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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 SSO SAE 0W-30

Article No.:

1111100

#### 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]

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

#### \* 2.2. Label elements

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

According to EC directives or the corresponding national regulations the product does not have to be labelled.

Hazard statements: none

##### Supplemental hazard information

EUH208	Contains Molybdenum alkylthiocarbamide complex. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

Precautionary statements: none

#### 2.3. Other hazards

Other adverse effects:

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



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## 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.: 68037-01-4 EC No.: 500-183-1 REACH No.: 01-2119486452-34	<b>1-decene, homopolymer, hydrogenated</b> Asp. Tox. 1 (H304) Danger <b>Acute Toxicity Estimate</b> ATE (oral) > 5,000 mg/kg ATE (dermal) > 2,000 mg/kg ATE (inhalation, dust/mist) > 5 mg/L	20 - < 40 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) <b>Acute Toxicity Estimate</b> ATE (oral) > 5,000 mg/kg ATE (dermal) > 2,000 mg/kg ATE (inhalation, dust/mist) > 5 mg/L	0 - < 2 weight-%
CAS No.: 1190625-94-5 EC No.: 931-468-2 REACH No.: 01-2119498288-19	<b>C14-16-18 Alkyl phenol</b> Aquatic Chronic 4 (H413), Skin Irrit. 2 (H315) Warning <b>Acute Toxicity Estimate</b> ATE (oral) 2,000 mg/kg ATE (dermal) 2,000 mg/kg	0 - < 2 weight-%
CAS No.: 28629-66-5 EC No.: 249-109-7 REACH No.: 01-2119953278-28	<b>zinc bis(O,O-diisooctyl) bis(dithiophosphate)</b> Aquatic Chronic 2 (H411), Eye Dam. 1 (H318), Skin Irrit. 2 (H315) Danger <b>Specific concentration limit (SCL)</b> Eye Dam. 1; H318: C ≥ 15% Eye Irrit. 2; H319: C ≥ 15%	0 - < 2 weight-%
EC No.: 457-320-2 REACH No.: 01-0000019337-66	<b>Molybdenum alkylthiocarbamide complex</b> Aquatic Chronic 3 (H412), Skin Irrit. 2 (H315), Skin Sens. 1B (H317) Warning <b>Acute Toxicity Estimate</b> ATE (oral) > 2,000 mg/kg ATE (dermal) > 2,000 mg/kg	0 - < 0.15 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.

#### 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 Molybdenum alkylthiocarbamide complex. 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.



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## 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

#### 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.

### 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.



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## SECTION 7: Handling and storage

### \* 7.1. Precautions for safe handling

#### Protective measures

##### Advices on safe handling:

Wear personal protection equipment (refer to section 8).

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

##### Fire prevent measures:

No special fire protection measures are necessary.

##### Environmental precautions:

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

##### Advices on general occupational hygiene

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

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

#### Technical measures and storage conditions:

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

#### Requirements for storage rooms and vessels:

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

Keep/Store only in original container.

#### Hints on storage assembly:

not required

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

#### Further information on storage conditions:

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

### 7.3. Specific end use(s)

#### Recommendation:

Observe technical data sheet.

## SECTION 8: Exposure controls/personal protection

### \* 8.1. Control parameters

#### 8.1.1. Occupational exposure limit values

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
PL from 12 Jun 2018	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (Mgła olejowa mineralny)
MAK (AT)	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (Ölnebel, mineralisch einatembare Fraktion)
BE	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (Brouillard d'huile minéral)
Québec (CA)	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ② 10 mg/m <sup>3</sup> ⑤ (Oil mist mineral)



