# SAFETY DATA SHEET

according to Commission Regulation (EU) 2020/878 as amended

## Bioetanol

| | | | |
|---|---|---|---|
| Creation date | 06th January 2025 | | |
| Revision date | | Version | 2.0 |

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

**1.1. Product identifier** — Bioetanol

Substance / mixture — mixture

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

**Mixture's intended use**

Application in the industrial sector, household chemicals, paint and varnish industry, printing and households - for cleaning and degreasing surfaces.

**Main intended use**

PC-UNC — Chemical products - uncategorised

**Mixture uses advised against**

The product should not be used in ways other than those referred in Section 1.

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

**Supplier**

| | |
|---|---|
| Name or trade name | STAPAR Sp. z o.o. |
| Address | Wenecja 62, Żnin, 88-400<br>Poland |
| VAT Reg No | PL5621804826 |
| Phone | +48 (52) 561 04 82 |
| E-mail | biuro@stapar.pl |
| Web address | www.stapar.pl |

**Competent person responsible for the safety data sheet**

| | |
|---|---|
| Name | STAPAR Sp. z o.o. |
| E-mail | biuro@stapar.pl |

**1.4. Emergency telephone number**

European emergency number: 112

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**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification of the mixture in accordance with Regulation (EC) No 1272/2008**

The mixture is classified as dangerous.

Flam. Liq. 2, H225
Eye Irrit. 2, H319

**Most serious adverse physico-chemical effects**

Highly flammable liquid and vapour.

**Most serious adverse effects on human health and the environment**

Causes serious eye irritation.

**2.2. Label elements**

**Hazard pictogram**

**Signal word**

Danger

**Hazard statements**

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

**Precautionary statements**

| | |
|---|---|
| P102 | Keep out of reach of children. |

| | |
|---|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P233 | Keep container tightly closed. |
| P243 | Take action to prevent static discharges. |
| P264 | Wash hands and exposed parts of the body thoroughly after handling. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P501 | Dispose of contents/container to properly labeled waste containers in accordance with national regulations. |

**Requirements for child-resistant fastenings and tactile warning of danger**

Container must carry a tactile warning of danger.

### 2.3. Other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Chemical characterization**

Mixture of substances and additives specified below.

**Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment**

| Identification numbers | Substance name | Content in % weight | Classification according to Regulation (EC) No 1272/2008 | Note |
|---|---|---|---|---|
| Index: 603-002-00-5<br>CAS: 64-17-5<br>EC: 200-578-6<br>Registration number: 01-2119457610-43 | ethanol | 93-96 | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>Specific concentration limit:<br>Eye Irrit. 2, H319: C ≥ 50 % | |
| Index: 606-002-00-3<br>CAS: 78-93-3<br>EC: 201-159-0<br>Registration number: 01-2119457290-43 | butanone | <2 | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336<br>EUH066 | 1 |
| Index: 603-117-00-0<br>CAS: 67-63-0<br>EC: 200-661-7<br>Registration number: 01-2119457558-25 | propan-2-ol | <2 | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336 | |

**Notes**

1 A substance for which exposure limits are set.

Full text of all classifications and hazard statements is given in the section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

**If inhaled**

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold.

**If on skin**

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury.

**If in eyes**

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person.

**If swallowed**

Rinse out the mouth with water and provide 2-5 dL of water. Provide medical treatment if the person has any health problems.

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

**If inhaled**

Not expected.

**If on skin**

Not expected.

**If in eyes**

Causes serious eye irritation.

**If swallowed**

Irritation, nausea.

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

Symptomatic treatment.

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**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

**Unsuitable extinguishing media**

Water - full jet.

**5.2. Special hazards arising from the substance or mixture**

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

**5.3. Advice for firefighters**

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

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**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

The mixture is flammable. Remove all ignition sources; provide sufficient ventilation. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale aerosols. Avoid contact with eyes.

**6.2. Environmental precautions**

Prevent contamination of the soil and entering surface or ground water.

