

Safety Data Sheet

according to Regulation (EC) No 1907/2006

95-RXN-M; 95-RXZ-M; 95-SEL; 94-XM6

Revision date: 14.05.2019

Product code: 950402

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

95-RXN-M; 95-RXZ-M; 95-SEL; 94-XM6

Further trade names

This MSDS covers the following products:

- 95-RXN-M
- 95-RXZ-M
- 95-SEL
- 94-XM6

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

Fluxes for soft soldering

Uses advised against

any non-intended use.

1.3. Details of the supplier of the safety data sheet**Manufacturer**

| | | |
|---------------|-------------------|-------------------------|
| Company name: | Cobar Europe BV | |
| Street: | Aluminiumstraat 2 | |
| Place: | NL-4823 AL Breda | |
| Telephone: | +31 76 5445566 | Telefax: +31 76 5445577 |
| e-mail: | info@Cobar.com | |

Supplier

| | | |
|-------------------------|--------------------------------------|---------------------------|
| Company name: | Balver Zinn Josef Jost GmbH & Co. KG | |
| Street: | Blintroper Weg 11 | |
| Place: | D-58802 Balve | |
| Telephone: | +49 2375 915-0 | Telefax: +49 2375 915-114 |
| Responsible Department: | cia@BalverZinn.com | |

1.4. Emergency telephone number: Chemtrec: +44(0) 870-8200418

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Flammable liquid: Flam. Liq. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Highly flammable liquid and vapour.

Causes serious eye irritation.

May cause drowsiness or dizziness.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

propan-2-ol; isopropyl alcohol; isopropanol

Signal word: Danger

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Pictograms:



Hazard statements

| | |
|------|-------------------------------------|
| H225 | Highly flammable liquid and vapour. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |

Precautionary statements

| | |
|----------------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312 | Call a POISON CENTER/doctor if you feel unwell. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
In use, may form flammable/explosive vapour-air mixture.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

| CAS No | Chemical name | Quantity | | |
|------------|---|--------------|------------------|-------------|
| | EC No | Index No | REACH No | |
| | GHS Classification | | | |
| 64-17-5 | ethanol, ethyl alcohol | | | 35 - < 40 % |
| | 200-578-6 | 603-002-00-5 | 01-2119457610-43 | |
| | Flam. Liq. 2, Eye Irrit. 2; H225 H319 | | | |
| 67-63-0 | propan-2-ol; isopropyl alcohol; isopropanol | | | 20-<35 % |
| | 200-661-7 | 603-117-00-0 | 01-2119457558-25 | |
| | Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 | | | |
| 124-04-9 | adipic acid | | | 1-<5 % |
| | 204-673-3 | 607-144-00-9 | 01-2119457561-38 | |
| | Eye Irrit. 2; H319 | | | |
| 70750-47-9 | Quaternary ammonium compounds, C12-18-alkylbis(hydroxyethyl)methyl, chlorides | | | < 0.1 % |
| | 274-846-6 | | 01-2119974110-47 | |
| | Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 2; H302 H314 H400 H411 | | | |

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

Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

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

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General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Change contaminated clothing.

First aider: Pay attention to self-protection!

After inhalation

Remove person to fresh air and keep comfortable for breathing. In case of respiratory tract irritation, consult a physician.

After contact with skin

Take off immediately all contaminated clothing. Wash with plenty of water. In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

After ingestion

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. In all cases of doubt, or when symptoms persist, seek medical advice.

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

refer to chapter 2 and 11.

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

Treat symptomatically.

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

Carbon dioxide (CO₂). Dry extinguishing powder. alcohol resistant foam.
In case of major fire and large quantities: Atomized water.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide. Carbon dioxide (CO₂).

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use water spray jet to protect personnel and to cool endangered containers.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Remove persons to safety. Remove all sources of ignition. Ventilate affected area.
Do not breathe gas/vapour/aerosol. Avoid contact with skin, eyes and clothes.
Wear personal protection equipment. (See section 8.)

