

**Safety Data Sheet**

according to UK REACH Regulation

100 Multifunktionsöl 400ml ALL

Revision date: 10.03.2023

Product code: 1106955

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

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UFI: K4T4-A0PM-7002-U32V

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

| | | |
|---------------|--------------------------------|-------------------------------|
| Company name: | TUNAP GmbH & Co. KG | |
| Street: | Buergermeister-Seidl-Strasse 2 | |
| Place: | D-82515 Wolfratshausen | |
| Telephone: | +49 (0) 8171/1600-0 | Telefax: +49 (0) 8171/1600-40 |
| E-mail: | sdb@tunap.com | |
| Internet: | www.tunap.com | |

1.4. Emergency telephone number: 111 NHS (National Health Service)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Aerosol 1; H222-H229
Asp. Tox. 1; H304
Skin Irrit. 2; H315
Skin Sens. 1; H317
STOT SE 3; H336
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements**GB CLP Regulation****Hazard components for labelling**

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Polysulfides, di-tert-dodecyl

Signal word: Danger**Pictograms:****Hazard statements**

| | |
|------|--|
| H222 | Extremely flammable aerosol. |
| H229 | Pressurised container: May burst if heated. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H336 | May cause drowsiness or dizziness. |
| H412 | Harmful to aquatic life with long lasting effects. |



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Precautionary statements

| | |
|-----------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P211 | Do not spray on an open flame or other ignition source. |
| P251 | Do not pierce or burn, even after use. |
| P261 | Avoid breathing spray. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves. |
| P302+P352 | IF ON SKIN: Wash with plenty of water. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P304+P312 | IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell. |
| P410+P412 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. |

2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII. This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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Relevant ingredients

| CAS No | Chemical name | Quantity | | |
|--------------|--|--------------|------------------|--------------|
| | EC No | Index No | REACH No | |
| | Classification (GB CLP Regulation) | | | |
| 75-28-5 | isobutane | | | 50 - < 100 % |
| | 200-857-2 | 601-004-00-0 | 01-2119485395-27 | |
| | Flam. Gas 1, Press. Gas (Liq.); H220 H280 | | | |
| | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | | | 5 - < 10 % |
| | 921-024-6 | | 01-2119475514-35 | |
| | Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411 | | | |
| | Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclenes, <2% aromatics | | | 5 - < 10 % |
| | 927-241-2 | | 01-2119471843-32 | |
| | Flam. Liq. 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 3; H226 H336 H304 H412 EUH066 | | | |
| 64742-49-0 | Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | | | 5 - < 10 % |
| | 927-510-4 | | 01-2119475515-33 | |
| | Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411 | | | |
| 74-98-6 | propane | | | 5 - < 10 % |
| | 200-827-9 | 601-003-00-5 | 01-2119486944-21 | |
| | Flam. Gas 1, Press. Gas (Liq.); H220 H280 | | | |
| 106-97-8 | butane | | | 1 - < 3 % |
| | 203-448-7 | 601-004-00-0 | 01-2119474691-32 | |
| | Flam. Gas 1, Press. Gas (Liq.); H220 H280 | | | |
| 1474044-79-5 | Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate) | | | 0.1 - < 1 % |
| | 939-717-7 | | 01-2119980985-16 | |
| | Skin Irrit. 2, Eye Irrit. 2; H315 H319 | | | |
| 68425-15-0 | Polysulfides, di-tert-dodecyl | | | 0.1 - < 1 % |
| | 270-335-7 | | 01-2119540516-41 | |
| | Skin Sens. 1B; H317 | | | |
| 68602-85-7 | Hydrocarbon waxes (petroleum), oxidized, Me esters | | | 0.1 - < 1 % |
| | 271-626-1 | | 01-2120749916-39 | |
| | Eye Irrit. 2; H319 | | | |
| 68784-12-3 | 2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs. | | | 0.1 - < 1 % |
| | 272-221-2 | | 01-2119533117-46 | |
| | Skin Sens. 1B; H317 | | | |
| | Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate | | | 0.1 - < 1 % |
| | 947-946-9 | | 01-2120772600-59 | |
| | Skin Irrit. 2, Skin Sens. 1B, Aquatic Chronic 4; H315 H317 H413 | | | |

Full text of H and EUH statements: see section 16.