**6.3. Methods and material for containment and cleaning up**

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

**6.4. Reference to other sections**

See the Section 7, 8 and 13.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

Prevent formation of gases and vapours in flammable or explosive concentrations and concentrations exceeding the occupational exposure limits. The product should be used only in the areas where it is not in contact with open fire and other ignition sources. Use non-sparking tools. Use of antistatic clothes and footwear is recommended. Do not inhale aerosols. Avoid contact with eyes. No smoking. Use only outdoors or in a well-ventilated area. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take action to prevent static discharges.

**7.2. Conditions for safe storage, including any incompatibilities**

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight. Store locked up. Keep container tightly closed. Keep cool.

**The specific requirements or rules relating to the substance/mixture**

Solvent vapours are heavier than air and accumulate especially near the floor where they may form an explosive mixture with the air.

**7.3. Specific end use(s)**

not available

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters**

The mixture contains substances for which occupational exposure limits are set.

**European Union** **Commission Directive 2000/39/EC**

| Substance name (component) | Type | Value |
|---|---|---|
| butanone (CAS: 78-93-3) | OEL 8 hours | 600 mg/m³ |
| | OEL 8 hours | 200 ppm |
| | OEL 15 minutes | 900 mg/m³ |
| | OEL 15 minutes | 300 ppm |

**DNEL**

| **butanone** | | | | | |
|---|---|---|---|---|---|
| Workers / consumers | Route of exposure | Value | Effect | Value determination | Source |
| Workers (0) | Dermal | 1161 mg/kg | Chronic effects systemic | | ECHA |
| Workers (0) | Inhalation | 600 mg/m³ | Chronic effects systemic | | ECHA |
| Consumers (0) | Inhalation | 106 mg/m³ | Chronic effects systemic | | ECHA |
| Consumers (0) | Dermal | 412 mg/kg | Chronic effects systemic | | ECHA |
| Consumers (0) | Oral | 31 mg/kg bw/day | | | ECHA |

| ethanol | | | | | |
|---|---|---|---|---|---|
| Workers / consumers | Route of exposure | Value | Effect | Value determination | Source |
| Workers | Inhalation | 1900 mg/m³ | Acute effects local | | |
| Workers | Dermal | 343 mg/kg bw/day | Chronic effects systemic | | |
| Workers | Inhalation | 950 mg/m³ | Chronic effects systemic | | |
| Consumers | Inhalation | 950 mg/m³ | Acute effects local | | |
| Consumers | Oral | 87 mg/kg bw/day | Chronic effects systemic | | |
| Consumers | Dermal | 206 mg/kg bw/day | Chronic effects systemic | | |
| Consumers | Inhalation | 114 mg/m³ | Chronic effects systemic | | |

| propan-2-ol | | | | | |
|---|---|---|---|---|---|
| Workers / consumers | Route of exposure | Value | Effect | Value determination | Source |
| Workers | Inhalation | 500 mg/m³ | Chronic effects systemic | | |
| Consumers | Oral | 26 mg/kg bw/day | Chronic effects systemic | | |
| Consumers | Dermal | 319 mg/kg | Chronic effects systemic | | |
| Consumers | Inhalation | 89 mg/m³ | Chronic effects systemic | | |
| Workers | Dermal | 888 mg/kg | Chronic effects systemic | | |

**PNEC**

| butanone | | | |
|---|---|---|---|
| Route of exposure | Value | Value determination | Source |
| Microorganisms in sewage treatment | 709 mg/l | | ECHA |
| Oral | 1000 mg/kg of food | | ECHA |
| Water (intermittent release) | 55.8 mg/l | | ECHA |
| Drinking water | 55.8 mg/l | | ECHA |
| Marine water | 55.8 mg/l | | ECHA |
| Sea sediments | 284.7 mg/kg | | ECHA |
| Freshwater sediment | 284.74 mg/kg | | ECHA |

| ethanol | | | |
|---|---|---|---|
| Route of exposure | Value | Value determination | Source |
| Microorganisms in sewage treatment | 580 mg/l | | |
| Water (intermittent release) | 2.75 mg/l | | |
| Oral | 0.72 mg/kg of food | | |

| ethanol | | | |
|---|---|---|---|
| Route of exposure | Value | Value determination | Source |
| Drinking water | 0.96 mg/l | | |
| Marine water | 0.79 mg/l | | |
| Freshwater sediment | 3.6 mg/kg | | |

