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 MTF-1 SAE 75W-85

Article No.:
1221102

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 Reaction products of bis (4-methyl pentan-2-yl) phosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched). 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.

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
EC No.: 931-384-6 **REACH No.:** 01-2119493650-38-XXXX	**Reaction products of bis (4-methyl pentan-2-yl) phosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)** Acute Tox. 4 (H302), Aquatic Chronic 2 (H411), Eye Dam. 1 (H318), Skin Sens. 1 (H317) **Danger**	0 – < 1 weight-%
CAS No.: 64742-94-5 **EC No.:** 918-811-1 **REACH No.:** 01-2119463583-34	**Hydrocarbons, C10, aromatics, <1% naphthalene** Aquatic Chronic 2 (H411), Asp. Tox. 1 (H304), STOT SE 3 (H336) **Danger**	0 – < 0.02 weight-%
CAS No.: 91-20-3 **EC No.:** 202-049-5 **Index No.:** 601-052-00-2	**naphthalene** Acute Tox. 4 (H302), Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Carc. 2 (H351) **Warning**	0 – < 0.0002 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 Reaction products of bis (4-methyl pentan-2-yl) phosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched). May produce an allergic reaction.

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

Treat symptomatically. Observe risk of aspiration if vomiting occurs.

SECTION 5: Firefighting measures

* ### 5.1. Extinguishing media

Suitable extinguishing media:
Co-ordinate fire-fighting measures to the fire surroundings.
Carbon dioxide (CO2)
Extinguishing powder
alcohol resistant foam
Use water spray jet to protect personnel and to cool endangered containers.

Unsuitable extinguishing media:
Full water jet

* ### 5.2. Special hazards arising from the substance or mixture

During heating or in case of fire, toxic gases is possible.
The formation of combustible vapours is possible at temperatures above: Flash point

Hazardous combustion products:
Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx),
During heating or in case of fire, toxic gases is possible.

5.3. Advice for firefighters
In case of fire: Wear self-contained breathing apparatus. Protective clothing.

5.4. Additional information
Do not inhale explosion and combustion gases. Move undamaged containers from immediate hazard area if it can be done safely. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

*
6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Personal precautions:
Use personal protection equipment. Special danger of slipping by leaking/spilling product.
Protective equipment:
Personal protection equipment: see section 8
Emergency procedures:
Eliminate all ignition sources if safe to do so. Remove persons to safety. Provide adequate ventilation.

6.1.2. For emergency responders
Personal protection equipment:
Use personal protection equipment.

6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up
For containment:
Suitable material for taking up: Sand, Kieselguhr, Universal binder, Chemical binding agents, containing acids
Prevent spread over a wide area (e.g. by containment or oil barriers).
For cleaning up:
Remove from the water surface (e.g. skimming, sucking). Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
Other information:
Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Disposal: see section 13
Personal protection equipment: see section 8

6.5. Additional information
Clear spills immediately. Use appropriate container to avoid environmental contamination.

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

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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**
TRGS 900 (DE)	Hydrocarbons, C10, aromatics, <1% naphthalene **CAS No.:** 64742-94-5 **EC No.:** 918-811-1	① 50 mg/m³ ② 100 mg/m³ ⑤ (C9-C14 Aromaten)
VLA (FR)	Hydrocarbons, C10, aromatics, <1% naphthalene **CAS No.:** 64742-94-5 **EC No.:** 918-811-1	① 150 mg/m³ ⑤ (hydrocarbures, benzène C9-C12)
NO	Hydrocarbons, C10, aromatics, <1% naphthalene **CAS No.:** 64742-94-5 **EC No.:** 918-811-1	① 25 ppm (120 mg/m³) ⑤ (White Spirit (aromatinnhold > 22 %))
CH	Hydrocarbons, C10, aromatics, <1% naphthalene **CAS No.:** 64742-94-5 **EC No.:** 918-811-1	① 100 ppm (525 mg/m³) ⑤ Messmeth: OSHA
MAK (AT)	Hydrocarbons, C10, aromatics, <1% naphthalene **CAS No.:** 64742-94-5 **EC No.:** 918-811-1	① 20 mL/m³ ② 40 mL/m³ ⑤ (für Kohlenwasserstoffgemische mit einem Gehalt an aromatischen Kohlenwasserstoffen von mehr als 25 %)
MAK (AT)	Hydrocarbons, C10, aromatics, <1% naphthalene **CAS No.:** 64742-94-5 **EC No.:** 918-811-1	① 70 mL/m³ ② 140 mL/m³ ⑤ (für Kohlenwasserstoffgemische mit einem Gehalt an aromatischen Kohlenwasserstoffen von 1 % bis 25 % und an Hexanen von weniger als 1 %)
WEL (GB)	Hydrocarbons, C10, aromatics, <1% naphthalene **CAS No.:** 64742-94-5 **EC No.:** 918-811-1	① 500 mg/m³ ⑤ (Aromatics)