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Specific Conc. Limits, M-factors and ATE

| CAS No | EC No | Chemical name | Quantity |
|--------------|-----------|---|-------------|
| | | Specific Conc. Limits, M-factors and ATE | |
| | 921-024-6 | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | 5 - < 10 % |
| | | inhalation: LC50 = > 25,2 mg/l (vapours); dermal: LD50 = > 2800 - 3100 mg/kg; oral: LD50 = > 5000 mg/kg | |
| | 927-241-2 | Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclenes, <2% aromatics | 5 - < 10 % |
| | | inhalation: LC50 = > 4951 mg/l (vapours); dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg | |
| 64742-49-0 | 927-510-4 | Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | 5 - < 10 % |
| | | inhalation: LC50 = > 23,3 mg/l (vapours); dermal: LD50 = > 2800 - 3100 mg/kg; oral: LD50 = 5500 mg/kg | |
| 106-97-8 | 203-448-7 | butane | 1 - < 3 % |
| | | inhalation: LC50 = 658 ppm (gases) | |
| 1474044-79-5 | 939-717-7 | Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate) | 0.1 - < 1 % |
| | | inhalation: LC50 = > 18 mg/l (vapours) | |
| 68425-15-0 | 270-335-7 | Polysulfides, di-tert-dodecyl | 0.1 - < 1 % |
| | | inhalation: LC50 = >20 mg/l (vapours); dermal: LD50 = >2000 mg/kg; oral: LD50 = >2000 mg/kg | |
| 68602-85-7 | 271-626-1 | Hydrocarbon waxes (petroleum), oxidized, Me esters | 0.1 - < 1 % |
| | | oral: LD50 = > 2000 mg/kg | |
| 68784-12-3 | 272-221-2 | 2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs. | 0.1 - < 1 % |
| | | dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg | |

Labelling for contents according to Regulation (EC) No 648/2004

>= 30 % aliphatic hydrocarbons.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

After inhalation

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

Wash with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

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

Headache, nausea, dizziness, fatigue, skin irritation

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.



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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water fog. Foam. Carbon dioxide (CO₂). Extinguishing powder.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO₂, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

Additional information

Danger of bursting container.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Wear personal protection equipment.

For non-emergency personnel

First aider: Pay attention to self-protection!

For emergency responders

Fight fire with normal precautions from a reasonable distance.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

6.3. Methods and material for containment and cleaning up

For containment

Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Observe instructions for use.

Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point

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of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

When using do not eat, drink, smoke, sniff.

Wear personal protection equipment (refer to section 8).

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Heating causes rise in pressure with risk of bursting.

Advice on general occupational hygiene

Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

Further information on handling

Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Observe legal regulations and provisions.

Hints on joint storage

Do not store together with: Oxidizing agents. Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions

Protect from frost. Protect from direct sunlight. Store in a cool dry place. Observe legal regulations and provisions.

7.3. Specific end use(s)

Lubricant

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|----------|-----------|-----|-------------------|-----------|---------------|--------|
| 106-97-8 | Butane | 600 | 1450 | | TWA (8 h) | WEL |
| | | 750 | 1810 | | STEL (15 min) | WEL |

