

Revision date: 06-Mar-2018 Version: 3 Print date: 08-Mar-2018



**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 VPD SAE 5W-40

Article No.:

1111131

**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

Jöllenbecker Str. 2

33824 Werther

D

Telephone: +49 5203 9719 0

Telefax: +49 5203 9719 40

E-mail: kontakt@ravenol.de

Website: www.ravenol.de

\* **1.4. Emergency telephone number**

No data available

**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
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	

\* **2.2. Label elements**

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

Hazard pictograms:



**GHS07**

Exclamation mark

Signal word: Warning

Hazard components for labelling:

zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)

**hazard statements for health hazards**

H319 Causes serious eye irritation.

Supplemental Hazard information (EU): -

**Precautionary statements Prevention**

P264.1 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.



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#### Precautionary statements Response

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.

#### Precautionary statements Disposal

P501.2	Dispose of contents/container to an appropriate recycling or disposal facility.
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### 2.3. Other hazards

No data available

## SECTION 3: Composition / information on ingredients

### 3.2. Mixtures

#### Additional information:

The base oil / mineral oil used has a value of less than 3% DMSO, so it is not classified as a carcinogen.

#### Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CL P]	Concentration
CAS No.: 36878-20-3 EC No.: 253-249-4	<b>bis(nonylphenyl)amine</b> Aquatic Chronic 4 H413	1 - < 2 Wt %
CAS No.: 93819-94-4 EC No.: 298-577-9 REACH No.: 01-2119543726-33	<b>zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)</b> Eye Dam. 1, Skin Irrit. 2, Aquatic Chronic 2 Danger H315-H318-H411	1 - < 2 Wt %

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. Take off immediately all contaminated clothing. If unconscious place in recovery position and seek medical advice. Do not leave affected person unattended.

#### Following inhalation:

Consult a doctor immediately. Provide fresh air. In case of respiratory tract irritation, consult a physician.

#### In case of skin contact:

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. If skin irritation occurs: Get medical advice/attention.

#### After eye contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

#### After ingestion:

Rinse mouth immediately and drink plenty of water. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

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

Use personal protection equipment.

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

Causes serious eye irritation.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media:

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

Carbon dioxide, Dry extinguishing powder, alcohol resistant foam , Sand



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**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.

**Hazardous combustion products:**

Carbon monoxide Carbon dioxide (CO<sub>2</sub>) Nitrogen oxides (NO<sub>x</sub>) In case of fire: Gases/vapours, toxic

**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. 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:**

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

**Protective equipment:**

Wear protective gloves/protective clothing/eye protection/face protection.

**Emergency procedures:**

Remove all sources of ignition. Remove persons to safety. Provide adequate ventilation.

**6.1.2. For emergency responders**

**Personal protection equipment:**

Personal protection equipment: see section 8

**6.2. Environmental precautions**

Do not allow to enter into soil/subsoil. 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. Do not allow to enter into surface water or drains.

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

**For containment:**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

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

**For cleaning up:**

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

**Other information:**

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

**6.4. Reference to other sections**

Safe handling: see section 7

Disposal: see section 13

Personal protection equipment: see section 8

**6.5. Additional information**

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

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Protective measures**

**Advices on safe handling:**

When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Avoid oil mist.

Do not put any product-impregnated cleaning rags into your trouser pockets. Wear personal protection equipment (refer to section 8).



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**Fire prevent measures:**

No special measures are necessary.  
Fire class B

**Environmental precautions:**

See section 8.

**Advices on general occupational hygiene**

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500. When using do not eat, drink or smoke. Avoid contact with eyes and skin.

**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:**

Do not store together with: Food and feedingstuffs Oxidising agent

**Storage class:** 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
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate) CAS No.: 93819-94-4	8.31 mg/m <sup>3</sup>	① DNEL worker ② DNEL long-term inhalative (systemic)

**8.2. Exposure controls**

**8.2.1. Appropriate engineering controls**

See section 7. No additional measures necessary.

**8.2.2. Personal protection equipment**

**Eye/face protection:**

During transfer: Eye glasses with side protection

**Skin protection:**

Hand protection

Suitable material: NBR (Nitrile rubber), PVC (Polyvinyl chloride)

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

Breakthrough time (maximum wearing 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.

Suitable protective clothing: Protective clothing:

**Respiratory protection:**

Usually no personal respirative protection necessary. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Filtering device with filter or ventilator filtering device of type: A



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### 8.2.3. Environmental exposure controls

No data available

### 8.3. Additional information

Mineral oil mist limits:

OSHA PEL - value 5 mg / m<sup>3</sup>, ACGIH STEL - value of 10 mg / m<sup>3</sup>

## 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		at °C	Method	Remark
pH	<i>not applicable</i>			
Melting point	<i>not determined</i>			
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	<i>not applicable</i>			
Decomposition temperature (°C):	<i>not determined</i>			
Flash point	242 °C			
Evaporation rate	<i>not determined</i>			
Ignition temperature in °C	<i>not determined</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>not determined</i>			
Vapour density	<i>not determined</i>			
Relative density	848 kg/m <sup>3</sup>	20 °C		
Bulk density	<i>not determined</i>			
Water solubility (g/L)	The study does not need to be conducted because the substance is known to be insoluble in water.			
Partition coefficient: n-octanol/water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	83 mm <sup>2</sup> /s	40 °C		

### 9.2. Other information

No data available

## 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.

Possibility of hazardous reactions: Oxidising agent, strong

### 10.4. Conditions to avoid

To avoid thermal decomposition do not overheat.

