



Revision date: 15 May 2023 Version: 6 Print date: 29 Sept 2023

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 Professional Engine Cleaner

Article No.:

1390321

UFI:

Y096-URG2-WAQS-R1P8

* 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture:

Solvent, Cleaning agent

* 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 |
|--|---|--------------------------|
| Aspiration hazard (<i>Asp. Tox. 1</i>) | H304: May be fatal if swallowed and enters airways. | Calculation method. |

* 2.2. Label elements

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

Hazard pictograms:



GHS08

Health hazard

Signal word: Danger



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Hazard components for labelling:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics

Hazard statements for health hazards

| | |
|------|---|
| H304 | May be fatal if swallowed and enters airways. |
|------|---|

Supplemental hazard information

| | |
|--------|---|
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
|--------|---|

Precautionary statements

| | |
|------|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |

Precautionary statements Prevention

| | |
|------|---------------------------------------|
| P264 | Wash hands thoroughly after handling. |
|------|---------------------------------------|

Precautionary statements Response

| | |
|-------------|---|
| P301 + P310 | IF SWALLOWED: Immediately call a POISON CENTER/doctor/Emergency telephone number. |
| P331 | Do NOT induce vomiting. |

Precautionary statements Storage

| | |
|------|------------------|
| P405 | Store locked up. |
|------|------------------|

Precautionary statements Disposal

| | |
|------|---|
| P501 | Dispose of contents/container to an appropriate recycling or disposal facility. |
|------|---|

* 2.3. Other hazards

Other adverse effects:

The mixture contains substances fulfilling the PBT and / or vPvB criteria according to REACH, Annex XIII.

SECTION 3: Composition/information on ingredients

* 3.2. Mixtures

Additional information:

Labelling for contents according to regulation (EC) No. 648/2004 >30% aliphatic hydrocarbons

Hazardous ingredients / Hazardous impurities / Stabilisers:

| Product identifiers | Substance name Classification according to Regulation (EC) No 1272/2008 [CLP] | Concentration |
|--|--|---------------------|
| CAS No.: 64742-48-9 EC No.: 918-481-9 REACH No.: 01-2119457273-39 | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics Asp. Tox. 1 (H304) Danger | 80 - < 100 weight-% |
| CAS No.: 10254-57-6 EC No.: 233-593-1 | 4,4'-methylene bis(dibutylidithiocarbamate) Aquatic Chronic 4 (H413) | 1 - < 10 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:

Never give anything by mouth to an unconscious person or a person with cramps. 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:

Remove person to fresh air and keep comfortable for breathing. When in doubt or if symptoms are observed, get medical advice.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. When in doubt or if symptoms are observed, get medical advice. Repeated exposure may cause skin dryness or cracking.



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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. Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion:

Rinse mouth thoroughly with water. Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

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**

Repeated exposure may cause skin dryness or cracking.

May cause skin and eye irritation.

Harmful: may cause lung damage if swallowed.

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

Treat symptomatically. Call a POISON CENTER. Symptoms can occur only after several hours. Aspiration hazard

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

Water mist

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**

Flammable. Do not inhale explosion and combustion gases. Danger of suffocation in case of accumulation in lowlying or closed rooms.

Hazardous combustion products:

Nitrogen oxides (NO_x) Carbon monoxide Carbon dioxide (CO₂)

During heating or in case of fire, toxic gases is possible.

* **5.3. Advice for firefighters**

Do not inhale explosion and combustion gases. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

* **5.4. Additional information**

Use water spray jet to protect personnel and to cool endangered containers.

Suppress gases/vapours/mists with water spray jet.

Fire class: B

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.

Do not breathe dust/fume/gas/mist/vapours/spray.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Avoid contact with eyes and skin.

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.



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6.1.2. For emergency responders

Personal protection equipment:

Use appropriate respiratory protection. Personal protection equipment: see section 8

* 6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion. Prevent spread over a wide area (e.g. by containment or oil barriers). Do not allow to enter into surface water or drains. 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

SECTION 7: Handling and storage

SECTION 8: Exposure controls/personal protection

SECTION 13: Disposal considerations

* 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:

Use only in well-ventilated areas. Do not breathe gas/fumes/vapour/spray.