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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
HU from 28 May 2022	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (Olajköd ásványi) T
SE	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 1 mg/m <sup>3</sup> ② 3 mg/m <sup>3</sup> ⑤ (Oljeånga eller rök)
ES	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ② 10 mg/m <sup>3</sup> ⑤ (Niebla de aceite mineral) am
NL	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (Olienevel mineraal)
OSHA (US)	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (Oil mist mineral)
NIOSH (US)	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ② 10 mg/m <sup>3</sup> ⑤ (Oil mist mineral)
ACGIH (US) from 1 Jan 2010	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (Oil mist mineral, inhalable fraction)
CZ	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ② 10 mg/m <sup>3</sup> ⑤ (Rozprášený olej (olejová mlhovina) minerální)
NO	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 1 mg/m <sup>3</sup> ⑤ (Oljetåke mineralsk)
NPEL (SK) from 23 Nov 2011	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 ppm (1 mg/m <sup>3</sup> ) ② 15 ppm (3 mg/m <sup>3</sup> ) ⑤ (Olejová hmlovina minerálny)
Alberta (CA)	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ② 10 mg/m <sup>3</sup> ⑤ (Oil mist mineral)
HTP (FI)	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (Öljysumu)
LT	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 1 mg/m <sup>3</sup> ② 3 mg/m <sup>3</sup> ⑤ (Tepalo rūkas arba dūmai)
BC (CA) from 1 Jan 2007	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 0.2 mg/m <sup>3</sup> ⑤ (Oil mist mineral) 1
MY from 1 Jan 2000	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (Kabus minyak mineral)



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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
BC (CA) from 1 Jan 2007	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 1 mg/m <sup>3</sup> ⑤ (Oil mist mineral, highly refined)
TW	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (## ##)
GR from 1 Oct 2016	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (Εκκνέφωμα λαδιού, ορυκτό)
MY from 1 Jan 2000	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 10 mg/m <sup>3</sup> ⑤ (Kabus minyak, vegetal)
RO from 21 Aug 2018	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ② 10 mg/m <sup>3</sup> ⑤ (Ceata uleioasa mineral)
CH from 1 Jan 2022	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (einatembare Fraktion) C2; Tox: Lunge; Messmeth: NIOSH DFG
LV from 12 Jul 2018	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (Eļļas migla)
JP	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 3 mg/m <sup>3</sup> ⑤ (Oil mist mineral)
IDLH (US) from 1 Jan 1994	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 2,500 mg/m <sup>3</sup>
IE from 1 Apr 2016	<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m <sup>3</sup> ⑤ (Oil mist mineral, inhalable fraction)

### 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
<b>bis(nonylphenyl)amine</b> CAS No.: 36878-20-3 EC No.: 253-249-4	5 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
<b>C14-16-18 Alkyl phenol</b> CAS No.: 1190625-94-5 EC No.: 931-468-2	1.17 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2	3.52 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2	2.24 mg/kg	① DNEL worker ② Long-term - dermal, systemic effects



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Substance name	DNEL value	① DNEL type ② Exposure route
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2	0.112 mg/cm <sup>2</sup>	① DNEL worker ② Long-term - dermal, local effects

Substance name	PNEC Value	① PNEC type
<b>bis(nonylphenyl)amine</b> CAS No.: 36878-20-3 EC No.: 253-249-4	412 µg/L	① PNEC aquatic, freshwater
<b>bis(nonylphenyl)amine</b> CAS No.: 36878-20-3 EC No.: 253-249-4	41.2 µg/L	① PNEC aquatic, marine water
<b>bis(nonylphenyl)amine</b> CAS No.: 36878-20-3 EC No.: 253-249-4	1 mg/L	① PNEC aquatic, intermittent release
<b>C14-16-18 Alkyl phenol</b> CAS No.: 1190625-94-5 EC No.: 931-468-2	100 µg/L	① PNEC aquatic, freshwater
<b>C14-16-18 Alkyl phenol</b> CAS No.: 1190625-94-5 EC No.: 931-468-2	10 µg/L	① PNEC aquatic, marine water
<b>C14-16-18 Alkyl phenol</b> CAS No.: 1190625-94-5 EC No.: 931-468-2	100 mg/L	① PNEC sewage treatment plant
<b>C14-16-18 Alkyl phenol</b> CAS No.: 1190625-94-5 EC No.: 931-468-2	4,266.16 mg/kg bw/day	① PNEC sediment, freshwater
<b>C14-16-18 Alkyl phenol</b> CAS No.: 1190625-94-5 EC No.: 931-468-2	426.62 mg/kg bw/day	① PNEC sediment, marine water
<b>C14-16-18 Alkyl phenol</b> CAS No.: 1190625-94-5 EC No.: 931-468-2	852.58 mg/kg bw/day	① PNEC soil
<b>C14-16-18 Alkyl phenol</b> CAS No.: 1190625-94-5 EC No.: 931-468-2	3.3 mg/kg bw/day	① PNEC secondary poisoning
<b>C14-16-18 Alkyl phenol</b> CAS No.: 1190625-94-5 EC No.: 931-468-2	1 mg/L	① PNEC aquatic, intermittent release
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2	0.081 mg/L	① PNEC aquatic, freshwater
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2	0.008 mg/L	① PNEC aquatic, marine water
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2	10 mg/L	① PNEC sewage treatment plant
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2	195 mg/kg	① PNEC sediment, freshwater
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2	19.5 mg/kg	① PNEC sediment, marine water
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2	0.872 mg/kg	① PNEC soil
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2	20 mg/kg	① PNEC secondary poisoning