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DNEL/DMEL values

| CAS No | Substance | Exposure route | Effect | Value |
|--------------------------|---|----------------|----------|------------------------|
| | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | | | |
| Worker DNEL, long-term | | inhalation | systemic | 2035 mg/m ³ |
| Worker DNEL, long-term | | dermal | systemic | 773 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 608 mg/m ³ |
| Consumer DNEL, long-term | | dermal | systemic | 699 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 699 mg/kg bw/day |
| 64742-49-0 | Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | | | |
| Worker DNEL, long-term | | inhalation | systemic | 2085 mg/m ³ |
| Worker DNEL, long-term | | dermal | systemic | 300 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 447 mg/m ³ |
| Consumer DNEL, long-term | | dermal | systemic | 149 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 149 mg/kg bw/day |
| 1474044-79-5 | Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate) | | | |
| Worker DNEL, long-term | | inhalation | systemic | 5 mg/m ³ |
| Worker DNEL, long-term | | dermal | systemic | 10 mg/kg bw/day |
| 68602-85-7 | Hydrocarbon waxes (petroleum), oxidized, Me esters | | | |
| Worker DNEL, long-term | | inhalation | systemic | 1000 mg/m ³ |
| Worker DNEL, long-term | | dermal | systemic | 1000 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 1000 mg/m ³ |
| Consumer DNEL, long-term | | dermal | systemic | 1000 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 1000 mg/kg bw/day |
| 68784-12-3 | 2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs. | | | |
| Worker DNEL, long-term | | dermal | systemic | 1 mg/kg bw/day |
| Consumer DNEL, long-term | | dermal | systemic | 0,5 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 0,5 mg/kg bw/day |
| | Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate | | | |
| Worker DNEL, long-term | | inhalation | systemic | 4,93 mg/m ³ |
| Worker DNEL, long-term | | dermal | systemic | 1,4 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 0,87 mg/m ³ |
| Consumer DNEL, long-term | | dermal | systemic | 0,5 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 0,5 mg/kg bw/day |

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PNEC values

| CAS No | Substance | Value |
|--|---|-------------|
| Environmental compartment | | |
| 1474044-79-5 | Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate) | |
| Freshwater | | 0,004 mg/l |
| Freshwater (intermittent releases) | | 0,0027 mg/l |
| Marine water | | 0,0004 mg/l |
| Freshwater sediment | | 69 mg/kg |
| Marine sediment | | 6,9 mg/kg |
| Secondary poisoning | | 22,2 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 10 mg/l |
| Soil | | 13,9 mg/kg |
| 68602-85-7 | Hydrocarbon waxes (petroleum), oxidized, Me esters | |
| Freshwater | | 100 mg/l |
| Marine water | | 10 mg/l |
| Freshwater sediment | | 100 mg/kg |
| Marine sediment | | 10 mg/kg |
| Secondary poisoning | | 100 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 10 mg/l |
| Soil | | 100 mg/kg |
| 68784-12-3 | 2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs. | |
| Freshwater | | 0,01 mg/l |
| Freshwater (intermittent releases) | | 0,1 mg/l |
| Marine water | | 0,001 mg/l |
| Micro-organisms in sewage treatment plants (STP) | | 8 mg/l |
| Soil | | 19,2 mg/kg |

Additional advice on limit values

- a no restriction
- b End of exposure or end of shift
- c at long-term exposure:
- d before next shift

blood (B)
Urine (U)

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Suitable eye protection: Tightly sealed safety glasses.
EN 166

Hand protection

Protect skin by using skin protective cream. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals



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must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Suitable material: NBR (Nitrile rubber) Breakthrough time: 480min

Thickness of the glove material 0,45 mm

EN ISO 374

Skin protection

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

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

When exceeding the relevant workplace exposure limits, note the following:

Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..

Filtering device with filter or ventilator filtering device of type: AX

Observe the wear time limits as specified by the manufacturer.

Observe legal regulations and provisions.