Wear personal protection equipment (refer to section 8).

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

Fire prevent measures:

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

Measures to prevent aerosol and dust generation:

See protective measures under point 7 and 8.

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. Keep locked up and out of reach of children. Keep only in original container.

Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Packaging materials:

Keep/Store only in original container.

Requirements for storage rooms and vessels:

Shafts and sewers must be protected from entry of the product. Floors should be impervious, resistant to liquids and easy to clean.

Keep only in the original container in a cool, well-ventilated place.

Do not store at temperatures above 50°C.

Take precautionary measures against static discharge.

Hints on storage assembly:

TRGS 510

Do not store together with: Oxidising agent, Pyrophoric or self-heating substances, Food and feedingstuffs



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

Further information on storage conditions:

Observe technical data sheet. Store in a cool dry place.

* **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 | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 | ① 300 mg/m ³ ② 900 mg/m ³ |
| VLA (FR) | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 | ① 1,000 mg/m ³ ② 1,500 mg/m ³ ⑤ (hydrocarbures C9-C12) |
| NO | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 | ① 50 ppm (275 mg/m ³) ⑤ (White Spirit (aromatinnhold < 22 %)) |
| CH from 1 Jan 2022 | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 | ① 50 ppm (300 mg/m ³) ② 100 ppm (600 mg/m ³) ⑤ Tox: ZNS |
| MAK (AT) | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 | ① 200 mL/m ³ ② 400 mL/m ³ 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, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 | ① 170 mL/m ³ ② 340 mL/m ³ 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, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 | ① 1,200 mg/m ³ ⑤ (> or = C7, Normal and branched chain alkanes) |
| WEL (GB) | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 | ① 800 mg/m ³ ⑤ (> or = C7, Cycloalkanes) |
| SI from 4 Dec 2018 | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 | ① 700 mg/m ³ |
| RO from 21 Aug 2018 | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 | ① 700 mg/m ³ ② 1,000 mg/m ³ |



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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 |
|---|---|--|
| TRGS 900 (DE) from 23 Jun 2022 | 4,4'-methylene bis(dibutyldithiocarbamate) CAS No.: 10254-57-6 EC No.: 233-593-1 | ① 5 mg/m ³ ② 20 mg/m ³ ⑤ (alveolengängige Fraktion) DFG |
| TRGS 900 (DE) from 23 Jun 2022 | 4,4'-methylene bis(dibutyldithiocarbamate) CAS No.: 10254-57-6 EC No.: 233-593-1 | ① 20 mg/m ³ ② 160 mg/m ³ ⑤ (einatembare Fraktion) DFG |
| TRGS 900 (DE) | Hydrocarbons, TRGS 900 | ① 50 mg/m ³ ⑤ Mass fraction (wt %): 99.9999 |

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

No data available

* 8.2. Exposure controls

8.2.1. Appropriate engineering controls

Avoid exposure. Do not breathe gas/fumes/vapour/spray.

8.2.2. Personal protection equipment



Eye/face protection:

During transfer: Eye glasses with side protection
 DIN-/EN-Norms EN 166

Skin protection:

Hand protection

Suitable material: NBR (Nitrile rubber), FKM (fluoro 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.

Tested protective gloves must be worn: EN ISO 374

Suitable protective clothing: Protective clothing solvent-resistant like: EN 465

Respiratory protection:

Usually no personal respiratory protection necessary.

