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 MOTOGEAR SAE 80W-90 GL-4

Article No.:
1250055

UFI:
SEN7-6G3G-D9D5-J5T4

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture:
Lubricant

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Ravensberger Schmierstoffvertrieb GmbH
Produktsicherheit
Jöllenbecker Str. 2
33824 Werther
Germany
Telephone: +49 5203 9719 0
Telefax: +49 5203 9719 40
E-mail: kontakt@ravenol.de
Website: www.ravenol.de

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

1.4. Emergency telephone number

24 hr. emergency phone number, 24h: +49 700 24 112 112 (Contract ID: RAV) / +1 872 5888271 (Contract ID: RAV)

SECTION 2: Hazards identification

*
2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	Calculation method.
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	Calculation method.

*
2.2. Label elements

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

Hazard pictograms:

GHS07
Exclamation mark

Signal word: Warning

Hazard components for labelling:
Polysulfides, di-tert-Bu; C16-18-(even numbered, saturated and unsaturated)-alkylamines; Reaction products of bis (4-methyl pentan-2-yl) phosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)

Hazard statements for health hazards	
H317	May cause an allergic skin reaction.

Hazard statements for environmental hazards	
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements Prevention	
P261	Avoid breathing vapours and spray.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye/face protection.

Precautionary statements Response	
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Precautionary statements Disposal	
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

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
CAS No.: 68937-96-2 **EC No.:** 273-103-3 **REACH No.:** 01-2119540515-43	**Polysulfides, di-tert-Bu** Aquatic Chronic 4 (H413), Skin Sens. 1 (H317) **Warning**	1 – < 2 weight-%
EC No.: 931-384-6 **REACH No.:** 01-2119493620-38	**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 – < 0.2 weight-%
CAS No.: 1213789-63-9 **EC No.:** 627-034-4 **REACH No.:** 01-2119473797-19	**C16-18-(even numbered, saturated and unsaturated)-alkylamines** Acute Tox. 4 (H302), Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Asp. Tox. 1 (H304), Eye Dam. 1 (H318), STOT RE 2 (H373), STOT SE 3 (H335), Skin Corr. 1B (H314) **Danger** M-factor (acute): 10 M-factor (chronic): 10	0 – < 0.1 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 respiratory tract irritation, consult a physician.

In case of skin contact:
After contact with skin, wash immediately with plenty of water and soap. Consult a doctor immediately.
After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

Following ingestion:
Rinse mouth thoroughly with water. Do NOT induce vomiting. Consult a doctor immediately. Rinse mouth. Let water be drunken in little sips (dilution effect). Get medical advice/attention if you feel unwell.

Self-protection of the first aider:
Use personal protection equipment.

* **4.2. Most important symptoms and effects, both acute and delayed**
Allergic reactions

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:
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

Wear a self-contained breathing apparatus and chemical 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. Personal protection equipment: see section 8

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

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. Take precautionary measures against static discharge. Keep away from sources of ignition - No smoking.

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. 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:

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
TRGS 900 (DE)	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 300 mg/m³ ② 600 mg/m³ ⑤ (C9-C14 Aliphaten)
VLA (FR)	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 1,000 mg/m³ ② 1,500 mg/m³ ⑤ (hydrocarbures C9-C12)
NO	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 50 ppm (275 mg/m³) ⑤ (White Spirit (aromatinnhold < 22 %))
DFG (DE)	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 5 mg/m³ ② 20 mg/m³ ⑤ (Aerosol, alveolengängige Fraktion)
MAK (AT)	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 200 mL/m³ ② 400 mL/m³ ⑤ (für Kohlenwasserstoffgemische mit einem Gehalt an aromatischen Kohlenwasserstoffen von weniger als 1 %, an n-Hexan von weniger als 5 % und an Cyclo-/ Isohexanen von weniger als 25 %)
MAK (AT)	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 170 mL/m³ ② 340 mL/m³ ⑤ (für Kohlenwasserstoffgemische mit einem Gehalt an aromatischen Kohlenwasserstoffen von weniger als 1 %, an n-Hexan von weniger als 5 % und an Cyclo-/ Isohexanen von 25 % oder mehr)
WEL (GB)	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 1,200 mg/m³ ⑤ (> or = C7, Normal and branched chain alkanes)
WEL (GB)	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 800 mg/m³ ⑤ (> or = C7, Cycloalkanes)
DFG (DE)	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 50 ppm (350 mg/m³) ② 100 ppm (700 mg/m³) ⑤ (Dampf)
RU	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 100 mg/m³ ③ 300 mg/m³
CH	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 50 ppm (350 mg/m³) ② 100 ppm (700 mg/m³) ⑤ (Dampf)
SI	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 700 mg/m³

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
RO	Hydrocarbons, C12-C15, n-alkanes, iso-alkanes, cyclenes, <2% aromatics **CAS No.:** 64742-47-8 **EC No.:** 920-107-4	① 700 mg/m³ ② 1,000 mg/m³

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
Polysulfides, di-tert-Bu **CAS No.:** 68937-96-2 **EC No.:** 273-103-3	14.5 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
Polysulfides, di-tert-Bu **CAS No.:** 68937-96-2 **EC No.:** 273-103-3	1.66 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
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	8.56 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
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	12.5 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
C16-18-(even numbered, saturated and unsaturated)-alkylamines **CAS No.:** 1213789-63-9 **EC No.:** 627-034-4	0.38 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
C16-18-(even numbered, saturated and unsaturated)-alkylamines **CAS No.:** 1213789-63-9 **EC No.:** 627-034-4	1 mg/m³	① DNEL worker ② Long-term – inhalation, local effects
C16-18-(even numbered, saturated and unsaturated)-alkylamines **CAS No.:** 1213789-63-9 **EC No.:** 627-034-4	1 mg/cm²	① DNEL worker ② Acute - inhalation, local effects