Environmental exposure controls

Observe legal regulations and provisions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | | |
|---|--|--------------------|
| Physical state: | Aerosol | |
| Colour: | greenish-brown, milky | |
| Odour: | characteristic | |
| | | Test method |
| Melting point/freezing point: | not determined | |
| Boiling point or initial boiling point and boiling range: | -40 °C | |
| Flammability: | not applicable | |
| | not applicable | |
| Lower explosion limits: | 0,6 vol. % | |
| Upper explosion limits: | 9,4 vol. % | |
| Flash point: | < 0 °C | |
| Decomposition temperature: | not determined | |
| pH-Value (at 20 °C): | | DIN 19268 |
| Viscosity / kinematic: (at 40 °C) | < 20,5 mm ² /s | |
| Water solubility: | The study does not need to be conducted because the substance is known to be insoluble in water. | |
| Solubility in other solvents | | |
| not determined | | |
| Partition coefficient n-octanol/water: | not determined | |
| Vapour pressure: | not determined | |
| Density (at 20 °C): | 0,77 g/cm ³ | DIN 51757 |
| Relative vapour density: | not determined | |

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

Heating may cause an explosion.

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

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Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Evaporation rate:

not determined

Solid content:

not determined

Further Information

Data apply to technical substance: Relative density, Colour, Odour, Viscosity, pH.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Take precautionary measures against static discharges.

10.5. Incompatible materials

Oxidizing agents. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition productsIncomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO₂, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.**Further information**

Do not mix with other chemicals.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in GB CLP Regulation****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

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| CAS No | Chemical name | | | | |
|--------------|---|--------------------------|---------|---------------------|--|
| | Exposure route | Dose | Species | Source | Method |
| | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | | | | |
| | oral | LD50 > 5000 mg/kg | Rat | | |
| | dermal | LD50 > 2800 - 3100 mg/kg | Rat | | |
| | inhalation (4 h) vapour | LC50 > 25,2 mg/l | Rat | | |
| | Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclenes, <2% aromatics | | | | |
| | oral | LD50 > 5000 mg/kg | Rat | | |
| | dermal | LD50 > 5000 mg/kg | Rabbit | | |
| | inhalation (4 h) vapour | LC50 > 4951 mg/l | Rat | | |
| 64742-49-0 | Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | | | | |
| | oral | LD50 5500 mg/kg | Rat | | |
| | dermal | LD50 > 2800 - 3100 mg/kg | Rat | Study report (1977) | The acute toxicity of SBP 100/140 was de |
| | inhalation (4 h) vapour | LC50 > 23,3 mg/l | Rat | Study report (1988) | OECD Guideline 403 |
| 106-97-8 | butane | | | | |
| | inhalation (4 h) gas | LC50 658 ppm | Rat | GESTIS | |
| 1474044-79-5 | Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate) | | | | |
| | inhalation (1 h) vapour | LC50 > 18 mg/l | Rat | Study report (1978) | other: FHSLA, CFR, Title 21 J para. 191. |
| 68425-15-0 | Polysulfides, di-tert-dodecyl | | | | |
| | oral | LD50 >2000 mg/kg | Rat | | |
| | dermal | LD50 >2000 mg/kg | Rabbit | | |
| | inhalation (4 h) vapour | LC50 >20 mg/l | Rat | | |
| 68602-85-7 | Hydrocarbon waxes (petroleum), oxidized, Me esters | | | | |
| | oral | LD50 > 2000 mg/kg | Rat | Study report (2017) | OECD Guideline 420 |
| 68784-12-3 | 2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs. | | | | |
| | oral | LD50 > 2000 mg/kg | Rat | Study report (2009) | OECD Guideline 423 |
| | dermal | LD50 > 2000 mg/kg | Rat | Study report (2009) | OECD Guideline 402 |

Irritation and corrosivity

Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

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Sensitising effects

May cause an allergic skin reaction. (Polysulfides, di-tert-dodecyl; 2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs.; Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate)

Carcinogenic/mutagenic/toxic effects for reproduction

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

No indication of human carcinogenicity.

No indications of human germ cell mutagenicity exist.

No indications of human reproductive toxicity exist.

STOT-single exposure

May cause drowsiness or dizziness. (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane; Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclenes, <2% aromatics; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics)

STOT-repeated exposure

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

Aspiration hazard

May be fatal if swallowed and enters airways.