| propan-2-ol | | | |
|---|---|---|---|
| Route of exposure | Value | Value determination | Source |
| Microorganisms in sewage treatment | 2251 mg/l | | |
| Soil (agricultural) | 28 mg/kg | | |
| Water (intermittent release) | 140.9 mg/l | | |
| Oral | 160 mg/kg | | |
| Drinking water | 140.9 mg/l | | |
| Marine water | 140.9 mg/l | | |
| Freshwater sediment | 552 mg/kg | | |
| Sea sediments | 552 mg/kg | | |

**8.2. Exposure controls**

Follow the usual measures intended for health protection at work and especially for good ventilation.

**Eye/face protection**

Protective goggles or face shield (based on the nature of the work performed). EN166 - Personal Eye Protection Standard.

**Skin protection**

Hand protection: Protective gloves resistant to the product. EN ISO 374-1. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Contaminated skin should be washed thoroughly.

**Respiratory protection**

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

**Thermal hazard**

Not available.

**Environmental exposure controls**

Observe usual measures for protection of the environment, see Section 6.2.

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| Physical state | liquid |
| Colour | colourless |
| color intensity | transparent |
| Odour | characteristic |
| Melting point/freezing point | <-114.5 °C |
| Boiling point or initial boiling point and boiling range | 78 °C |
| Flammability | data not available |
| Lower and upper explosion limit | |
| Lower and upper explosion limit | |
| bottom | 15 % |
| upper | 3 % |
| Flash point | <23 °C |

| | |
|---|---|
| Auto-ignition temperature | 425 °C (etanol) |
| Decomposition temperature | data not available |
| pH | 6-8 (undiluted) |
| Kinematic viscosity | data not available |
| Solubility in water | data not available |
| Partition coefficient n-octanol/water (log value) | -0.35 |
| Vapour pressure | 57.26 hPa at 19.6 °C |
| Vapour pressure | 78.7 hPa at 25 °C |
| Density and/or relative density | |
| Density and/or relative density | |
| Density | 0.78-0.8 g/cm³ at 20 °C |
| Relative vapour density | data not available |
| Particle characteristics | data not available |
| Form | liquid: volatile |

**9.2. Other information**

not available

## SECTION 10: Stability and reactivity

**10.1. Reactivity**

The mixture is flammable.

**10.2. Chemical stability**

The product is stable under normal conditions.

**10.3. Possibility of hazardous reactions**

Unknown.

**10.4. Conditions to avoid**

The product is stable and no degradation occurs under normal use.

**10.5. Incompatible materials**

Protect against strong acids, bases and oxidizing agents.

**10.6. Hazardous decomposition products**

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

## SECTION 11: Toxicological information

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

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. No toxicological data is available for the mixture.

**Acute toxicity**

Based on available data the classification criteria are not met.

| **butanone** | | | | | |
|---|---|---|---|---|---|
| Route of exposure | Parameter | Value | Exposure time | Species | Sex |
| Oral | $LD_{50}$ | 6200 mg/kg | | Rat (Rattus norvegicus) | F/M |
| Inhalation | $LC_{50}$ | 1247 mg/kg | 4 hours | Rat (Rattus norvegicus) | F/M |

| **ethanol** | | | | | |
|---|---|---|---|---|---|
| Route of exposure | Parameter | Value | Exposure time | Species | Sex |
| Oral | $LD_{50}$ | 6200 mg/kg bw | | Rat (Rattus norvegicus) | F/M |

| ethanol | | | | | |
|---|---|---|---|---|---|
| Route of exposure | Parameter | Value | Exposure time | Species | Sex |
| Dermal | $LD_{50}$ | 20000 mg/kg | | Rabbit | F/M |
| Inhalation | $LD_{50}$ | 124.7 mg/l of air | 4 hours | Rat (Rattus norvegicus) | F/M |

| propan-2-ol | | | | | |
|---|---|---|---|---|---|
| Route of exposure | Parameter | Value | Exposure time | Species | Sex |
| Inhalation (vapor) | $LC_{50}$ | 47.5 mg/l of air | 8 hours | Rat | F/M |
| Oral | $LD_{50}$ | 4400 mg/kg bw | | Rat (Rattus norvegicus) | F/M |
| Dermal | $LD_{50}$ | 12900 mg/kg bw | | Rabbit | F/M |

