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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 RRS SAE 5W-50

Article No.:

1142100

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

Germany

Telephone: +49 5203 9719 0

Telefax: +49 5203 9719 40

E-mail: kontakt@ravenol.de

Website: www.ravenol.de

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

* 1.4. Emergency telephone number

Abt. Technik (Produktsicherheit), 24h: +49 700 24 112 112 (Company ID: RAV) (outside USA/Canada)
011 49 700 24 112 112 (Company ID: RAV) (inside USA/Canada), +49 5203 9719 0 (Mo-Do 7.30 Uhr -
16.30 Uhr, Fr 7.30 Uhr - 13.15 Uhr) (Only available during office hours.)

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: -

Supplemental hazard information

EUH210 Safety data sheet available on request.

Precautionary statements: -

* 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	1-decene, homopolymer, hydrogenated Asp. Tox. 1 Danger H304	7.5 - < 10 weight-%
CAS No.: 72623-87-1 EC No.: 276-738-4 Index No.: 649-483-00-5 REACH No.: 01-2119474889-13	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil Asp. Tox. 1 H304 Specific concentration limit (SCL): Asp. Tox. 1; H304: 0% ≤ C < 100%	1 - < 4 weight-%
CAS No.: 1190625-94-5 EC No.: 813-078-3 REACH No.: 01-2119498288-19	C14-16-18 Alkyl phenol Aquatic Chronic 4, Skin Irrit. 2 Warning H315-H413	0 - < 2 weight-%
CAS No.: 93819-94-4 EC No.: 298-577-9 REACH No.: 01-2119543726-33	zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate) Aquatic Chronic 2, Eye Dam. 1, Skin Irrit. 2 Danger H315-H318-H411 Specific concentration limit (SCL): Skin Irrit. 2; H315: C ≥ 6.25% Eye Irrit. 2; H319: C ≥ 10% Eye Dam. 1; H318: C ≥ 12.5%	0 - < 2 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

No known symptoms to date.

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 (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 (NO_x),

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:

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

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	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (Mgła olejowa mineralny)
MAK (AT)	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (Ölnebel, mineralisch (einateembare Fraktion))
BE	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (Brouillard d'huile minéral)



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Québec (CA)	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ② 10 mg/m ³ ⑤ (Oil mist mineral)
DK	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 1 mg/m ³ ② 2 mg/m ³ ⑤ (Olietåge mineralsk)
HU	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (Olajköd ásványi)
SE	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 1 mg/m ³ ② 3 mg/m ³ ⑤ (Oljeånga eller rök)
ES	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ② 10 mg/m ³ ⑤ (Niebla de aceite mineral)
NL	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (Olienevel mineraal)
OSHA (US)	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (Oil mist mineral)
MEL/OES (GB)	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ② 10 mg/m ³ ⑤ (Oil mist)
NIOSH (US)	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ② 10 mg/m ³ ⑤ (Oil mist mineral)
CZ	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ② 10 mg/m ³ ⑤ (Rozprášený olej (olejová mlhovina) minerální)
NO	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 1 mg/m ³ ⑤ (Oljetåke mineralsk)
NPEL (SK)	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 ppm (1 mg/m ³) ② 15 ppm (3 mg/m ³) ⑤ (Olejová hmlovina minerálny)



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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
Alberta (CA)	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ② 10 mg/m ³ ⑤ (Oil mist mineral)
HTP (FI)	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (Oljeaŋga)
LT	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 1 mg/m ³ ② 3 mg/m ³ ⑤ (Tepalo rūkas arba dūmai)
BC (CA)	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 0.2 mg/m ³ ⑤ (Oil mist mineral)
MY	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (Kabus minyak mineral)
BC (CA)	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 1 mg/m ³ ⑤ (Oil mist mineral, severely refined)
TW	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (油霧 礦物)
Ontario (CA)	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (Oil mist mineral)
GR	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (Εκκνέφωμα λαδιού, ορυκτό)
MY	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 10 mg/m ³ ⑤ (Kabus minyak, vegetal)
RO	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ② 10 mg/m ³ ⑤ (Ceata uleioasa mineral)
CH	Lubricating oils (petroleum), C20-50, hydrotreated neutra I oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (Ölnebel, einatembare Fraktion)



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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
LV	Lubricating oils (petroleum), C20-50, hydrotreated neutra l oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ ⑤ (Eljas migla)
JP	Lubricating oils (petroleum), C20-50, hydrotreated neutra l oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 3 mg/m ³ ⑤ (Oil mist mineral)
IE	Lubricating oils (petroleum), C20-50, hydrotreated neutra l oil CAS No.: 72623-87-1 EC No.: 276-738-4	① 5 mg/m ³ 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
C14-16-18 Alkyl phenol CAS No.: 1190625-94-5 EC No.: 813-078-3	1.17 mg/m ³	① DNEL worker ② Long-term - inhalation, systemic effects
C14-16-18 Alkyl phenol CAS No.: 1190625-94-5 EC No.: 813-078-3	0.3 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bi s(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	8.31 mg/m ³	① DNEL worker ② Long-term - inhalation, systemic effects
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bi s(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	2.11 mg/m ³	① DNEL Consumer ② Long-term - inhalation, systemic effects
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bi s(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	0.58 mg/kg	① DNEL worker ② Long-term - dermal, systemic effects
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bi s(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	0.29 mg/kg	① DNEL Consumer ② Long-term - dermal, systemic effects
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bi s(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	0.24 mg/kg	① DNEL Consumer ② Long-term - oral, systemic effects

