction product of alkylthioalcohol and substituted phoshorus 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:**

Harmful to aquatic life with long lasting effects.

#### Additional ecotoxicological information:

Do not allow uncontrolled discharge of product into the environment.

### \* 12.2. Persistence and degradability

Distillates (petroleum), solvent-refined heavy paraffinic CAS No.: 64741-88-4 EC No.: 265-090-8

Biodegradation: not determined

**Remark:** The base oil / mineral oil used has a value of less than 3% DMSO, so it is not classified as a carcinogen. **bis(nonylphenyl)amine CAS No.:** 36878-20-3 **EC No.:** 253-249-4

Biodegradation: -



RAVENOL

Revision date: 15 Jun 2022 Version: 2 Print date: 15 Jun 2022

#### **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

#### 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

**Distillates (petroleum), hydrotreated heavy paraffinic; Base oil - not specified CAS No.:** 64742-54-7 **EC No.:** 265-157-1

Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. Distillates (petroleum), solvent-refined heavy paraffinic CAS No.: 64741-88-4 EC No.: 265-090-8 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. Isomer mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propionate CAS No.: 125643-61-0 EC No.: 406-040-9

**Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. **Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based CAS No.:** 72623-86-0 **EC No.:** 276-737-9

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

Reaction product of alkylthioalcohol and substituted phoshorus compound EC No.: 424-820-7 Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

Gemisch aus: Triphenylthio-phosphat und tertiären butylierten Phenylderivaten CAS No.: 192268-65-8 EC No.: 421-820-9

Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.4,4'-thiodiethylene hydrogen -2-octadecenylsuccinateCAS No.: 93882-40-7EC No.: 299-434-3

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 nontarget 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.

#### 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.



RAVENOĽ

Revision date: 15 Jun 2022 Version: 2 Print date: 15 Jun 2022

### SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or	ID number		
No dangerous good in sense of these transport regulations.			
14.2. UN proper ship	ping name		
No dangerous good in sense of these transport regulations.			
14.3. Transport haza	rd class(es)	·	
not relevant	not relevant	not relevant	not relevant
14.4. Packing group			
not relevant	not relevant	not relevant	not relevant
14.5. Environmental	hazards		
not relevant	not relevant	not relevant	not relevant
14.6. Special precau	tions for user		
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