Information on likely routes of exposure

Ingestion, Inhalation, Skin contact, Eye contact.

Reference to other sections: 2.1, 4.2.

Specific effects in experiment on an animal

No information 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.

Other information

No information available.

SECTION 12: Ecological information**12.1. Toxicity**

Harmful to aquatic life with long lasting effects.



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| CAS No | Chemical name | | | | | |
|------------|--|---------------|-----------|---------|-------------------------------------|--|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 75-28-5 | isobutane | | | | | |
| | Acute fish toxicity | LC50 mg/l | 91,42 | 96 h | Fish, no other information | United States Environmental Protection A The Ecosar class program has been develo |
| | Acute algae toxicity | ErC50 mg/l | 19,37 | 96 h | Algae | USEPA OPPT Risk Assessment Division (200 Calculation using ECOSAR Program v1.00. |
| | Acute crustacea toxicity | EC50 mg/l | 69,43 | 48 h | Daphnia sp. | USEPA OPPT Risk Assessment Division (200 Calculation using ECOSAR Program v1.00. |
| | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | | | | | |
| | Acute fish toxicity | LC50 mg/l | > 1-10 | 96 h | Pimephales promelas | |
| | Acute algae toxicity | ErC50 mg/l | 10 - 30 | 72 h | Pseudokirchneriella subcapitata | Study report (1995) OECD Guideline 201 |
| | Acute crustacea toxicity | EC50 mg/l | > 1-10 | 48 h | Daphnia magna | |
| | Fish toxicity | NOEC mg/l | 2,045 | 28 d | Oncorhynchus mykiss | CONCAWE, Brussels, Belgium (2010) |
| | Crustacea toxicity | NOEC | 1 mg/l | 21 d | Daphnia magna | SIDS Initial Assessment Report For SIAM OECD Guideline 211 |
| | Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclenes, <2% aromatics | | | | | |
| | Acute fish toxicity | LC50 mg/l | >1000 | 96 h | Oncorhynchus mykiss (Rainbow trout) | |
| | Acute algae toxicity | ErC50 mg/l | >1000 | 72 h | Pseudokirchneriella subcapitata | |
| | Acute crustacea toxicity | EC50 mg/l | >1000 | 48 h | Daphnia magna | |
| 64742-49-0 | Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | | | | | |
| | Acute fish toxicity | LL50 mg/l | > 13,4 | 96 h | Oncorhynchus mykiss | Study report (2004) OECD Guideline 203 |
| | Acute algae toxicity | ErC50 | 12 mg/l | 72 h | Pseudokirchneriella subcapitata | SIDS Initial Assessment Report For SIAM OECD Guideline 201 |
| | Acute crustacea toxicity | EC50 mg/l | >1 - 10 | 48 h | Daphnia magna | |
| | Fish toxicity | NOEC mg/l | 1,534 | 28 d | Oncorhynchus mykiss | CONCAWE, Brussels, Belgium (2010) |
| | Crustacea toxicity | NOEC | 1 mg/l | 21 d | Daphnia magna | SIDS Initial Assessment Report For SIAM OECD Guideline 211 |
| 74-98-6 | propane | | | | | |
| | Acute fish toxicity | LC50 mg/l | 49,9 | 96 h | Fish, no other information | United States Environmental Protection A The Ecosar class program has been develo |