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
SI	Hydrocarbons, C10, aromatics, <1% naphthalene **CAS No.:** 64742-94-5 **EC No.:** 918-811-1	① 50 mg/m³
CH	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³) ⑤ (Dampf und Aerosol; kann über die Haut aufgenommen werden) H C2; Tox: Blut OAW Auge; Messmeth: NIOSH OSHA
BE	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (53 mg/m³) ② 15 ppm (80 mg/m³) ⑤ (peut être absorbé par la peau) D
CZ	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 9.4 ppm (50 mg/m³) ② 18.8 ppm (100 mg/m³)
PL	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 20 mg/m³ ② 50 mg/m³ ⑤ (może przenikać przez skórę do organizmu) skóra
NO	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³) ⑤ E
IE	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³) ⑤ IOELV
HTP (FI)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 1 ppm (5 mg/m³) ② 2 ppm (10 mg/m³)
LT	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³) ⑤ (Kancerogeninės) K
SE	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³) ③ 15 ppm (80 mg/m³)
NPEL (SK)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³) ② 15 ppm (80 mg/m³) ⑤ K
TRGS 900 (DE)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 0.4 ppm (2 mg/m³) ② 1.6 ppm (8 mg/m³) ⑤ (Aerosol und Dampf, kann über die Haut aufgenommen werden) AGS, H, Y, 11, 27
DK	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³) ② 20 ppm (100 mg/m³) ⑤ EK
BG	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 50 mg/m³ ② 75 mg/m³
HR	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³)
ES	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (53 mg/m³) ② 15 ppm (80 mg/m³) ⑤ (puede ser absorbido a través dérmica) vía dérmica, VLI
RO	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³) ⑤ C2

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
EE	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³)
LV	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³)
Alberta (CA)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (52 mg/m³) ② 15 ppm (79 mg/m³) ⑤ (may be absorbed through the skin) 1
BC (CA)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm ⑤ (may be absorbed through the skin) Skin; 2B
MY	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (52 mg/m³)
IOELV (EU)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³)
VLA (FR)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³)
SI	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 50 mg/m³ ② 50 mg/m³ ⑤ (frakcija ki jo je mogoče vdihniti računati je treba z možnostjo prodiranja skozi kožo) K, Y, EU0
TW	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (52 mg/m³)
KR	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³) ② 15 ppm (75 mg/m³)
IS	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³)
CN	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 50 mg/m³ ② 75 mg/m³ ⑤ (###############)
RU	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	③ 20 mg/m³
HU	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 50 mg/m³ ⑤ i
GR	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³)
NL	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 50 mg/m³ ② 80 mg/m³
MAK (AT)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³) ⑤ (kann über die Haut aufgenommen werden) III B, H
SI	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm ② 10 ppm ⑤ (računati je treba z možnostjo prodiranja skozi kožo) K, Y, EU0

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
TR	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³)
IDLH (US)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 250 ppm
Québec (CA)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (52 mg/m³) ② 15 ppm (79 mg/m³)
OSHA (US)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³)
NIOSH (US)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (50 mg/m³) ② 15 ppm (75 mg/m³)
ACGIH (US)	naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	① 10 ppm (52 mg/m³) ② 15 ppm (79 mg/m³) ⑤ (may be absorbed through the skin)