\* **8.2. Exposure controls****8.2.1. Appropriate engineering controls**

See section 7. No additional measures necessary.



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### 8.2.2. Personal protection equipment



#### Eye/face protection:

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

#### Skin protection:

Hand protection  
 Suitable material: NBR (Nitrile rubber), PVC (polyvinyl chloride), CR (polychloroprene, chloroprene rubber)  
 Thickness of the glove material:  $\geq 0,4$  mm  
 Breakthrough time: 480 min  
 Breakthrough times and swelling properties of the material must be taken into consideration.  
 The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.  
 For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.  
 Tested protective gloves must be worn: EN ISO 374  
 Suitable protective clothing: Protective clothing

#### Respiratory protection:

Usually no personal 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

**Colour:** tawny

**Odour:** characteristic

#### Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	<i>not applicable</i>		
Melting point	<i>No data available</i>		
Freezing point	<i>No data available</i>		
Initial boiling point and boiling range	<i>No data available</i>		
Decomposition temperature	<i>not applicable</i>		
Flash point	244 °C		
Evaporation rate	<i>No data available</i>		
Auto-ignition temperature	<i>No data available</i>		
Upper/lower flammability or explosive limits	<i>No data available</i>		
Vapour pressure	<i>No data available</i>		
Vapour density	<i>No data available</i>		
Density	848 kg/m <sup>3</sup>	15 °C	
Relative density	<i>not applicable</i>		
Bulk density	<i>not applicable</i>		
Water solubility	practically insoluble		
Partition coefficient: n-octanol/water	<i>not applicable</i>		
Dynamic viscosity	<i>No data available</i>		
Kinematic viscosity	62 mm <sup>2</sup> /s	40 °C	

### 9.2. Other information

Not applicable



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**SECTION 10: Stability and reactivity**

- \* **10.1. Reactivity**  
No known hazardous reactions.
  - 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, Oxidising agent, Reducing agent
  - \* **10.6. Hazardous decomposition products**  
Hazardous combustion products: Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>),  
During heating or in case of fire, toxic gases is possible.
- Further information**  
No information available.

**SECTION 11: Toxicological information**

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

<b>1-decene, homopolymer, hydrogenated</b> CAS No.: 68037-01-4 EC No.: 500-183-1
<b>LD<sub>50</sub> oral:</b> >5,000 mg/kg (Rat)
<b>LD<sub>50</sub> dermal:</b> >2,000 mg/kg (Rabbit)
<b>LC<sub>50</sub> Acute inhalation toxicity (dust/mist):</b> >5 mg/L 4 h (Rat)
<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4
<b>LD<sub>50</sub> oral:</b> >5,000 mg/kg (Rat) OECD 401
<b>LD<sub>50</sub> dermal:</b> >2,000 mg/kg (Rabbit) OECD 402
<b>LC<sub>50</sub> Acute inhalation toxicity (dust/mist):</b> >5 mg/L
<b>bis(nonylphenyl)amine</b> CAS No.: 36878-20-3 EC No.: 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>C14-16-18 Alkyl phenol</b> CAS No.: 1190625-94-5 EC No.: 931-468-2
<b>LD<sub>50</sub> oral:</b> 2,000 mg/kg
<b>LD<sub>50</sub> dermal:</b> 2,000 mg/kg
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2
<b>LD<sub>50</sub> oral:</b> >2,000 mg/kg (Rat) OECD Guideline 425
<b>LD<sub>50</sub> dermal:</b> >2,000 mg/kg (Rat) OECD Guideline 402

**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 Molybdenum alkylthiocarbamide complex. 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.



