

Safety Data Sheet

according to UK REACH Regulation

Indicator solution pH 6.8 - 8.4 (phenol red)

Revision date: 24.07.2023

Product code: 13664.xxxxx

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Indicator solution pH 6.8 - 8.4 (phenol red)

UFI: 64U6-110M-300D-EYNM

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

Use of the substance/mixture

Use as laboratory reagent

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name: MORPHISTO GmbH
Street: Schumannstr. 142/144
Place: D-63069 Offenbach
Telephone: +49 (0) 69 / 400 3019-60 Telefax: +49 (0) 69 / 400 3019-64
E-mail: info@morphisto.de
Contact person: Morphisto GmbH
E-mail: gefahrstoffmanagement@morphisto.de
Internet: http://www.morphisto.de

1.4. Emergency telephone number:

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Flam. Liq. 2; H225

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Signal word: Danger

Pictograms:



Hazard statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use sand, extinguishing powder or alcohol-resistant foam to extinguish.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

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Pictograms:

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulating and toxic (PBT) or very persistent and very bioaccumulating (vPvB) at levels of 0.1% or higher. Ecological information: The substance/mixture does not contain any components that are considered to be hazardous according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in amounts of 0.1 % or more have endocrine disrupting properties. Toxicological information: The substance/mixture does not contain any components that are to be classified according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1 % or more have endocrine disrupting properties.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Relevant ingredients

| CAS No | Chemical name | | | Quantity |
|-----------|--|--------------|------------------|--------------|
| | EC No | Index No | REACH No | |
| | Classification (GB CLP Regulation) | | | |
| 64-17-5 | ethanol | | | 95 - < 100 % |
| | 200-578-6 | 603-002-00-5 | 01-2119457610-43 | |
| | Flam. Liq. 2, Eye Irrit. 2; H225 H319 | | | |
| 67-63-0 | 2-propanol | | | < 1 % |
| | 200-661-7 | 603-117-00-0 | 01-2119457558-25 | |
| | Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 | | | |
| 78-93-3 | butanone | | | < 1 % |
| | 201-159-0 | 606-002-00-3 | 01-2119457290-43 | |
| | Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066 | | | |
| 3734-33-6 | Denatoniumbenzoate | | | < 1 % |
| | 223-095-2 | | | |
| | Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Aquatic Chronic 3; H332 H302 H315 H318 H412 | | | |

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

Specific Conc. Limits, M-factors and ATE

| CAS No | EC No | Chemical name | Quantity |
|-----------|-----------|---|--------------|
| | | Specific Conc. Limits, M-factors and ATE | |
| 64-17-5 | 200-578-6 | ethanol | 95 - < 100 % |
| | | inhalation: LC50 = 124,7 mg/l (vapours); dermal: LD50 = >2000 mg/kg; oral: LD50 = >5000 mg/kg Eye Irrit. 2; H319: >= 50 - 100 | |
| 67-63-0 | 200-661-7 | 2-propanol | < 1 % |
| | | dermal: LD50 = >5000 mg/kg; oral: LD50 = >5000 mg/kg | |
| 78-93-3 | 201-159-0 | butanone | < 1 % |
| | | dermal: LD50 = >2000 mg/kg; oral: LD50 = 2054 mg/kg | |
| 3734-33-6 | 223-095-2 | Denatoniumbenzoate | < 1 % |
| | | inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = >2000 mg/kg; oral: ATE = 500 mg/kg | |

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SECTION 4: First aid measures**4.1. Description of first aid measures****After inhalation**

Provide fresh air. In case of accident by inhalation: remove casualty to fresh air and keep at rest. If unconscious but breathing normally, place in recovery position and seek medical advice. In case of allergic symptoms, especially in the breathing area, seek medical advice immediately.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. In case of skin irritation, seek medical treatment.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink 1 glass of water. Seek medical advice.

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

No information available.

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

Treat symptomatically.

Percutaneously absorbed and inhaled substance causes next to irritation of affected mucous membranes only an indicated impairment of the inhibitory functions of the central nervous system, clinically recognizable as the beginning of a euphoric stage. At the same time face and skin redness is caused by dilation of peripheral blood vessels in the body.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Water spray jet, Carbon dioxide (CO₂), Foam, Extinguishing powder. Dry extinguishing powder. alcohol resistant foam. Atomized water.