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| | | | | | | | |
|------------------|---|------------------|----------|------|---|---|--|
| | Acute algae toxicity | ErC50 mg/l | 19,37 | 96 h | Algae | USEPA OPPT Risk Assessment Division (200) | Calculation using ECOSAR Program v1.00. |
| | Acute crustacea toxicity | EC50 mg/l | 69,43 | 48 h | Daphnia sp. | USEPA OPPT Risk Assessment Division (200) | Calculation using ECOSAR Program v1.00. |
| 106-97-8 | butane | | | | | | |
| | Acute fish toxicity | LC50 mg/l | 49,9 | 96 h | Fish, no other information | United States Environmental Protection A | The Ecosar class program has been develo |
| | Acute algae toxicity | ErC50 mg/l | 19,37 | 96 h | Algae | USEPA OPPT Risk Assessment Division (200) | Calculation using ECOSAR Program v1.00. |
| | Acute crustacea toxicity | EC50 mg/l | 69,43 | 48 h | Daphnia sp. | USEPA OPPT Risk Assessment Division (200) | Calculation using ECOSAR Program v1.00. |
| 1474044-79 -5 | Calcium bis(di C8-C10, branched, C9 rich, alkyl-naphthalenesulphonate) | | | | | | |
| | Acute crustacea toxicity | EC50 mg/l | > 0,27 | 48 h | Daphnia magna | Study report (2013) | OECD Guideline 202 |
| | Crustacea toxicity | NOEC | 4,6 mg/l | 21 d | Daphnia magna | REACH Registration Dossier | OECD Guideline 211 |
| 68425-15-0 | Polysulfides, di-tert-dodecyl | | | | | | |
| | Acute fish toxicity | LC50 mg/l | >100 | 96 h | Oncorhynchus mykiss (Rainbow trout) | | |
| | Acute algae toxicity | ErC50 mg/l | >100 | 72 h | Selenastrum capricornutum | | |
| | Acute crustacea toxicity | EC50 mg/l | >100 | 48 h | Daphnia magna (Big water flea) | | |
| 68602-85-7 | Hydrocarbon waxes (petroleum), oxidized, Me esters | | | | | | |
| | Acute fish toxicity | LL50 mg/l | > 100 | 96 h | Oncorhynchus mykiss | REACH Registration Dossier | OECD Guideline 203 |
| | Acute algae toxicity | ErC50 mg/l | > 100 | 72 h | Pseudokirchneriella subcapitata | REACH Registration Dossier | OECD Guideline 201 |
| | Acute crustacea toxicity | EL50 mg/l | > 100 | 48 h | Daphnia magna | Study report (2017) | OECD Guideline 202 |
| | Acute bacteria toxicity | EC50 mg/l () | > 100 | 3 h | activated sludge of a predominantly domestic sewage | REACH Registration Dossier | OECD Guideline 209 |
| 68784-12-3 | 2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs. | | | | | | |
| | Acute fish toxicity | LC50 mg/l | > 10 | 96 h | Leuciscus idus | REACH Registration Dossier | OECD Guideline 203 |
| | Acute algae toxicity | ErC50 mg/l | 85,1 | 72 h | | REACH Registration Dossier | OECD Guideline 201 |
| | Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate | | | | | | |

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|--|-------------------------|----------------------|------|---|----------------------------|--------------------|
| | Acute algae toxicity | ErC50 > 100 mg/l | 72 h | Pseudokirchneriella subcapitata | REACH Registration Dossier | OECD Guideline 201 |
| | Acute bacteria toxicity | EC50 > 1000 mg/l () | 3 h | activated sludge of a predominantly domestic sewage | REACH Registration Dossier | OECD Guideline 209 |

12.2. Persistence and degradability

The product has not been tested.

| CAS No | Chemical name | Value | d | Source |
|--------|--|-------|----|--------|
| | Method | | | |
| | Evaluation | | | |
| | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | | | |
| | OECD Guideline 301 F | 98% | 28 | |
| | Easily biodegradable (concerning to the criteria of the OECD) | | | |

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

| CAS No | Chemical name | Log Pow |
|--------------|---|-----------|
| 75-28-5 | isobutane | 1,09 |
| | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | 3,4 - 5,2 |
| 74-98-6 | propane | 1,09 |
| 106-97-8 | butane | 1,09 |
| 1474044-79-5 | Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate) | > 6,6 |
| 68602-85-7 | Hydrocarbon waxes (petroleum), oxidized, Me esters | > 10 |
| 68784-12-3 | 2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs. | 6,74 |

BCF

| CAS No | Chemical name | BCF | Species | Source |
|--------------|---|-------|---------|---------------------|
| 1474044-79-5 | Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate) | 3,16 | fish | Study report (2013) |
| 68784-12-3 | 2,5-Furandione, dihydro-, mono-C15-20-alkenyl derivs. | 63,79 | fish | Study report (2014) |

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

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

The product has not been tested.