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**Reproductive toxicity:**

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

**STOT-single exposure:**

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

**STOT-repeated exposure:**

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

**Aspiration hazard:**

Observe risk of aspiration if vomiting occurs.  
 For viscosity data, see section 9.

**Additional information:**

Frequently or prolonged contact with skin may cause dermal irritation.

\* **11.2. Information on other hazards**

**Endocrine disrupting properties:**

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

**Other information:**

No data available.

**SECTION 12: Ecological information**

\* **12.1. Toxicity**

<b>1-decene, homopolymer, hydrogenated</b> CAS No.: 68037-01-4 EC No.: 500-183-1
LC <sub>50</sub> : >750 mg/L 4 d (fish)
EC <sub>50</sub> : 190 mg/L 2 d (crustaceans, Daphnia pulex (water flea))
EC <sub>50</sub> : >1,000 mg/L 3 d (Algae/water plant)
<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4
EC <sub>50</sub> : >100 mg/L 2 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201
EC <sub>50</sub> : >10,000 mg/L 2 d (crustaceans, Daphnia magna (Big water flea)) OECD 202
NOEC: 10 mg/L 21 d (crustaceans, Daphnia magna (Big water flea)) OECD 211
NOEC: >100 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201
NOEC: >100 mg/L 4 d (fish, Pimephales promelas (fathead minnow))
<b>bis(nonylphenyl)amine</b> 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)
<b>C14-16-18 Alkyl phenol</b> CAS No.: 1190625-94-5 EC No.: 931-468-2
EC <sub>50</sub> : 100 mg/L 2 d (crustaceans)
EC <sub>50</sub> : 100 mg/L 2 d (Algae/water plant)
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2
LC <sub>50</sub> : 670 mg/L 4 d (fish)
EC <sub>50</sub> : 50 mg/L 2 d (crustaceans)
NOEC: 100 mg/L 21 d (crustaceans)
EC <sub>50</sub> : 9.62 mg/L 3 d (Algae/water plant)
NOEC: 4.05 mg/L 3 d (Algae/water plant)

**Assessment/classification:**

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

**Additional ecotoxicological information:**

Do not allow uncontrolled discharge of product into the environment.

\* **12.2. Persistence and degradability**

<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4
<b>Biodegradation:</b> Yes, slowly
<b>bis(nonylphenyl)amine</b> CAS No.: 36878-20-3 EC No.: 253-249-4
<b>Biodegradation:</b> —

**Biodegradation:**

Not readily biodegradable (according to OECD criteria)



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\* **12.3. Bioaccumulative potential**

<b>1-decene, homopolymer, hydrogenated</b> CAS No.: 68037-01-4 EC No.: 500-183-1
Log K <sub>OW</sub> : > 6.5
<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4
Log K <sub>OW</sub> : 6
<b>bis(nonylphenyl)amine</b> CAS No.: 36878-20-3 EC No.: 253-249-4
Log K <sub>OW</sub> : 7.6
<b>Bioconcentration factor (BCF):</b> 1,584.89

**Partition coefficient: n-octanol/water:**  
not applicable

**Accumulation / Evaluation:**  
The product has not been tested.

**12.4. Mobility in soil**  
The product has not been tested.

\* **12.5. Results of PBT and vPvB assessment**

<b>1-decene, homopolymer, hydrogenated</b> CAS No.: 68037-01-4 EC No.: 500-183-1
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil</b> CAS No.: 72623-87-1 EC No.: 276-738-4
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>bis(nonylphenyl)amine</b> CAS No.: 36878-20-3 EC No.: 253-249-4
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>C14-16-18 Alkyl phenol</b> CAS No.: 1190625-94-5 EC No.: 931-468-2
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>zinc bis(O,O-diisooctyl) bis(dithiophosphate)</b> CAS No.: 28629-66-5 EC No.: 249-109-7
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>Molybdenum alkylthiocarbamide complex</b> EC No.: 457-320-2
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

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

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

**12.7. Other adverse effects**  
No data available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**  
Dispose of waste according to applicable legislation.