### 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 (AltölV)

Page 11/12

RAVENOL

Revision date: 15 Jun 2022 Version: 2 Print date: 15 Jun 2022

	egulations, restrictions and prohibition regulations nark: Bekendtgørelse af lov om arbejdsmiljø: Beskæftigelsesministeriets lovbekendtgørelse nr.
	af 7. september 2010
	over stoffer og processer, der anses for at vaere kraeftfremkaldende
[F	R] National regulations
	egulations, restrictions and prohibition regulations
	reich: Tableaux de maladies professionelles
	nclature des installations classées pour la protection de l'environnement
	es 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-
	de du travail
	L] National regulations
	egulations, restrictions and prohibition regulations
Algem	rlande: Lijst vank kankerverwekkende, mutagene en voor de voortplanting giftige stoffen (SZW) neene beoordelingsmethodiek Water (ABM) landse emissierichtlijn (NeR)
	imitatieve lijst an voor de voortplanting giftige stoffen - Borstvoeding
	imitatieve lijst an voor de voortplanting giftige stoffen - Vruchtbaarheid
	imitatieve lijst an voor de voortplanting giftige stoffen - Ontwikkeling
	ijst van kankerverwekkende stoffen
	ijst van mutagene stoffen
	an 18 maart 1999, houdende bepalingen ter verbetering van de arbeidsomstandigheden
	dsomstandighedenwet) n de endernemingere den 1071
	p de ondernemingsraden 1971
[C	H] National regulations
Brand	rencode verhütung, BVD (Schweiz) <b>Chemical Safety Assessment</b>
Brand . <b>5.2.</b> Chemi . <b>5.3.</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information
Brand .5.2. ( Chemi .5.3. / No dat	verhütung, BVD (Schweiz) <b>Chemical Safety Assessment</b> cal safety assessments for substances in this mixture were not carried out.
Brand 5.2. ( Chemi 5.3. / No dat	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available.
Brand 5.2. ( Chemi 5.3. / No dat 5ECT	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ION 16: Other information Indication of changes
Brand 5.2. ( Chemi 5.3. / No dat 5ECT 6.1. 1 1.3.	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Indication of changes Details of the supplier of the safety data sheet
Brand <b>5.2.</b> ( Chemin <b>5.3.</b> <i>A</i> No dat <b>5.6.1.</b> 1 <b>1.3.</b> <b>1.4.</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Indication of changes Details of the supplier of the safety data sheet Emergency telephone number
Brand 5.2. ( Chemi 5.3. / No dat 6.1. ( 1.3. 1.4. 2.2.	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Indication of changes Details of the supplier of the safety data sheet Emergency telephone number Label elements
Brand <b>5.2.</b> ( Chemin <b>5.3.</b> ( <b>5.3.</b> ( <b>No</b> dat <b>5.7.</b> ( <b>6.1.</b> ( 1.3. 1.4.	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Indication of changes Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards
Brand 5.2. ( Chemi- 5.3. / No dat 6.1.   1.3. 1.4. 2.2. 2.3.	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Indication of changes Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures
Brand <b>.5.2.</b> (Chemin <b>.5.3.</b> (A) <b>.6.1.</b> (Chemin <b>.6.1.</b> (Chemin <b>.6</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures
Brand <b>5.2.</b> (Chemin <b>5.3.</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed
Brand <b>5.2.</b> Chemi <b>5.3.</b> A No dat <b>6.1.</b> I <b>1.3.</b> <b>1.4.</b> 2.2. 2.3. 3.2. 4.1. 4.2. 5.1.	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media
Brand <b>5.2.</b> (Chemin <b>5.3.</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information mdication of changes Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Advice for firefighters
Brand <b>.5.2.</b> (Chemin <b>.5.3.</b> (No dat <b>.5.3.</b> (A) <b>.6.1.</b> (Chemin <b>.6.1.</b> (Chemin <b>.6</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. DN 16: Other information Indication of changes Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Advice for firefighters Personal precautions, protective equipment and emergency procedures
Brand <b>.5.2.</b> Chemi <b>.5.3.</b> No dat <b>.6.1.</b> 1.3. 1.4. 2.2. 2.3. 3.2. 4.1. 4.2. 5.1. 5.3. 6.1. 6.3.	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. DN 16: Other information Indication of changes Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Advice for firefighters Personal precautions, protective equipment and emergency procedures Methods and material for containment and cleaning up
Brand <b>5.2.</b> (Chemin <b>5.3.</b> (Chemin <b>5.3.</b> (Chemin <b>5.3.</b> (Chemin <b>5.3.</b> (Chemin <b>5.3.</b> (Chemin <b>5.4.</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Advice for firefighters Personal precautions, protective equipment and emergency procedures Methods and material for containment and cleaning up Precautions for safe handling
Brand <b>5.2.</b> (Chemi- <b>5.3.</b> ) <b>No dat</b> <b>6.1.</b> ( <b>1.3.</b> <b>1.4.</b> <b>2.2.</b> <b>2.3.</b> <b>3.2.</b> <b>4.1.</b> <b>4.2.</b> <b>5.1.</b> <b>5.3.</b> <b>6.1.</b> <b>6.3.</b> <b>7.1.</b> <b>8.1.</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Advice for firefighters Personal precautions, protective equipment and emergency procedures Methods and material for containment and cleaning up Precautions for safe handling Control parameters