Substance name	PNEC Value	① PNEC type
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	0.0012 mg/L	① PNEC aquatic, freshwater
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	0.12 µg/L	① PNEC aquatic, marine water
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	24.33 mg/L	① PNEC sewage treatment plant
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	3.13 mg/kg bw/day	① PNEC sediment, freshwater

Substance name	PNEC Value	① PNEC type
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	0.313 mg/kg bw/day	① PNEC sediment, marine water
C16-18-(even numbered, saturated and unsaturated)-alkylamines **CAS No.:** 1213789-63-9 **EC No.:** 627-034-4	0.26 µg/L	① PNEC aquatic, freshwater
C16-18-(even numbered, saturated and unsaturated)-alkylamines **CAS No.:** 1213789-63-9 **EC No.:** 627-034-4	0.026 µg/L	① PNEC aquatic, marine water
C16-18-(even numbered, saturated and unsaturated)-alkylamines **CAS No.:** 1213789-63-9 **EC No.:** 627-034-4	3.76 mg/kg	① PNEC sediment, freshwater
C16-18-(even numbered, saturated and unsaturated)-alkylamines **CAS No.:** 1213789-63-9 **EC No.:** 627-034-4	0.376 mg/kg	① PNEC sediment, marine water
C16-18-(even numbered, saturated and unsaturated)-alkylamines **CAS No.:** 1213789-63-9 **EC No.:** 627-034-4	10 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. 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 In the case of wanting to use the gloves again, clean them before taking off and air them well.

Respiratory protection:

Usually no personal respirative protection necessary. Filtering device with filter or ventilator filtering device of type: A

8.2.3. Environmental exposure controls

See section 7. No additional measures necessary.

8.3. Additional information

Mineral oil mist limits:
OSHA PEL - value 5 mg / m³, ACGIH STEL - value of 10 mg / m³

SECTION 9: Physical and chemical properties

* 9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid **Colour:** yellow

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 applicable*		
Flash point	244 °C		
Evaporation rate	*not determined*		
Auto-ignition temperature	*not determined*		
Upper/lower flammability or explosive limits	*not applicable*		
Vapour pressure	*not determined*		
Vapour density	*not applicable*		
Density	880 kg/m³	15 °C	
Relative density	*not applicable*		
Bulk density	*not applicable*		
Water solubility	practically insoluble		
Partition coefficient: n-octanol/water	*not applicable*		
Dynamic viscosity	*not determined*		
Kinematic viscosity	127 mm²/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.

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

C16-18-(even numbered, saturated and unsaturated)-alkylamines **CAS No.:** 1213789-63-9 **EC No.:** 627-034-4
ATE (oral): 500 mg/kg
LD_{50} oral: >1,200 mg/kg (Rat) OECD 401
LD_{50} dermal: >2,000 mg/kg (Rat) OECD 402
LC_{50} Acute inhalation toxicity (dust/mist): >5 mg/L 4 h

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.
Frequently or prolonged contact with skin may cause dermal irritation.

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

Additional information:
No data available

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

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12.1. Toxicity

Polysulfides, di-tert-Bu **CAS No.:** 68937-96-2 **EC No.:** 273-103-3
EC_{50}: 63 mg/L 2 d (crustaceans)
EC_{50}: >100 mg/L 3 d (Algae/water plant)
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
EC_{50}: 91.4 mg/L 2 d (crustaceans)
C16-18-(even numbered, saturated and unsaturated)-alkylamines **CAS No.:** 1213789-63-9 **EC No.:** 627-034-4
LC_{50}: >0.84 mg/L 4 d (fish)
EC_{50}: >0.32 mg/L 2 d (crustaceans)
EC_{50}: >0.39 mg/L 3 d (Algae/water plant)
NOEC: >0.63 mg/L 4 d (fish)

Aquatic toxicity:
Harmful to aquatic life with long lasting effects.

Additional ecotoxicological information:
Do not allow uncontrolled discharge of product into the environment.

12.2. Persistence and degradability

Additional information:
No data available.

12.3. Bioaccumulative potential

Polysulfides, di-tert-Bu **CAS No.:** 68937-96-2 **EC No.:** 273-103-3
Log K_{OW}: = 6

Partition coefficient: n-octanol/water:
not applicable

Accumulation / Evaluation:
No data available.

12.4. Mobility in soil
No data available.

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12.5. Results of PBT and vPvB assessment

Polysulfides, di-tert-Bu **CAS No.:** 68937-96-2 **EC No.:** 273-103-3
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
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.
C16-18-(even numbered, saturated and unsaturated)-alkylamines **CAS No.:** 1213789-63-9 **EC No.:** 627-034-4
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 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. Consult the appropriate local waste disposal expert about waste disposal.

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

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
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], Hazard categories:

- E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1
- E2 Hazardous to the Aquatic Environment in Category Chronic 2

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

Observe employment restrictions according to the Law for the protection of working youth (Protection of Young Persons Act - JArbSchG). Observe employment restrictions according to the Act on the Protection of Mothers at Work, in Training and in Studies (Maternity Protection Act - MuSchG).

Störfallverordnung

for substances contained in the product:

Hazard categories:

- E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1
- 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 (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

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16.1. Indication of changes

1.1.	Product identifier
2.1.	Classification of the substance or mixture
2.2.	Label elements
3.2.	Mixtures
4.2.	Most important symptoms and effects, both acute and delayed
8.1.	Control parameters
9.1.	Information on basic physical and chemical properties
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
12.1.	Toxicity
12.5.	Results of PBT and vPvB assessment
12.7.	Other adverse effects
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]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	Calculation method.
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	Calculation method.

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

Hazard statements	
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

* Data changed compared with the previous version