**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.



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## 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):

This product is not assigned to a hazard category.  
Safety data sheet available on request.

#### 15.1.2. National regulations

##### [DE] National regulations

##### Störfallverordnung (12. BImSchV)

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

This product is not assigned to a hazard category.

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

###### Remark:

To follow: 5.2.5

##### Water hazard class

###### WGK:

2 - obviously hazardous to water

###### 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



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 **[FR] National regulations**

**Other regulations, restrictions and prohibition regulations**

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

 **[NL] National regulations**

**Other regulations, restrictions and prohibition regulations**

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

 **[CH] National regulations**

**Other regulations, restrictions and prohibition regulations**

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

 **[SK] National regulations**

**Other regulations, restrictions and prohibition regulations**

Zákon č. 67/2010 Z.z., o podmienkach uvedenia chemických látok a chemických zmesí na trh a o zmene a doplnení niektorých zákonov (chemický zákon).  
 Zákon č. 124/2006 Z. z. o bezpečnosti a ochrane zdravia pri práci a o zmene a doplnení niektorých zákonov.  
 Zákon NR SR č. 355/2007 Z.z., o ochrane, podpore a rozvoji verejného zdravia a o zmene a doplnení niektorých zákonov, v znení neskorších predpisov.  
 Nariadenie vlády SR 471/2011 Z.z., ktorým sa mení nariadenie vlády Slovenskej republiky č. 355/2006 Z. z. o ochrane zamestnancov pred rizikami súvisiacimi s expozíciou chemickým faktorom pri práci, Príloha č.1.  
 Zákon č. 79/2015 Z.z. o odpadoch v znení neskorších predpisov.  
 Vyhláška MV SR č. 96/2004 Z.z., ktorou sa ustanovujú zásady protipožiarnej bezpečnosti pri manipulácii a skladovaní horľavých kvapalín, ťažkých vykurovacích olejov a rastlinných a živočíšnych tukov a olejov.  
 Zákon NR SR č. 137/2010 Z.z. o ovzduší v znení neskorších predpisov.  
 Zákon č. 319/2013 Z.z. o pôsobnosti orgánov štátnej správy pre sprístupňovanie biocídnych výrobkov na trh a ich používanie a o zmene a doplnení niektorých zákonov (biocídny zákon).

**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**

1.3.	Details of the supplier of the safety data sheet
1.4.	Emergency telephone number
2.2.	Label elements
3.2.	Mixtures
4.2.	Most important symptoms and effects, both acute and delayed
6.1.	Personal precautions, protective equipment and emergency procedures
7.1.	Precautions for safe handling
8.1.	Control parameters
8.2.	Exposure controls
9.1.	Information on basic physical and chemical properties



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10.1.	Reactivity
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
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes
16.2.	Abbreviations and acronyms
16.5.	List of relevant hazard statements and/or precautionary statements from sections 2 to 15

\* **16.2. Abbreviations and acronyms**

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DNEL	derived no-effect level
EC <sub>50</sub>	Effective Concentration 50%
ES	Exposure scenario
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
KG	body weight
LC <sub>50</sub>	Lethal (fatal) Concentration 50%
LD <sub>50</sub>	Lethal (fatal) Dose 50%
MAK	Maximum concentration in the workplace air (CH)
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety & Health
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Cooperation and Development
OSHA	Occupational Safety & Health Administration
PBT	persistent and bioaccumulative and toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation and Authorization of Chemicals
RID	Dangerous goods regulations for transport by rail
SCL	Specific concentration limit
TRGS	Technische Regeln für Gefahrstoffe
UN	United Nations

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**

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]**

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].



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\* **16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15**

Hazard statements	
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
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 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.