5.2. Special hazards arising from the substance or mixture

Highly flammable. Vapours can form explosive mixtures with air.

Vapours are heavier than air and will spread at floor level.

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO₂).

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Do not inhale explosion and combustion gases.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. 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****General advice**

Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Ventilate affected area.

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

Special danger of slipping by leaking/spilling product.

Wear personal protection equipment. (refer to chapter 8)

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6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk. Do not allow to enter into surface water or drains. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. 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 cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Ventilate affected area.

Treat the recovered material as prescribed in the section on waste disposal.

Clear contaminated areas thoroughly.

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**

No special measures are necessary.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air. Flammable vapours can accumulate in head space of closed systems. Heating causes rise in pressure with risk of bursting.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Take off contaminated clothing. Wash hands before breaks and after work. Always close containers tightly after the removal of product. When using do not eat, drink or smoke. Protect skin by using skin protective cream.

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

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep/Store only in original container. Protect from direct sunlight.

Ensure adequate ventilation of the storage area. Concentrated vapours are heavier than air.

Suitable material for Container: Stainless steel. (1.4301 (V2), 1.4401 (V4)); iron. solvent resistant plastics.

Unsuitable materials for Container: Aluminium. Rubber. various plastics.

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances. Do not store together with: Gas. Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating substances and mixtures. Substances or mixtures which, in contact with water, emit flammable gases. Oxidizing liquids. Oxidizing solids. ammonium nitrate. Self-reactive substances and mixtures. Organic peroxides. Non-combustible toxic substances. Radioactive substances. Infectious substances.

Further information on storage conditions

storage temperature: 15-25 °C

7.3. Specific end use(s)

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Use as laboratory reagent

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

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|---------|-----------------------------------|------|-------------------|-----------|---------------|--------|
| 78-93-3 | Butan-2-one (methyl ethyl ketone) | 200 | 600 | | TWA (8 h) | WEL |
| | | 300 | 899 | | STEL (15 min) | WEL |
| 64-17-5 | Ethanol | 1000 | 1920 | | TWA (8 h) | WEL |
| 67-63-0 | Propan-2-ol | 400 | 999 | | TWA (8 h) | WEL |
| | | 500 | 1250 | | STEL (15 min) | WEL |

Biological Monitoring Guidance Values (EH40)

| CAS No | Substance | Parameter | Value | Test material | Sampling time |
|---------|-------------|-------------|-----------|---------------|---------------|
| 78-93-3 | Butan-2-one | butan-2-one | 70 µmol/L | urine | Post shift |

DNEL/DMEL values

| CAS No | Substance | Exposure route | Effect | Value |
|---------|--------------------------|----------------|----------|------------------------|
| 64-17-5 | ethanol | | | |
| | Worker DNEL, acute | inhalation | local | 1900 mg/m ³ |
| | Worker DNEL, long-term | dermal | systemic | 343 mg/kg bw/day |
| | Worker DNEL, long-term | inhalation | systemic | 950 mg/m ³ |
| | Consumer DNEL, acute | inhalation | local | 950 mg/m ³ |
| | Consumer DNEL, long-term | dermal | systemic | 206 mg/kg bw/day |
| | Consumer DNEL, long-term | inhalation | systemic | 114 mg/m ³ |
| | Consumer DNEL, long-term | oral | systemic | 87 mg/kg bw/day |
| 67-63-0 | 2-propanol | | | |
| | Worker DNEL, long-term | inhalation | systemic | 500 mg/m ³ |
| | Consumer DNEL, long-term | inhalation | systemic | 89 mg/m ³ |
| | Worker DNEL, long-term | dermal | systemic | 888 mg/kg bw/day |
| | Consumer DNEL, long-term | oral | systemic | 26 mg/kg bw/day |
| | Consumer DNEL, long-term | dermal | systemic | 319 mg/kg bw/day |
| 78-93-3 | butanone | | | |
| | Worker DNEL, long-term | inhalation | systemic | 600 mg/m ³ |
| | Worker DNEL, long-term | dermal | systemic | 1161 mg/kg bw/day |