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Ventilate affected area.

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Treat the recovered material as prescribed in the section on waste disposal.
Clean contaminated objects and areas thoroughly observing environmental regulations.

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

Provide adequate ventilation as well as local exhaustion at critical locations.
Do not breathe gas/vapour/aerosol. Avoid contact with skin, eyes and clothes.
Wear suitable protective clothing. (See section 8.)

Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges.
Flammable vapours can accumulate in head space of closed systems. In use, may form flammable/explosive vapour-air mixture. Heating causes rise in pressure with risk of bursting.

Further information on handling

General protection and hygiene measures: See section 8.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Protect against direct sunlight.
Ensure adequate ventilation of the storage area.
Make sure spills can be contained (e.g. sump pallets or kerbed areas).

Hints on joint storage

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

Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.
Protect against: UV-radiation/sunlight. heat. Humidity frost.
storage temperature: refer to specifications.

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|---------|-------------|------|-------------------|-----------|---------------|--------|
| 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 |

DNEL/DMEL values

| CAS No | Substance | DNEL type | Exposure route | Effect | Value |
|--------|-----------|-----------|----------------|--------|-------|
| | | | | | |

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| 67-63-0 | propan-2-ol; isopropyl alcohol; isopropanol | | |
| 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 |
| 64-17-5 | ethanol, ethyl alcohol | | |
| 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 |
| 124-04-9 | adipic acid | | |
| Worker DNEL, acute | inhalation | systemic | 264 mg/m ³ |
| Worker DNEL, acute | inhalation | local | 5 mg/m ³ |
| Consumer DNEL, long-term | inhalation | systemic | 65 mg/m ³ |
| Worker DNEL, long-term | dermal | systemic | 38 mg/kg bw/day |
| Consumer DNEL, acute | inhalation | systemic | 65 mg/m ³ |
| Worker DNEL, acute | dermal | systemic | 38 mg/kg bw/day |
| Consumer DNEL, long-term | dermal | systemic | 19 mg/kg bw/day |
| Consumer DNEL, long-term | oral | systemic | 19 mg/kg bw/day |
| Consumer DNEL, acute | oral | systemic | 19 mg/kg bw/day |
| Consumer DNEL, acute | dermal | systemic | 19 mg/kg bw/day |
| Worker DNEL, long-term | inhalation | local | 5 mg/m ³ |
| Worker DNEL, long-term | inhalation | systemic | 264 mg/m ³ |
| 70750-47-9 | Quaternary ammonium compounds, C12-18-alkylbis(hydroxyethyl)methyl, chlorides | | |
| Worker DNEL, long-term | inhalation | systemic | 0,18 mg/m ³ |
| Worker DNEL, long-term | dermal | systemic | 0,26 mg/kg bw/day |
| Consumer DNEL, long-term | inhalation | systemic | 0,5 mg/m ³ |
| Consumer DNEL, long-term | dermal | systemic | 0,16 mg/kg bw/day |
| Consumer DNEL, long-term | oral | systemic | 0,16 mg/kg bw/day |

PNEC values

| CAS No | Substance | Value |
|---------|--|------------|
| | Environmental compartment | |
| 67-63-0 | propan-2-ol; isopropyl alcohol; isopropanol | |
| | Freshwater | 140,9 mg/l |
| | Marine water | 140,9 mg/l |
| | Micro-organisms in sewage treatment plants (STP) | 2251 mg/l |
| | Freshwater sediment | 552 mg/kg |

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| | |
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| Marine sediment | 552 mg/kg |
| Soil | 28 mg/kg |
| Secondary poisoning | 160 mg/kg |
| 64-17-5 | ethanol, ethyl alcohol |
| 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 |
| 124-04-9 | adipic acid |
| Freshwater | 0,126 mg/l |
| Marine water | 0,0126 mg/l |
| Freshwater sediment | 0,484 mg/kg |
| Marine sediment | 0,0484 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | 59,1 mg/l |
| Soil | 0,0228 mg/kg |
| 70750-47-9 | Quaternary ammonium compounds, C12-18-alkylbis(hydroxyethyl)methyl, chlorides |
| Freshwater | 0,0121 mg/l |
| Marine water | 0,00121 mg/l |
| Freshwater sediment | 61,4 mg/kg |
| Marine sediment | 6,14 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | 1,09 mg/l |
| Soil | 30,6 mg/kg |

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.