Brand <b>5.2.</b> Chemi <b>5.3.</b> No dat <b>5.4.</b> No dat <b>5.5.</b> Construction <b>5.6.1.</b> Construction <b>5.7.</b> Construction	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Advice for firefighters Personal precautions, protective equipment and emergency procedures Methods and material for containment and cleaning up Precautions for safe handling Control parameters Information on basic physical and chemical properties
Brand <b>5.2.</b> Chemi <b>5.3.</b> No dat <b>5.4.</b> No dat <b>5.5.1.</b> <b>5.1.</b> <b>5.1.</b> <b>5.1.</b> <b>5.1.</b> <b>5.1.</b> <b>5.3.</b> <b>6.1.</b> <b>6.3.</b> <b>7.1.</b> <b>8.1.</b> <b>9.2.</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Advice for firefighters Personal precautions, protective equipment and emergency procedures Methods and material for containment and cleaning up Precautions for safe handling Control parameters Information
Brand <b>5.2.</b> Chemin <b>5.3.</b> A No dat <b>5.3.</b> A <b>5.3.</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Indication of changes Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Advice for firefighters Personal precautions, protective equipment and emergency procedures Methods and material for containment and cleaning up Precautions for safe handling Control parameters Information Description of nasic physical and chemical properties Other information
Brand <b>5.2.</b> Chemin <b>5.3.</b> A No dat <b>5.3.</b> A <b>5.3.</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. ON 16: Other information Indication of changes Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Advice for firefighters Personal precautions, protective equipment and emergency procedures Methods and material for containment and cleaning up Precautions for safe handling Control parameters Information Date: Supplier of the safet properties Other information
Brand <b>5.2.</b> Chemin <b>5.3.</b> A No dat <b>5.3.</b> A <b>5.3.</b> A <b>5.3.</b> A <b>5.4.</b> <b>6.1.</b> 1 <b>1.3.</b> <b>1.4.</b> <b>2.2.</b> <b>2.3.</b> <b>3.2.</b> <b>4.1.</b> <b>4.2.</b> <b>5.1.</b> <b>5.3.</b> <b>6.1.</b> <b>6.3.</b> <b>7.1.</b> <b>8.1.</b> <b>9.1.</b> <b>9.2.</b> <b>10.1.</b> <b>10.6.</b> <b>11.1.</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. DN 16: Other information Indication of changes Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Advice for firefighters Personal precautions, protective equipment and emergency procedures Methods and material for containment and cleaning up Precautions for safe handling Control parameters Information Reactivity Hazardous decomposition products Information on hazard classes as defined in Regulation (EC) No 1272/2008
Brand <b>5.2.</b> Chemi <b>5.3.</b> A No dat <b>5.4.</b> <b>6.1.</b> <b>6.1.</b> <b>6.1.</b> <b>6.3.</b> 7.1. 8.1. 9.1. 9.2. <b>10.1.</b> <b>10.6.</b> <b>11.1.</b> <b>11.2.</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. CON 16: Other information Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Advice for firefighters Personal precautions, protective equipment and emergency procedures Methods and material for containment and cleaning up Precautions for safe handling Control parameters Information Information Reactivity Hazardous decomposition products Information on bazard classes as defined in Regulation (EC) No 1272/2008 Information on other hazards
Brand <b>5.2.</b> Chemi <b>5.3.</b> No dat <b>5.3.</b> A <b>5.4</b> <b>5.3.</b> A <b>5.5.</b> <b>6.1.</b> <b>6.1.</b> <b>6.1.</b> <b>6.3.</b> <b>7.1.</b> <b>8.1.</b> <b>9.1.</b> <b>9.2.</b> <b>10.1.</b> <b>10.6.</b> <b>11.1.</b> <b>11.2.</b> <b>12.1.</b>	verhütung, BVD (Schweiz) Chemical Safety Assessment cal safety assessments for substances in this mixture were not carried out. Additional information a available. DN 16: Other information Indication of changes Details of the supplier of the safety data sheet Emergency telephone number Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Advice for firefighters Personal precautions, protective equipment and emergency procedures Methods and material for containment and cleaning up Precautions for safe handling Control parameters Information Reactivity Hazardous decomposition products Information on hazard classes as defined in Regulation (EC) No 1272/2008



RAVENOL

Revision date: 15 Jun 2022 Version: 2 Print date: 15 Jun 2022

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

### 16.2. Abbreviations and acronyms

See overview table at 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 state	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.		
H317	May cause an allergic skin reaction.		
H319	Causes serious eye irritation.		
H361d	Suspected of damaging the unborn child.		
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.		
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 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