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PNEC values

| CAS No | Substance | Value |
|--|------------|-------------|
| Environmental compartment | | |
| 64-17-5 | ethanol | |
| Freshwater | | 0,96 mg/l |
| Freshwater (intermittent releases) | | 2,75 mg/l |
| Marine water | | 0,79 mg/l |
| Marine water (intermittent releases) | | 2,75 mg/l |
| Freshwater sediment | | 3,6 mg/kg |
| Marine sediment | | 2,9 mg/kg |
| Secondary poisoning | | 0,72 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 580 mg/l |
| Soil | | 0,63 mg/kg |
| 67-63-0 | 2-propanol | |
| Freshwater | | 140,9 mg/l |
| Marine water | | 140,9 mg/l |
| Freshwater sediment | | 552 mg/kg |
| Marine sediment | | 552 mg/kg |
| Secondary poisoning | | 160 mg/kg |
| Soil | | 28 mg/kg |
| 78-93-3 | butanone | |
| Freshwater | | 55,8 mg/l |
| Freshwater (intermittent releases) | | 55,8 mg/l |
| Marine water | | 55,8 mg/l |
| Freshwater sediment | | 284,7 mg/kg |
| Marine sediment | | 284,7 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 709 mg/l |
| Soil | | 22,5 mg/kg |

8.2. Exposure controls

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

Suitable eye protection: goggles. Tightly sealed safety glasses. EN 166

Hand protection

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 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. In case of prolonged or frequently repeated skin contact:

Tested protective gloves are to be worn:

Suitable material:

 Butyl rubber. (0,7 mm, Breakthrough time \geq 480 min, penetration time (maximum wearing period): 160 min):

 NBR (Nitrile rubber). (0,4 mm, Breakthrough time \geq 120 min, penetration time (maximum wearing period): 40

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min)

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing . Protective clothing. (fire retardant.) Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

Respiratory protection

In case of inadequate ventilation wear respiratory protection. With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

Insufficient ventilation.

exceeding exposure limit values

generation/formation of aerosols

Suitable respiratory protective equipment:

gas filtering equipment (EN 141). Type : a

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

The wearing time limitations according to GefStoffV in conjunction with the rules for the use of respiratory protective devices (BGR 190) must be observed.

Thermal hazards

Flame-retardant protective clothing. Wear anti-static footwear and clothing

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|------------------------|
| Physical state: | Liquid |
| Colour: | red |
| Odour: | alcoholic |
| Melting point/freezing point: | -114 °C |
| Boiling point or initial boiling point and boiling range: | 78 °C |
| Flammability: | No data available |
| Lower explosion limits: | 2,5 vol. % |
| Upper explosion limits: | 15 vol. % |
| Flash point: | 12 °C |
| Auto-ignition temperature: | 400 °C |
| Decomposition temperature: | not determined |
| pH-Value: | not determined |
| Viscosity / kinematic: | not determined |
| Water solubility: (at 20 °C) | 1000 g/L |
| Solubility in other solvents | not determined |
| Partition coefficient n-octanol/water: | not determined |
| Vapour pressure: (at 20 °C) | 58 hPa |
| Density (at 20 °C): | 0,79 g/cm ³ |
| Relative vapour density: | not determined |
| Particle characteristics: | not applicable |

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9.2. Other information

Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive. In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. Vapours can travel considerable distances to a source of ignition where they can ignite, flash back, or explode.

Oxidizing properties

The product is not: oxidising.

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable. No information available.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Exothermic reaction with: Oxidizing agent Alkali metals. Aluminium. Nitric acid. Sulphuric acid. Nitric oxides. Hydrogen peroxide. Barium perchlorate. Lead chlorate. Lead perchlorate. Chromosulphuric acid. Dichlorohexoxide. Magnesium powder. Sodium hypochlorite. Perchloric acid. Permanganic acid. Zinc diethyl.

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. Keep away from heat. Protect from direct sunlight. Protect from moisture.

In use may form flammable/explosive vapour-air mixture.

Heating causes rise in pressure with risk of bursting.