Protective and hygiene measures

The usual precautions for handling chemicals should be considered.

Keep away from food, drink and animal feedingstuffs.

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Protect skin by using skin protective cream. Take off contaminated clothing.

Eye/face protection

Recommended eye protection brand: Tightly sealed safety glasses. (DIN EN 166)

Hand protection

In case of prolonged or frequently repeated skin contact: Wear suitable gloves.

Suitable material: Butyl rubber.

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Thickness of glove material: 0,5 mm
penetration time (maximum wearing period): 120 min.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
In the case of wanting to use the gloves again, clean them before taking off and air them well. Before using check leak tightness / impermeability.
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.

Skin protection

Wear suitable protective clothing.
Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.
Respiratory protection necessary at:
exceeding exposure limit values
Insufficient ventilation.
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.
Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.
This material and its container must be disposed of in a safe way.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: liquid.
Colour: colourless - yellow
Odour: alcoholic.

Test method

pH-Value: not determined

Changes in the physical state

Melting point: not applicable
Initial boiling point and boiling range: Ethanol: 78 °C
Sublimation point: not determined
Softening point: not determined
Pour point: not determined
Flash point: 0-<21 °C

Explosive properties

In use, may form flammable/explosive vapour-air mixture. Vapours can travel considerable distances to a source of ignition where they can ignite, flash back, or explode.

Lower explosion limits: not determined
Upper explosion limits: not determined
Ignition temperature: not determined
Decomposition temperature: not determined

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Oxidizing properties

none.

Vapour pressure: not determined
(at 20 °C)

Density: 0,90-0,95 g/cm³ N/A

Water solubility: miscible.

Solubility in other solvents

not determined

Viscosity / dynamic: not determined
(at 20 °C)

Viscosity / kinematic: not determined
(at 20 °C)

Flow time: not determined

Vapour density: not determined

Evaporation rate: not determined

9.2. Other information

Solid content: not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Protect against: UV-radiation/sunlight. heat. moisture.
In use may form flammable/explosive vapour-air mixture.
Heating causes rise in pressure with risk of bursting.

10.5. Incompatible materials

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong. Strong acid. strong alkalis (Base)

10.6. Hazardous decomposition products

Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide. Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No data available.

Acute toxicity

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

| CAS No | Chemical name | | | | |
|---------|------------------------|------------------|---------|--------------|--------|
| | Exposure route | Dose | Species | Source | Method |
| 64-17-5 | ethanol, ethyl alcohol | | | | |
| | oral | LD50 >5000 mg/kg | Rat | ECHA Dossier | |

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| | | | | | | |
|------------|---|---------------|--------|--------|--------------|--|
| | inhalation (4 h) vapour | LC50 mg/l | 124,7 | Rat | ECHA Dossier | |
| 67-63-0 | propan-2-ol; isopropyl alcohol; isopropanol | | | | | |
| | oral | LD50 mg/kg | >5000 | Rat | ECHA Dossier | |
| | dermal | LD50 mg/kg | >5000 | Rabbit | ECHA Dossier | |
| 124-04-9 | adipic acid | | | | | |
| | oral | LD50 mg/kg | 5560 | Rat | ECHA Dossier | |
| | dermal | LD50 mg/kg | 5010 | Rat | ECHA Dossier | |
| | inhalation (4 h) aerosol | LC50 mg/l | > 7,7 | Rat | ECHA Dossier | |
| 70750-47-9 | Quaternary ammonium compounds, C12-18-alkylbis(hydroxyethyl)methyl, chlorides | | | | | |
| | oral | LD50 mg/kg | (1710) | Rat | ECHA Dossier | |

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.