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

**Serious eye damage/irritation**
Causes serious eye irritation.

| propan-2-ol | | | | |
|---|---|---|---|---|
| Route of exposure | Result | Method | Exposure time | Species |
| Eye | Serious eye damage | OECD 405 | | Rabbit |

**Respiratory or skin sensitisation**
Based on available data the classification criteria are not met.

| propan-2-ol | | | | |
|---|---|---|---|---|
| Route of exposure | Result | Exposure time | Species | Sex |
| | Not sensitizing | | Guinea-pig | F/M |

**Germ cell mutagenicity**
Based on available data the classification criteria are not met.

**Carcinogenicity**
Based on available data the classification criteria are not met.

**Reproductive toxicity**
Based on available data the classification criteria are not met.

**Toxicity for specific target organ - single exposure**
Based on available data the classification criteria are not met.

**Toxicity for specific target organ - repeated exposure**
Based on available data the classification criteria are not met.

| propan-2-ol | | | | | |
|---|---|---|---|---|---|
| Route of exposure | Parameter | Value | Result | Species | Sex |
| Inhalation (vapor) | NOEC | 500 ppm | | Rat (Rattus norvegicus) | F/M |

**Aspiration hazard**
Based on available data the classification criteria are not met.

**11.2. Information on other hazards**
not available

**SECTION 12: Ecological information**

**12.1. Toxicity**
The product is not classified as hazardous to the aquatic environment.
**Acute toxicity**

| **butanone** | | | | |
|---|---|---|---|---|
| Parameter | Value | Exposure time | Species | Environment |
| $LC_{50}$ | 3220 mg/l | 96 hours | Fish (Pimephales promelas) | |
| $EC_{50}$ | 5091 mg/l | 48 hours | Daphnia (Daphnia magna) | |
| $EC_{50}$ | 4300 mg/l | 168 hours | Algae and other aquatic plants (Scenedesmus quadricauda) | |

| **ethanol** | | | | |
|---|---|---|---|---|
| Parameter | Value | Exposure time | Species | Environment |
| $LC_{50}$ | 8140 mg/l | 48 hours | Fish (Leuciscus idus) | |
| $EC_{50}$ | 9268-14221 mg/l | 48 hours | Daphnia (Daphnia magna) | |
| $IC_{50}$ | 5000 mg/l | 7 days | Algae and other aquatic plants (Scenedesmus quadricauda) | |

| **propan-2-ol** | | | | |
|---|---|---|---|---|
| Parameter | Value | Exposure time | Species | Environment |
| $EC_{50}$ | 2285 mg/l | 48 hours | Daphnia (Daphnia magna) | |
| $LC_{50}$ | 9640 mg/l | 96 hours | Fish | Fresh water |
| NOEC | 141 mg/l | 16 days | Daphnia (Daphnia magna) | |
| $ErC_{50}$ | 10500 mg/l | 48 days | Algae (Pseudokirchneriella subspicata ) | |

**12.2. Persistence and degradability**
No data for the mixture.

**12.3. Bioaccumulative potential**
Not available.

| **butanone** | | | | | |
|---|---|---|---|---|---|
| Parameter | Value | Exposure time | Species | Environment | Temperature [°C] |
| BCF | 3 | | | | |
| Log Pow | 0.29 | | | | |

| ethanol | | | | | |
|---|---|---|---|---|---|
| Parameter | Value | Exposure time | Species | Environment | Temperature [°C] |
| Log Pow | -0.31 | | | | |
| BCF | 3 | | | | |

**12.4. Mobility in soil**

Not available.

| butanone | | | |
|---|---|---|---|
| Parameter | Value | Environment | Temperature |
| Koc | 1 | | |

| ethanol | | | |
|---|---|---|---|
| Parameter | Value | Environment | Temperature |
| Koc | 1 | | |