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

Formation of carbon dioxide Carbon monoxide

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

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 |
| 64-17-5 | ethanol | | | | |
| | oral | LD50 mg/kg | >5000 | Rat | ECHA Dossier |
| | dermal | LD50 mg/kg | >2000 | Rabbit | ECHA Dossier |
| | inhalation (4 h) vapour | LC50 mg/l | 124,7 | Rat | ECHA Dossier |
| 67-63-0 | 2-propanol | | | | |
| | oral | LD50 mg/kg | >5000 | Rat | ECHA Dossier |
| | dermal | LD50 mg/kg | >5000 | Rabbit | ECHA Dossier |
| 78-93-3 | butanone | | | | |
| | oral | LD50 mg/kg | 2054 | Ratte | SDB Lieferant |
| | dermal | LD50 mg/kg | >2000 | Rabbit | ECHA Dossier |
| 3734-33-6 | Denatoniumbenzoate | | | | |
| | oral | ATE mg/kg | 500 | | |
| | dermal | LD50 mg/kg | >2000 | Rat | suppliers SDS. |
| | inhalation vapour | ATE | 11 mg/l | | |
| | inhalation dust/mist | ATE | 1,5 mg/l | | |

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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.

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

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information
12.1. Toxicity

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

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| CAS No | Chemical name | | | | | |
|-----------|--------------------------|---------------|-----------|---------|---|------------------------------------|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 64-17-5 | ethanol | | | | | |
| | Acute fish toxicity | LC50 mg/l | 14200 | 96 h | Pimephales promelas (fathead minnow) | ECHA Dossier |
| | Acute algae toxicity | ErC50 | 275 mg/l | 72 h | Chlorella vulgaris | ECHA Dossier |
| | Acute crustacea toxicity | EC50 mg/l | 5012 | 48 h | Ceriodaphnia dubia (water flea) | ECHA Dossier |
| | Crustacea toxicity | NOEC | 9,6 mg/l | 9 d | Daphnia magna | ECHA Dossier |
| 67-63-0 | 2-propanol | | | | | |
| | Acute fish toxicity | LC50 mg/l | 9640 | 96 h | Pimephales promelas | ECHA Dossier OECD Guideline 203 |
| | Acute algae toxicity | ErC50 mg/l | 1800 | 96 h | Scenedesmus quadricauda | ECHA Dossier |
| | Acute crustacea toxicity | EC50 mg/l | >10000 | 48 h | Daphnia magna (24h) | ECHA Dossier OECD Guideline 202 |
| 78-93-3 | butanone | | | | | |
| | Acute fish toxicity | LC50 mg/l | 2993 | 96 h | Pimephales promelas | ECHA Dossier OECD 203 |
| | Acute algae toxicity | ErC50 mg/l | 1972 | 72 h | Pseudokirchnerella subcapitata | ECHA Dossier OECD 201 |
| | Acute crustacea toxicity | EC50 | 308 mg/l | 48 h | Daphnia magna | ECHA Dossier OECD 202 |
| 3734-33-6 | Denatoniumbenzoate | | | | | |
| | Acute fish toxicity | LC50 mg/l | >1000 | 96 h | Oncorhynchus mykiss (Rainbow trout) | suppliers SDS. |
| | Acute crustacea toxicity | EC50 | 13 mg/l | 48 h | Daphnia magna (Big water flea) | suppliers SDS. |

12.2. Persistence and degradability

The product has not been tested.

| CAS No | Chemical name | | | |
|---------|---|-------|----|--------------|
| | Method | Value | d | Source |
| | Evaluation | | | |
| 64-17-5 | ethanol | | | |
| | other guideline | 84% | 20 | ECHA Dossier |
| | Biodegradable. | | | |
| 67-63-0 | 2-propanol | | | |
| | EU Method C.5/ EU Method C.6 | 53% | 5 | ECHA Dossier |
| | Easily biodegradable (concerning to the criteria of the OECD) | | | |
| 78-93-3 | butanone | | | |
| | | 98% | 28 | ECHA Dossier |
| | Readily biodegradable (according to OECD criteria). | | | |

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

| CAS No | Chemical name | Log Pow |
|---------|---------------|---------|
| 64-17-5 | ethanol | -0,31 |
| 67-63-0 | 2-propanol | 0,05 |
| 78-93-3 | butanone | 0,3 |

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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.