Substance name	PNEC Value	① PNEC type
C14-16-18 Alkyl phenol CAS No.: 1190625-94-5 EC No.: 813-078-3	100 µg/l	① PNEC aquatic, freshwater
C14-16-18 Alkyl phenol CAS No.: 1190625-94-5 EC No.: 813-078-3	10 µg/l	① PNEC aquatic, marine water
C14-16-18 Alkyl phenol CAS No.: 1190625-94-5 EC No.: 813-078-3	100 mg/l	① PNEC sewage treatment plant



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Substance name	PNEC Value	① PNEC type
C14-16-18 Alkyl phenol CAS No.: 1190625-94-5 EC No.: 813-078-3	852.58 mg/ kg bw/day	① PNEC soil
C14-16-18 Alkyl phenol CAS No.: 1190625-94-5 EC No.: 813-078-3	3.3 mg/kg bw/day	① PNEC secondary poisoning
C14-16-18 Alkyl phenol CAS No.: 1190625-94-5 EC No.: 813-078-3	1 mg/l	① PNEC aquatic, intermittent release
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bi s(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	4 µg/l	① PNEC aquatic, freshwater
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bi s(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	4.6 µg/l	① PNEC aquatic, marine water
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bi s(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	100 mg/l	① PNEC sewage treatment plant
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bi s(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	0.012 mg/kg	① PNEC sediment, freshwater
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bi s(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	0.001 mg/kg	① PNEC sediment, marine water
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bi s(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	0.005 mg/kg	① PNEC soil

8.2. Exposure controls

8.2.1. Appropriate engineering controls

See section 7. No additional measures necessary.

8.2.2. Personal protection equipment



Eye/face protection:

During transfer: Eye glasses with side protection

Wear eye/face protection. DIN EN 166

Skin protection:

Hand protection

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

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

Breakthrough time: 480 min

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

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

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

Tested protective gloves must be worn: EN ISO 374

Suitable protective clothing: Protective clothing

Respiratory protection:

Usually no personal respiratory protection necessary.

8.2.3. Environmental exposure controls

See section 7. No additional measures necessary.



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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	not applicable			
Melting point	not determined			
Freezing point	not determined			
Initial boiling point and boiling range	not determined			
Decomposition temperature	not applicable			
Flash point	243 °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	852 kg/m ³	15 °C		
Relative density	not applicable			
Bulk density	not applicable			
Water solubility	The study does not need to be conducted because the substance is known to be insoluble in water.			
Partition coefficient: n-octanol/water	not applicable			
Dynamic viscosity	not determined			
Kinematic viscosity	112 mm ² /s	40 °C		

* 9.2. Other information

Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

To avoid thermal decomposition do not overheat.

10.5. Incompatible materials

Materials to avoid: Acid, Oxidising agent, Reducing agent

10.6. Hazardous decomposition products

Hazardous combustion products: Carbon dioxide, Carbon monoxide, Nitrogen oxides (NO_x)



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SECTION 11: Toxicological information

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

Substance name	Toxicological information
1-decene, homopolymer, hydrogenated CAS No.: 68037-01-4 EC No.: 500-183-1	LD₅₀ oral: >5,000 mg/kg (Rat) LD₅₀ dermal: >2,000 mg/kg (Rabbit) LC₅₀ Acute inhalation toxicity (dust/mist): >5 mg/l 4 h (Rat)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil CAS No.: 72623-87-1 EC No.: 276-738-4	LD₅₀ oral: >5,000 mg/kg (Rat) OECD 401 LD₅₀ dermal: >2,000 mg/kg (Rabbit) OECD 402
C14-16-18 Alkyl phenol CAS No.: 1190625-94-5 EC No.: 813-078-3	LD₅₀ oral: >2,000 mg/kg (rat) OECD 423 LD₅₀ dermal: >2,000 mg/kg (rat) OECD 402
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	LD₅₀ oral: 2,600 g/m ³ (Rat) LD₅₀ dermal: 3,160 g/m ³ (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.

Acute inhalation toxicity:

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

Skin corrosion/irritation:

No irritant effect.

Serious eye damage/irritation:

No irritant effect.

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.

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.