Isopropyl alcohol. (CAS-No.: 67-63-0):

In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist.

Carcinogenicity:

Exposure time: 24 month

Species: Fischer 344 Rat.

Method: OECD Guideline 451

Result: NOEL = 5000 ppm

Literature information: ECHA Dossier

Ethanol. (CAS-No.: 64-17-5):

In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist.

Reproductive toxicity:

Exposure time: 18 weeks

Species: CD-1 Mouse.

Method: OECD Guideline 416

Result: NOAEL = 20700 mg/kg/day

Developmental toxicity/teratogenicity:

Exposure time: 19d

Species: Sprague-Dawley Rat.

Method: OECD Guideline 414

Result: NOAEL = 16000 ppm (maternal toxicity)

Result: NOAEL >= 20000 ppm (teratogenicity)

Literature information: ECHA Dossier

adipic acid (CAS-No.: 124-04-9):

In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist.

Carcinogenicity:

Exposure time: 24 month

Species: Carworth Farm strain Rat.

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Method: no guideline followed
Result: NOAEL = >3750 mg/kg(bw)/day (male.)
Result: NOAEL = >750 mg/kg(bw)/day (female.)
Developmental toxicity/teratogenicity:
Exposure time: 10d
Species: Wistar Rat.
Method: no guideline followed
Result: NOAEL >= 288 ppm (maternal toxicity)
Result: NOAEL >= 288 ppm (developmental toxicity)
Literature information: ECHA Dossier

Quaternary ammonium compounds, C12-18-alkylbis(hydroxyethyl)methyl, chlorides (CAS-No.: 70750-47-9):
In vitro mutagenicity/genotoxicity: No experimental indications of mutagenicity in-vitro exist.

Reproductive toxicity:
Method: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction /
Developmental Toxicity Screening Test)
Species: Wistar Rat.
Exposure time: 28d
Result: NOAEL = 25 mg/kg(bw)/day
Developmental toxicity/teratogenicity:
Method: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction /
Developmental Toxicity Screening Test)
Species: Wistar Rat.
Exposure time: 28d
Result: NOAEL = 25 mg/kg(bw)/day
Literature information: ECHA Dossier

STOT-single exposure

May cause drowsiness or dizziness. (propan-2-ol; isopropyl alcohol; isopropanol)

STOT-repeated exposure

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

Isopropyl alcohol. (CAS-No.: 67-63-0):
Chronic inhalative toxicity
Exposure time: 24 month
Species: Fischer 344 Rat.
Method: OECD Guideline 451
Result: NOAEC = 5000 ppm
Literature information: ECHA Dossier

Ethanol. (CAS-No.: 64-17-5):
Subchronic oral toxicity
Exposure time: 90d
Species: Sprague-Dawley Rat.
Method: OECD Guideline 408
Result: NOAEL = 1280 mg/kg
Literature information: ECHA Dossier

adipic acid (CAS-No.: 124-04-9):
Chronic oral toxicity
Exposure time: 24 month
Species: Carworth Farm strain Rat.
Result: NOAEL = 750 mg/kg(bw)/day
Literature information: ECHA Dossier

Quaternary ammonium compounds, C12-18-alkylbis(hydroxyethyl)methyl, chlorides (CAS-No.: 70750-47-9):
Subacute oral toxicity:

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Method: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Species: Wistar Rat.

Exposure time: 28d

Result: NOAEL = 25 mg/kg(bw)/day

Literature information: ECHA Dossier

Aspiration hazard

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

Specific effects in experiment on an animal

No data available.

Further information

Solvent:

Symptoms: Depression of the central nervous system. Liver and kidney damage. drowsiness. vomiting.