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

Avoid release to the environment. Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

| | |
|--|---------|
| <u>14.1. UN number or ID number:</u> | UN 1170 |
| <u>14.2. UN proper shipping name:</u> | ETHANOL |
| <u>14.3. Transport hazard class(es):</u> | 3 |
| <u>14.4. Packing group:</u> | II |
| Hazard label: | 3 |



| | |
|--------------------------|---------|
| Classification code: | F1 |
| Special Provisions: | 144 601 |
| Limited quantity: | 1 L |
| Excepted quantity: | E2 |
| Transport category: | 2 |
| Hazard No: | 33 |
| Tunnel restriction code: | D/E |

Inland waterways transport (ADN)

| | |
|--|---------|
| <u>14.1. UN number or ID number:</u> | UN 1170 |
| <u>14.2. UN proper shipping name:</u> | ETHANOL |
| <u>14.3. Transport hazard class(es):</u> | 3 |
| <u>14.4. Packing group:</u> | II |
| Hazard label: | 3 |

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Classification code: F1
Special Provisions: 144 601
Limited quantity: 1 L
Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 1170
14.2. UN proper shipping name: ETHANOL
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3



Special Provisions: 144
Limited quantity: 1 L
Excepted quantity: E2
EmS: F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1170
14.2. UN proper shipping name: ETHANOL
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3



Special Provisions: A3 A58 A180
Limited quantity Passenger: 1 L
Passenger LQ: Y341
Excepted quantity: E2
IATA-packing instructions - Passenger: 353
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 364
IATA-max. quantity - Cargo: 60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Combustible liquid. Refer to section 6-8

14.7. Maritime transport in bulk according to IMO instruments

No information available.

Other applicable information

No information available.

SECTION 15: Regulatory information

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

EU regulatory information

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Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

Directive 2010/75/EU on industrial emissions: 90-100 %

Directive 2004/42/EC on VOC in paints and varnishes: 90-100 %

Information according to Directive 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

ethanol
2-propanol
butanone

SECTION 16: Other information

Changes

Rev. 1,0; 24.07.2023; Recreation from collect_SDB 10369.xxxxx

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Abbreviations and acronyms

Flam. Liq: Flammable liquids
Acute Tox: Acute toxicity
Skin Irrit: Skin irritation
Eye Dam: Eye damage
Eye Irrit: Eye irritation
STOT SE: Specific target organ toxicity - single exposure
Aquatic Chronic: Chronic aquatic hazard
ADR: Accord européen sur le transport des marchandises dangereuses par Route
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen
AGW: Arbeitsplatzgrenzwert
AVV: Abfallverzeichnisverordnung
CAS Chemical Abstracts Service
CLP: Classification, Labelling and Packaging of substances and mixtures
DNEL: Derived No Effect Level
d: day(s)
EAKV: Europäisches Abfallverzeichnis gemäß Entwurf Abfallverzeichnisverordnung
EINECS: European Inventory of Existing Commercial Substances
ELINCS: European List of Notified Chemical Substances
ECHA: European Chemicals Agency
EWC: European Waste Catalogue
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
h: hour
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect level
NLP: No-Longer Polymers
N/A: not applicable
OECD: Organisation for Economic Co-operation and Development
PNEC: predicted no effect concentration
PBT: Persistent bioaccumulative toxic
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
REACH: Registration, Evaluation, Authorisation of Chemicals
SVHC: substance of very high concern
TRGS Technische Regeln fuer Gefahrstoffe
UN: United Nations
VOC: Volatile Organic Compounds
VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe
WGK: Wassergefährdungsklasse
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level

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DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation
 intérieures)
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>
 For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety
 assessment, chapter R.20 (Table of terms and abbreviations).

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

| Classification | Classification procedure |
|--------------------|--------------------------|
| Flam. Liq. 2; H225 | On basis of test data |
| Eye Irrit. 2; H319 | Calculation method |

Relevant H and EUH statements (number and full text)

| | |
|--------|---|
| H225 | Highly flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H336 | May cause drowsiness or dizziness. |
| H412 | Harmful to aquatic life with long lasting effects. |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. Classification according to Regulation (EC) No 1272/2008 [CLP] - Classification procedure:

Health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

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.

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