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SECTION 12: Ecological information

* 12.1. Toxicity

Substance name	Toxicological information
1-decene, homopolymer, hydrogenated CAS No.: 68037-01-4 EC No.: 500-183-1	LC₅₀ : >750 mg/l 4 d (fish) EC₅₀ : 190 mg/l 2 d (crustaceans, Daphnia pulex (water flea)) EC₅₀ : >1,000 mg/l 3 d (Algae/water plant)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil CAS No.: 72623-87-1 EC No.: 276-738-4	EC₅₀ : >100 mg/l 2 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201 NOEC : 10 mg/l 21 d (crustaceans, Daphnia magna (Big water flea)) OECD 211 EC₅₀ : >10,000 mg/l 2 d (crustaceans, Daphnia magna (Big water flea)) OECD 202 NOEC : >100 mg/l 3 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201 NOEC : >100 mg/l 4 d (fish, Pimephales promelas (fathead minnow))
C14-16-18 Alkyl phenol CAS No.: 1190625-94-5 EC No.: 813-078-3	LC₅₀ : >100 mg/l 4 d (fish, Cyprinus carpio) OECD 203 EC₅₀ : >100 mg/l 2 d (crustaceans, invertebrates) OECD 202 ErC₅₀ : >100 mg/l 3 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	LC₅₀ : 4.5 mg/l 4 d (fish) EC₅₀ : 5.4 mg/l 2 d (crustaceans) EC₅₀ : 2.1 mg/l 3 d (Algae/water plant)

Assessment/classification:

The substance/mixture does not fulfill the criteria of the acute aquatic toxicity according to Regulation (EC) No 1272/2008 [CLP], Annex I.

Additional ecotoxicological information:

Do not allow uncontrolled discharge of product into the environment.

* 12.2. Persistence and degradability

Substance name	Biodegradation	Remark
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	Yes, slowly	

Biodegradation:

Not readily biodegradable (according to OECD criteria)

* 12.3. Bioaccumulative potential

Substance name	Log K _{OW}	Bioconcentration factor (BCF)
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	0.9	

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

Substance name	Results of PBT and vPvB assessment
1-decene, homopolymer, hydrogenated CAS No.: 68037-01-4	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.



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Substance name	Results of PBT and vPvB assessment
EC No.: 500-183-1	
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil CAS No.: 72623-87-1 EC No.: 276-738-4	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.
C14-16-18 Alkyl phenol CAS No.: 1190625-94-5 EC No.: 813-078-3	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate) CAS No.: 93819-94-4 EC No.: 298-577-9	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. 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.

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

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.	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.
14.2. UN proper shipping name			
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.
14.3. Transport hazard class(es)			
not relevant			
14.4. Packing group			
not relevant			
14.5. Environmental hazards			
not relevant			
14.6. Special precautions for user			
not relevant			



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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:

- E2 Hazardous to the Aquatic Environment in Category Chronic 2

Safety data sheet available on request.

15.1.2. National regulations

[DE] National regulations

Störfallverordnung

for substances contained in the product:

Hazard categories:

- 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:

2 - deutlich wassergefährdend

Source:

Self-classification (mixture; calculation rule).

Identification number 436

Technische Regeln für Gefahrstoffe

TRGS 510

TRGS 500

Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)

Berufsgenossenschaftliche Informationen (DGUV-Informationen) 868

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

Other regulations, restrictions and prohibition regulations

Altöl-Verordnung (AltöIV)

[DK] National regulations

Other regulations, restrictions and prohibition regulations

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

[FR] National regulations

Other regulations, restrictions and prohibition regulations

Tableaux de maladies professionnelles

Nomenclature des installations classées pour la protection de l'environnement

[NL] National regulations

Other regulations, restrictions and prohibition regulations

Lijst van kankerverwekkende, mutagene, en voor de voortplanting giftige stoffen SZW

Algemeene beoordelingsmethodiek Water (ABM)

Nederlandse emissierichtlijn (NeR)

[CH] National regulations

Other regulations, restrictions and prohibition regulations

Mengenschwelle (Schweiz - StFV)

Gefahrencode

Brandverhütung, BVD (Schweiz)



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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
2.1.	Classification of the substance or mixture
2.2.	Label elements
2.3.	Other hazards
3.2.	Mixtures
4.1.	Description of first aid measures
4.2.	Most important symptoms and effects, both acute and delayed
5.2.	Special hazards arising from the substance or mixture
6.1.	Personal precautions, protective equipment and emergency procedures
7.1.	Precautions for safe handling
8.1.	Control parameters
8.3.	Additional information
9.1.	Information on basic physical and chemical properties
9.2.	Other information
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
11.2.	Information on other hazards
12.1.	Toxicity
12.2.	Persistence and degradability
12.3.	Bioaccumulative potential
12.5.	Results of PBT and vPvB assessment
12.6.	Endocrine disrupting properties
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes
16.4.	Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]
16.5.	Relevant R-, H- and EUH-phrases (Number and full text)

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

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]

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

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

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

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



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Hazard statements	
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