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.

Further information

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

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

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Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2.1
Classification code: 5F
Special Provisions: 190 327 344 625
Limited quantity: 1 L
Excepted quantity: E0
Transport category: 2
Tunnel restriction code: D

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2.1
Classification code: 5F
Special Provisions: 190 327 344 625
Limited quantity: 1 L
Excepted quantity: E0

Marine transport (IMDG)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
Hazard label: 2.1
Marine pollutant: no
Special Provisions: 63, 190, 277, 327, 344, 381,959
Limited quantity: 1000 mL
Excepted quantity: E0
EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

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| | |
|--|---------------------|
| 14.1. UN number or ID number: | UN 1950 |
| 14.2. UN proper shipping name: | AEROSOLS, flammable |
| 14.3. Transport hazard class(es): | 2.1 |
| 14.4. Packing group: | - |
| Hazard label: | 2.1 |
| Special Provisions: | A145 A167 A802 |
| Limited quantity Passenger: | 30 kg G |
| Passenger LQ: | Y203 |
| Excepted quantity: | E0 |
| IATA-packing instructions - Passenger: | 203 |
| IATA-max. quantity - Passenger: | 75 kg |
| IATA-packing instructions - Cargo: | 203 |
| IATA-max. quantity - Cargo: | 150 kg |

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 28, Entry 40, Entry 75

Directive 2010/75/EU on industrial emissions: No information available.

Directive 2004/42/EC on VOC in paints and varnishes: No information available.

Information according to Directive 2012/18/EU (SEVESO III): P3a FLAMMABLE AEROSOLS

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) Aerosol Directive (75/324/)

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

15.2. Chemical safety assessment

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

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,9,11,15.

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Abbreviations and acronyms

Flam. Gas: Flammable gases
Aerosol: Aerosols
Press. Gas (Liq.): Liquefied gas
Flam. Liq: Flammable liquids
Asp. Tox: Aspiration hazard
Skin Irrit: Skin irritation
Eye Irrit: Eye irritation
Skin Sens: Skin sensitisation
STOT SE: Specific target organ toxicity - single exposure
Aquatic Chronic: Chronic aquatic hazard
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA: International Air Transport Association
IMDG: International Maritime Code for Dangerous Goods
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level
WEL (UK): Workplace Exposure Limits
TWA (EC): Time-Weighted Average
ATE: Acute Toxicity Estimate
STEL (EC) Short Term Exposure Limit
LC50: Lethal Concentration
EC50: half maximal Effective Concentration
ErC50: means EC50 in terms of reduction of growth rate

Classification for mixtures and used evaluation method according to GB CLP Regulation

| Classification | Classification procedure |
|-------------------------|-------------------------------|
| Aerosol 1; H222-H229 | On basis of test data |
| Asp. Tox. 1; H304 | Calculation method |
| Skin Irrit. 2; H315 | Bridging principle "Aerosols" |
| Skin Sens. 1; H317 | |
| STOT SE 3; H336 | Bridging principle "Aerosols" |
| Aquatic Chronic 3; H412 | Calculation method |

Relevant H and EUH statements (number and full text)

H220 Extremely flammable gas.
H222 Extremely flammable aerosol.
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H229 Pressurised container: May burst if heated.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

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H413 May cause long lasting harmful effects to aquatic life.
EUH066 Repeated exposure may cause skin dryness or cracking.

Further 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.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)