Nausea. Dizziness. unconsciousness. Impaired consciousness. Intoxication. erythema (redness)

SECTION 12: Ecological information

12.1. Toxicity

| CAS No | Chemical name | | | | | |
|------------|---|---------------|----------------|---------|---|----------------|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 64-17-5 | ethanol, ethyl alcohol | | | | | |
| | Acute fish toxicity | LC50 mg/l | 14200 | 96 h | Pimephales promelas | 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 | ECHA Dossier |
| | Crustacea toxicity | NOEC mg/l | (9,6) | 9 d | Daphnia magna | ECHA Dossier |
| 67-63-0 | propan-2-ol; isopropyl alcohol; isopropanol | | | | | |
| | Acute fish toxicity | LC50 mg/l | 9640 | 96 h | Pimephales promelas | ECHA Dossier |
| | Acute algae toxicity | ErC50 mg/l | 1800 | | Scenedesmus quadricauda | ECHA Dossier |
| | Acute crustacea toxicity | EC50 mg/l | >10000 | 48 h | Daphnia magna (24h) | ECHA Dossier |
| 124-04-9 | adipic acid | | | | | |
| | Acute fish toxicity | LC50 mg/l | 1000 | 96 h | Danio rerio (OECD 203) | ECHA Dossier |
| | Acute algae toxicity | ErC50 | 59 mg/l | 72 h | Pseudokirchnerella subcapitata (IUCLID) | ECHA Dossier |
| | Acute crustacea toxicity | EC50 | 46 mg/l | 48 h | Daphnia magna (OECD 202) | ECHA Dossier |
| | Fish toxicity | NOEC | 6,3 mg/l | 21 d | Daphnia magna (OECD 211) | ECHA Dossier |
| 70750-47-9 | Quaternary ammonium compounds, C12-18-alkylbis(hydroxyethyl)methyl, chlorides | | | | | |
| | Acute fish toxicity | LC50 mg/l | >1-10 | 96 h | Danio rerio | MSDS external. |
| | Acute algae toxicity | ErC50 | >0,01-0,1 mg/l | 72 h | Pseudokirchnerella subcapitata | MSDS external. |
| | Acute crustacea toxicity | EC50 mg/l | 0,468 | 48 h | Daphnia magna | ECHA Dossier |
| | Crustacea toxicity | NOEC | >0,01-0,1 mg/l | 21 d | Daphnia magna | MSDS external. |

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| | | | | | | |
|--|-------------------------|----------|-----|------------------|--------------|--|
| | Acute bacteria toxicity | (9 mg/l) | 3 h | Activated sludge | ECHA Dossier | |
|--|-------------------------|----------|-----|------------------|--------------|--|

12.2. Persistence and degradability

| CAS No | Chemical name | Method | Value | d | Source |
|------------|---|------------|-------|----|--------------|
| | | Evaluation | | | |
| 64-17-5 | ethanol, ethyl alcohol | | | | |
| | other guideline | | 84% | 20 | ECHA Dossier |
| | Biodegradable. | | | | |
| 67-63-0 | propan-2-ol; isopropyl alcohol; isopropanol | | | | |
| | EU Method C.5/ EU Method C.6 | | 53% | 5 | ECHA Dossier |
| | Easily biodegradable (concerning to the criteria of the OECD) | | | | |
| 124-04-9 | adipic acid | | | | |
| | OECD Guideline 301 D | | 83% | 30 | ECHA Dossier |
| | Product is biodegradable. | | | | |
| 70750-47-9 | Quaternary ammonium compounds, C12-18-alkylbis(hydroxyethyl)methyl, chlorides | | | | |
| | OECD 301D/ EEC 92/69/V, C.4-E | | 64% | 28 | ECHA Dossier |
| | Readily biodegradable (according to OECD criteria). | | | | |