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Filtering device with filter or ventilator filtering device of type: AX

Other protection measures:

Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

8.2.3. Environmental exposure controls

See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

* 9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid

Colour: light yellow

Odour: characteristic



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Safety relevant basis data

| Parameter | Value | at °C | ① Method ② Remark |
|--|------------------------|-------|----------------------|
| pH | <i>not applicable</i> | | |
| Melting point | <i>not determined</i> | | |
| Freezing point | <i>not determined</i> | | |
| Initial boiling point and boiling range | 150 °C | | |
| Decomposition temperature | <i>not determined</i> | | |
| Flash point | 67 °C | | |
| Evaporation rate | <i>not determined</i> | | |
| Auto-ignition temperature | ≈ 240 °C | | |
| Upper/lower flammability or explosive limits | <i>not applicable</i> | | |
| Vapour pressure | <i>not determined</i> | | |
| Vapour density | <i>not determined</i> | | |
| Density | 0.8 g/cm ³ | | |
| Relative density | <i>not applicable</i> | | |
| Bulk density | <i>not applicable</i> | | |
| Water solubility | practically insoluble | | |
| Partition coefficient: n-octanol/water | <i>not applicable</i> | | |
| Dynamic viscosity | <i>not determined</i> | | |
| Kinematic viscosity | 1.7 mm ² /s | 40 °C | |

* 9.2. Other information

Not applicable

SECTION 10: Stability and reactivity

* 10.1. Reactivity

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

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

* 10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge.

* 10.5. Incompatible materials

Oxidizing agent, Pyrophoric or self-heating substances
 Strong acid
 Alkali (lye), concentrated

* 10.6. Hazardous decomposition products

Hazardous combustion products: Carbon monoxide, Carbon dioxide (CO₂), Nitrogen oxides (NO_x)
 During heating or in case of fire, toxic gases is possible.
 Do not inhale explosion and combustion gases. Danger of suffocation in case of accumulation in lowlying or closed rooms.

Further information

Do not mix with other chemicals.



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SECTION 11: Toxicological information

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

| |
|--|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 |
| LD₅₀ oral: >5,000 mg/kg (Rat) |
| LD₅₀ dermal: >5,000 mg/kg (Rabbit) |
| LC₅₀ Acute inhalation toxicity (vapour): >5 mg/L 4 h (Rat) |
| LC₅₀ Acute inhalation toxicity (dust/mist): >5.266 mg/L 4 h (rat) OECD Guideline 403 (Acute Inhalation Toxicity) |
| 4,4'-methylene bis(dibutyldithiocarbamate) CAS No.: 10254-57-6 EC No.: 233-593-1 |
| LD₅₀ oral: >16,000 mg/kg (Rat) |
| LD₅₀ dermal: >2,000 mg/kg (Rabbit) |

Acute oral toxicity:

May be fatal if swallowed and enters airways.

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:

Repeated exposure may cause skin dryness or cracking.

Serious eye damage/irritation:

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

Respiratory or skin sensitisation:

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

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:

May be fatal if swallowed and enters airways.

Observe risk of aspiration if vomiting occurs.

For viscosity data, see section 9.

Additional information:

Repeated exposure may cause skin dryness or cracking.

* 11.2. Information on other hazards

Endocrine disrupting properties:

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

Other information:

No information available.

SECTION 12: Ecological information

* 12.1. Toxicity

| |
|---|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 |
| LC₅₀: >1,000 mg/L 4 d (fish, Oncorhynchus mykiss (Rainbow trout)) |
| EC₅₀: >1,000 mg/L 2 d (crustaceans, Daphnia magna (Big water flea)) |
| ErC₅₀: >1,000 mg/L 4 d (Algae/water plant, Pseudokirchneriella subcapitata) |



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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

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9
EC No.: 918-481-9

Biodegradation: Yes, rapidly

Additional information:

The product has not been tested.

* **12.3. Bioaccumulative potential**

4,4'-methylene bis(dibutyldithiocarbamate) CAS No.: 10254-57-6 EC No.: 233-593-1

Log K_{ow}: 8.42

Bioconcentration factor (BCF):

The product has not been tested.

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**

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9
EC No.: 918-481-9

Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

4,4'-methylene bis(dibutyldithiocarbamate) CAS No.: 10254-57-6 EC No.: 233-593-1

Results of PBT and vPvB assessment: PBT-substance.

The mixture contains substances fulfilling the PBT and / or 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**

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



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SECTION 14: Transport information

| Land transport (ADR/RID) | Inland waterway craft (ADN) | Sea transport (IMDG) | Air transport (ICAO-TI / IATA-DGR) |
|--|--|--|--|
| 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

No transport as bulk according to IBC Code.