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
naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	25 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	25 mg/m³	① DNEL worker ② Long-term – inhalation, local effects
naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	3.57 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects

Substance name	PNEC Value	① PNEC type
naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	2.4 µg/L	① PNEC aquatic, freshwater
naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	2.4 µg/L	① PNEC aquatic, marine water
naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	2.9 mg/L	① PNEC sewage treatment plant
naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	20 µg/L	① PNEC aquatic, intermittent release

*
8.2. Exposure controls

8.2.1. Appropriate engineering controls

See section 7. No additional measures necessary.

8.2.2. Personal protection equipment

Eye/face protection:

During transfer: Eye glasses with side protection

Wear eye/face protection. EN 166

Skin protection:

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

Respiratory protection:

Usually no personal respirative protection necessary.

8.2.3. Environmental exposure controls

See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

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9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid **Colour:** red

Odour: characteristic

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	*not applicable*		
Melting point	*not determined*		
Freezing point	*not determined*		
Initial boiling point and boiling range	*not determined*		
Decomposition temperature	*not determined*		
Flash point	230 °C		
Evaporation rate	*not determined*		
Auto-ignition temperature	*not determined*		
Upper/lower flammability or explosive limits	*not determined*		
Vapour pressure	*not determined*		
Vapour density	*not determined*		
Density	856 kg/m³		
Relative density	*not determined*		
Bulk density	*not determined*		
Water solubility	practically insoluble		
Partition coefficient: n-octanol/water	*not determined*		
Dynamic viscosity	*not determined*		
Kinematic viscosity	52.2 mm²/s	40 °C	

9.2. Other information

Not applicable

SECTION 10: Stability and reactivity

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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 monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx), During heating or in case of fire, toxic gases is possible.

SECTION 11: Toxicological information

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

Reaction products of bis (4-methyl pentan-2-yl) phosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) **EC No.:** 931-384-6
LD_{50} oral: 2,000 mg/kg (Rat) OECD 401
LD_{50} dermal: 2,201 mg/kg (Rabbit)
LC_{50} Acute inhalation toxicity (vapour): 20.1 mg/L 4 h (Rat)
LC_{50} Acute inhalation toxicity (dust/mist): 5.1 mg/L 4 h (Rat)
Hydrocarbons, C10, aromatics, <1% naphthalene **CAS No.:** 64742-94-5 **EC No.:** 918-811-1
LD_{50} oral: =6,318 mg/kg (rats) OECD TG 401
LD_{50} dermal: >2,000 mg/kg (rabbits) OECD TG 402
LC_{50} Acute inhalation toxicity (vapour): >4.688 mg/L (rats) OECD TG 403
naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5
LD_{50} oral: >533 mg/kg (Mouse)
LD_{50} dermal: >16,000 mg/kg (Rat)
LC_{50} Acute inhalation toxicity (vapour): >0.4 mg/L 4 h (rat)
LC_{50} Acute inhalation toxicity (dust/mist): >0.4 mg/L 4 h (Rat)

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 Reaction products of bis (4-methyl pentan-2-yl) phosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched). May produce an allergic reaction.

Germ cell mutagenicity:
Based on available data, the classification criteria are not met.

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

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

STOT-single exposure:
Based on available data, the classification criteria are not met.

STOT-repeated exposure:
Based on available data, the classification criteria are not met.

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

Additional information:
Frequently or prolonged contact with skin may cause dermal irritation.