12.3. Bioaccumulative potential**Partition coefficient n-octanol/water**

| CAS No | Chemical name | Log Pow |
|------------|---|---------|
| 64-17-5 | ethanol, ethyl alcohol | -0,31 |
| 67-63-0 | propan-2-ol; isopropyl alcohol; isopropanol | 0,05 |
| 124-04-9 | adipic acid | 0,093 |
| 70750-47-9 | Quaternary ammonium compounds, C12-18-alkylbis(hydroxyethyl)methyl, chlorides | -0,12 |

BCF

| CAS No | Chemical name | BCF | Species | Source |
|----------|---------------|-------|---------|--------------|
| 124-04-9 | adipic acid | 3,162 | QSAR | ECHA Dossier |

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

No data available.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to EAKV, 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 EAKV:

Waste disposal number of waste from residues/unused products

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

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Waste disposal number of used product

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

Waste disposal number of contaminated packaging

150202 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; absorbents, filter materials, wiping cloths and protective clothing; absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances; hazardous waste

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.
Recommended cleaning agent: Water, if necessary together with cleansing agents.
Do not empty into drains; dispose of this material and its container in a safe way.

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

14.1. UN number: UN 1987
14.2. UN proper shipping name: ALCOHOLS, N.O.S.
(Ethanol. / Isopropyl alcohol.)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3



Classification code: F1
Special Provisions: 274 601 640D
Limited quantity: 1 L
Excepted quantity: E2
Transport category: 2
Hazard No: 33
Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 1987
14.2. UN proper shipping name: ALCOHOLS, N.O.S.
(Ethanol. / Isopropyl alcohol.)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3



Classification code: F1
Special Provisions: 274 601 640D
Limited quantity: 1 L
Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number: UN 1987

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14.2. UN proper shipping name: ALCOHOLS, N.O.S.
(ethanol / isopropanol)

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3



Marine pollutant: NO
Special Provisions: 274
Limited quantity: 1 L
Excepted quantity: E2
EmS: F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1987

14.2. UN proper shipping name: ALCOHOLS, N.O.S.
(ethanol / isopropanol)

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3



Special Provisions: A3 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

See section 8.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not relevant.

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 40: ethanol, ethyl alcohol

2010/75/EU (VOC): 75,6 % (680,4 g/l) (calculated)

2004/42/EC (VOC): 70,7 % (636,3 g/l) (calculated)

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

Additional information

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The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].
REACH 1907/2006 Appendix XVII, No: 3, 40

National regulatory information

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

Water contaminating class (D): 2 - clearly water contaminating

Additional information

Observe technical data sheet.

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
propan-2-ol; isopropyl alcohol; isopropanol
ethanol, ethyl alcohol

SECTION 16: Other information**Changes**

Rev. 1.00; 10.02.2015, Initial release
Rev. 1.01; 25.04.2016; Documentation of changes: chapter: 3, 8, 11, 12, 15, 16.
Rev. 1.10; 23.11.2016, Indication of changes - chapter: 1, 16.
Rev. 2.00; 14.05.2019, Indication of changes - chapter: 2-16.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
CAS Chemical Abstracts Service
DNEL: Derived No Effect Level
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)
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
NTP: National Toxicology Program
N/A: not applicable
OSHA: Occupational Safety and Health Administration
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)
SARA: Superfund Amendments and Reauthorization Act
SVHC: substance of very high concern
TRGS Technische Regeln fuerGefahrstoffe
TSCA: Toxic Substances Control Act
VOC: Volatile Organic Compounds
VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe
WGK: Wassergefaehrdungsklasse

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Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

| Classification | Classification procedure |
|--------------------|--------------------------|
| Flam. Liq. 2; H225 | On basis of test data |
| Eye Irrit. 2; H319 | Calculation method |
| STOT SE 3; H336 | Calculation method |

Relevant H and EUH statements (number and full text)

| | |
|------|--|
| H225 | Highly flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |
| H400 | Very toxic to aquatic life. |
| H411 | Toxic to aquatic life with long lasting effects. |

Further Information

Classification according EC regulation 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.

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