SECTION 15: Regulatory information

* 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation

Restrictions on use:

Use restriction according to REACH annex XVII, no.: 3

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.

Information according to 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline).

Volatile organic compounds (VOC) content in percent by weight: >80 - <100 % w/w

Labelling for contents according to regulation (EC) No. 648/2004 >30% aliphatic hydrocarbons

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

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

Annex Chemikalien-Verbotsverordnung (ChemVerbotsV)

Not applicable

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:

1 - slightly hazardous to water

Source:

Self-classification (mixture; calculation rule).

Technische Regeln für Gefahrstoffe

Minimum protective measures according to TRGS 500



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Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)

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



[CH] National regulations

Other regulations, restrictions and prohibition regulations

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

15.2. Chemical Safety Assessment

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

15.3. Additional information

Tactile warning according to EN/ISO 11683. Child-resistant fastenings (EN/862/ISO 8317).

SECTION 16: Other information

* 16.1. Indication of changes

| | |
|-------|--|
| 1.1. | Product identifier |
| 1.2. | Relevant identified uses of the substance or mixture and uses advised against |
| 1.3. | Details of the supplier of the safety data sheet |
| 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 |
| 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 |
| 5.3. | Advice for firefighters |
| 5.4. | Additional information |
| 6.1. | Personal precautions, protective equipment and emergency procedures |
| 6.2. | Environmental precautions |
| 6.3. | Methods and material for containment and cleaning up |
| 6.5. | Additional information |
| 7.1. | Precautions for safe handling |
| 7.2. | Conditions for safe storage, including any incompatibilities |
| 7.3. | Specific end use(s) |
| 8.1. | Control parameters |
| 8.2. | Exposure controls |
| 9.1. | Information on basic physical and chemical properties |
| 9.2. | Other information |
| 10.1. | Reactivity |
| 10.4. | Conditions to avoid |
| 10.5. | Incompatible materials |
| 10.6. | Hazardous decomposition products |
| 11.1. | Information on hazard classes as defined in Regulation (EC) No 1272/2008 |
| 11.2. | Information on other hazards |
| 12.1. | Toxicity |
| 12.3. | Bioaccumulative potential |
| 12.5. | Results of PBT and vPvB assessment |
| 12.6. | Endocrine disrupting properties |
| 13.1. | Waste treatment methods |
| 13.2. | Additional information |
| 15.1. | Safety, health and environmental regulations/legislation specific for the substance or mixture |
| 16.1. | Indication of changes |



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| | |
|-------|--|
| 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

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).
 See overview table at www.euphrac.eu

* 16.3. Key literature references and sources for data

EC 1907/2006 - REACH Regulation
 1272/2008 EC - Regulation on classification, labeling and packaging of substances and mixtures, and amending Directives 67/548/EEC and 1999/45/EC and Regulation (EC) No 1907/2006
 Regulation (EC) No 1907/2006 (REACH), Annex II
 European Chemicals Agency (ECHA), C & L classification and labeling inventory
 European Chemicals Agency (ECHA), ECHA CHEM Registered substances
 OECD The Global Portal to Information on Chemical Substances (ChemPortal)
 Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA): GESTIS substance database and International limit values for chemical substances
 Federal Environment Agency, Section IV 2.4: Documentation and Information Centre substances hazardous to water Rigoletto (catalog substances hazardous to water)

| Substance name | Type | source of supply |
|--|--|--|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9 EC No.: 918-481-9 | Classification of the substance or mixture; LC ₅₀ Acute inhalation toxicity (dust/mist) | 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]

| Hazard classes and hazard categories | Hazard statements | Classification procedure |
|--|---|--------------------------|
| Aspiration hazard (<i>Asp. Tox. 1</i>) | H304: May be fatal if swallowed and enters airways. | Calculation method. |

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

| Hazard statements | |
|-------------------|---|
| H304 | May be fatal if swallowed and enters airways. |
| 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.