11.2. Information on other hazards

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

SECTION 12: Ecological information

*

12.1. Toxicity

Reaction products of bis (4-methyl pentan-2-yl) phosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) **EC No.:** 931-384-6
LC_{50}: 24 mg/L 4 d (fish)
EC_{50}: 6.4 mg/L 4 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201
NOEC: 1.7 mg/L 4 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201
Hydrocarbons, C10, aromatics, <1% naphthalene **CAS No.:** 64742-94-5 **EC No.:** 918-811-1
LC_{50}: ≥2 – ≤5 mg/L 4 d (fish, rainbow trout)
LC_{50}: ≥3 – ≤10 mg/L 2 d (crustaceans, Daphnia magna)
EC_{50}: ≥1 – ≤3 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata)
NOEC: =0.441 mg/L 28 d (fish, rainbow trout)
NOEC: =0.771 mg/L 21 d (crustaceans, Daphnia magna)
NOEC: ≈1 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata)
naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5
LC_{50}: 6.08 mg/L 3 d (fish, Pimephales promelas)
LC_{50}: 1.2 mg/L 4 d (fish, Oncorhynchus gorbuscha)
LC_{50}: 6.35 mg/L 2 d (fish, Pimephales promelas)
EC_{50}: >2.96 mg/L 4 d (Algae/water plant)
EC_{50}: 2.16 mg/L 2 d (crustaceans, Daphnia magna) OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
NOEC: 0.12 mg/L 40 d (fish, Oncorhynchus gorbuscha)
LOEC: 0.38 mg/L 40 d (fish, Oncorhynchus gorbuscha)

Assessment/classification:
The substance/mixture does not fullfill 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.

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12.2. Persistence and degradability

Biodegradation:
Not readily biodegradable (according to OECD criteria)

*

12.3. Bioaccumulative potential

Reaction products of bis (4-methyl pentan-2-yl) phosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) **EC No.:** 931-384-6
Log K_{OW}: 0.3
naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5
Log K_{OW}: 3.7
Bioconcentration factor (BCF): 168

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

Reaction products of bis (4-methyl pentan-2-yl) phosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) **EC No.:** 931-384-6
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
Hydrocarbons, C10, aromatics, <1% naphthalene **CAS No.:** 64742-94-5 **EC No.:** 918-811-1
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

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

12.6. Endocrine disrupting properties

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

*

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

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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

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	not relevant	not relevant	not relevant
14.4. Packing group			
not relevant	not relevant	not relevant	not relevant
14.5. Environmental hazards			
not relevant	not relevant	not relevant	not relevant
14.6. Special precautions for user			
not relevant	not relevant	not relevant	not relevant

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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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]: 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 - deutlich wassergefährdend

Source:

Self-classification (mixture; calculation rule).
Identification number 436

Technische Regeln für Gefahrstoffe

TRGS 510
TRGS 500

Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)

Berufsgenossenschaftliche Informationen (DGUV-Informationen) 868
Berufsgenossenschaftliche Regeln (DGUV-Regeln) 189, 190, 192, 195

Other regulations, restrictions and prohibition regulations

Altöl-Verordnung (AltölV)

[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 vaere kraeftfremkaldende

[FR] National regulations

Other regulations, restrictions and prohibition regulations

Frankreich: Tableaux de maladies professionelles
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)

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

15.3. Additional information

No data available.

SECTION 16: Other information

* **16.1. Indication of changes**

1.1.	Product identifier
2.1.	Classification of the substance or mixture
2.2.	Label elements
3.2.	Mixtures
4.1.	Description of first aid measures
4.2.	Most important symptoms and effects, both acute and delayed
4.3.	Indication of any immediate medical attention and special treatment needed
5.1.	Extinguishing media
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
8.2.	Exposure controls
9.1.	Information on basic physical and chemical properties
10.1.	Reactivity
10.5.	Incompatible materials
10.6.	Hazardous decomposition products
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
12.1.	Toxicity
12.2.	Persistence and degradability
12.3.	Bioaccumulative potential
12.5.	Results of PBT and vPvB assessment
12.7.	Other adverse effects
13.1.	Waste treatment methods
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes
16.3.	Key literature references and sources for data
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)

Substance name	Type	source of supply
naphthalene **CAS No.:** 91-20-3 **EC No.:** 202-049-5	LC_{50} Acute inhalation toxicity (vapour); LC_{50}; EC_{50}; NOEC; LOEC	Source: European Chemicals Agency, http://echa.europa.eu/

* **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].

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

Hazard statements	
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

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.