**12.5. Results of PBT and vPvB assessment**

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

**12.6. Endocrine disrupting properties**

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

**12.7. Other adverse effects**

Not available.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

**Waste management legislation**

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

**Waste type code**

19 02 08* liquid combustible wastes containing hazardous substances

**Packaging waste type code**

15 01 10* packaging containing residues of or contaminated by hazardous substances

15 01 02 plastic packaging

(*) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

## SECTION 14: Transport information

**14.1. UN number or ID number**

UN 1170

**14.2. UN proper shipping name**

ETHANOL

**14.3. Transport hazard class(es)**

3 Flammable liquids

**14.4. Packing group**

II

**14.5. Environmental hazards**

Not hazardous for the environment.

**14.6. Special precautions for user**

Reference in the Sections 4 to 8.

**14.7. Maritime transport in bulk according to IMO instruments**

not relevant

**Additional information**

| | |
|---|---|
| Hazard identification No. | 33 |
| UN number | 1170 |
| Classification code | F1 |
| Safety signs | 3 |


| | |
|---|---|
| Tunnel restriction code | (D/E) |

**Air transport - ICAO/IATA**

| | |
|---|---|
| Packaging instructions passenger | 353 |
| Cargo packaging instructions | 364 |

**Marine transport - IMDG**

| | |
|---|---|
| EmS (emergency plan) | F-E, S-D |
| MFAG | 305 |

## SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended.

**15.2. Chemical safety assessment**

A safety assessment for the mixture is not required.

## SECTION 16: Other information

**A list of standard risk phrases used in the safety data sheet**

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

**Guidelines for safe handling used in the safety data sheet**

| | |
|---|---|
| P102 | Keep out of reach of children. |
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P233 | Keep container tightly closed. |
| P243 | Take action to prevent static discharges. |
| P264 | Wash hands and exposed parts of the body thoroughly after handling. |

| | |
|---|---|
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P501 | Dispose of contents/container to properly labeled waste containers in accordance with national regulations. |

**A list of additional standard phrases used in the safety data sheet**

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

**Other important information about human health protection**

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1.

**Key to abbreviations and acronyms used in the safety data sheet**

| | |
|---|---|
| ADR | European agreement concerning the international carriage of dangerous goods by road |
| BCF | Bioconcentration Factor |
| CAS | Chemical Abstracts Service |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures |
| EC | Identification code for each substance listed in EINECS |
| $EC_{50}$ | Concentration of a substance when it is affected 50% of the population |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| EmS | Emergency plan |
| EU | European Union |
| EuPCS | European Product Categorisation System |
| IATA | International Air Transport Association |
| IBC | International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals |
| $IC_{50}$ | Concentration causing 50% blockade |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods |
| IMO | International Maritime Organization |
| INCI | International Nomenclature of Cosmetic Ingredients |
| ISO | International Organization for Standardization |
| IUPAC | International Union of Pure and Applied Chemistry |
| $LC_{50}$ | Lethal concentration of a substance in which it can be expected death of 50% of the population |
| $LD_{50}$ | Lethal dose of a substance in which it can be expected death of 50% of the population |
| log Kow | Octanol-water partition coefficient |
| NOEC | No observed effect concentration |
| OEL | Occupational Exposure Limits |
| PBT | Persistent, Bioaccumulative and Toxic |
| ppm | Parts per million |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Agreement on the transport of dangerous goods by rail |
| UN | Four-figure identification number of the substance or article taken from the UN Model Regulations |
| UVCB | Substances of unknown or variable composition, complex reaction products or biological materials |
| VOC | Volatile organic compounds |
| vPvB | Very Persistent and very Bioaccumulative |
| | |
| Eye Irrit. | Eye irritation |
| Flam. Liq. | Flammable liquid |
| STOT SE | Specific target organ toxicity - single exposure |

**Training guidelines**

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

**Recommended restrictions of use**

not available

**Information about data sources used to compile the Safety Data Sheet**

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

**More information**

Raw material Safety Data Sheets were used to evaluate this product. Data was used in accordance with Article 9 paragraph 4 of Regulation (EC) No 1272/2008. Classification procedure - calculation method.

**Statement**

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.