### 10.5. Incompatible materials

Materials to avoid: Acid, Reducing agent.

### 10.6. Hazardous decomposition products

Hazardous combustion products: Carbon dioxide Carbon monoxide Nitrogen oxides (NO<sub>x</sub>)



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## SECTION 11: Toxicological information

### \* 11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
36878-20-3	bis(nonylphenyl)amine	<b>LD<sub>50</sub> oral:</b> 5,000 g/m <sup>3</sup> (Rat) <b>LD<sub>50</sub> dermal:</b> >2,000 g/m <sup>3</sup> (Rabbit)
93819-94-4	zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	<b>LD<sub>50</sub> oral:</b> 2,600 g/m <sup>3</sup> (Rat) <b>LD<sub>50</sub> dermal:</b> 3,160 g/m <sup>3</sup> (Rabbit)

#### Acute oral toxicity:

ATEmix calculated: > 2.000 mg/kg

#### Acute dermal toxicity:

ATEmix calculated: > 2.000 mg/kg

#### Acute inhalation toxicity:

There are no data available on the preparation/mixture itself.

#### Skin corrosion/irritation:

No irritant effect.

Frequently or prolonged contact with skin may cause dermal irritation.

#### Serious eye damage/irritation:

Causes serious eye irritation.

#### Respiratory or skin sensitisation:

No sensitizing effects known.

#### Germ cell mutagenicity:

No indications of human germ cell mutagenicity exist.

#### Carcinogenicity:

No indication of human carcinogenicity.

#### Reproductive toxicity:

No indications of human reproductive toxicity exist.

#### Aspiration hazard:

Observe risk of aspiration if vomiting occurs.

## SECTION 12: Ecological information

### \* 12.1. Toxicity

CAS No.	Substance name	Toxicological information
36878-20-3	bis(nonylphenyl)amine	<b>LC<sub>50</sub>:</b> >100 mg/l 4 d <b>EC<sub>50</sub>:</b> >100 mg/l 2 d <b>EC<sub>50</sub>:</b> 600 mg/l 3 d
93819-94-4	zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	<b>LC<sub>50</sub>:</b> 4.5 mg/l 4 d <b>EC<sub>50</sub>:</b> 5.4 mg/l 2 d <b>EC<sub>50</sub>:</b> 2.1 mg/l 3 d

#### Assessment/classification:

The product has not been tested.

#### Additional ecotoxicological information:

Do not allow uncontrolled discharge of product into the environment.

### 12.2. Persistence and degradability

CAS No.	Substance name	Biodegradation	Remark
36878-20-3	bis(nonylphenyl)amine	No	
93819-94-4	zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	No	

#### Additional information:

Not readily biodegradable (according to OECD criteria) Do not allow to enter into surface water or drains.  
Do not allow to enter into soil/subsoil.



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### 12.3. Bioaccumulative potential

CAS No.	Substance name	Log K <sub>OC</sub>	Bioconcentration factor (BCF)
36878-20-3	bis(nonylphenyl)amine	7.6	1,584.89
93819-94-4	zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	0.9	

### 12.4. Mobility in soil

The product has not been tested.

### 12.5. Results of PBT and vPvB assessment

CAS No.	Substance name	Results of PBT and vPvB assessment
36878-20-3	bis(nonylphenyl)amine	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.
93819-94-4	zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

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

### 12.6. Other adverse effects

No information 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. Handle contaminated packages in the same way as the substance itself.

### 13.2. Additional information

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

## SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

<b>14.1. UN-No.</b>
not relevant
<b>14.2. UN proper shipping name</b>
not relevant
<b>14.3. Transport hazard class(es)</b>
not relevant
<b>14.4. Packing group</b>
not relevant
<b>14.5. Environmental hazards</b>
not relevant
<b>14.6. Special precautions for user</b>
not relevant

- \* **14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
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

No data available

#### 15.1.2. National regulations

##### [DE] National regulations

#### Restrictions of occupation

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

#### Störfallverordnung

#### for substances contained in the product:

E2 Hazardous to the aquatic environment in Category Chronic 2

#### Technische Anleitung Luft (TA-Luft)

#### Remark:

To follow: 5.2.5.

#### Water hazard class (WGK)

#### WGK:

2 - deutlich wassergefährdend

#### Source:

Self-classification (mixture; calculation rule).

#### Technische Regeln für Gefahrstoffe

TRGS 510

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

#### Berufsgenossenschaftliche Vorschriften (BGV)

Berufsgenossenschaftliche Regeln (BGR) 190, 192, 195

#### Other regulations, restrictions and prohibition regulations

Altöl-Verordnung (AltöIV)

### 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

1.4.	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
11.1.	Information on toxicological effects
12.1.	Toxicity
14.7.	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes

### 16.2. Abbreviations and acronyms

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).





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### 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]

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	

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

Hazard statements	
H315	Causes skin irritation.
H318	Causes serious eye damage.
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