

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

Article No.: 398
Print date: 26.12.2022
Version: 8.0

PUROL Aktiv-Reiniger
Revision date: 10.12.2022
Issue date: 10.12.2022

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

1.1. Product identifier

Article No. (manufacturer/supplier) 398
Trade name/designation PUROL Aktiv-Reiniger

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

Relevant identified uses

Coating material to protecting surfaces

1.3. Details of the supplier of the safety data sheet

supplier (manufacturer/importer/downstream user/distributor)

Knuchel Farben AG

Farben + Lacke

Steinackerweg 11

CH-4537 Wiedlisbach

Telephone: +41 (0) 32 636 50 40

Telefax: +41 (0) 32 636 50 45

Department responsible for information:

laboratory Manager

E-mail (competent person)

info@knuchel.ch

1.4. Emergency telephone number

Emergency telephone number 145 (+41 (0)44 251 51 51)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

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

Skin Irrit. 2 / H315

Skin corrosion/irritation

Causes skin irritation.

Eye Irrit. 2 / H319

Serious eye damage/eye irritation

Causes serious eye irritation.

2.2. Label elements

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

Hazard pictograms



Warning

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves and eye/face protection.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

Hazard components for labelling

not applicable

Supplemental hazard information

not applicable

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

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3.2. Mixtures

Description polyisocyanate based preparation, containing the following hazardous substances:

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

| EC No. CAS No. Index No. | REACH No. Designation classification: // Remark | weight-% |
|--|---|----------|
| 203-905-0 111-76-2 603-014-00-0 | 01-2119475108-36 2-butoxyethanol Acute Tox. 4 H332 / Acute Tox. 4 H312 / Acute Tox. 4 H302 / Eye Irrit. 2 H319 / Skin Irrit. 2 H315 Acute toxicity estimate (ATE): ATE (oral): 1300 mg/kg bw / ATE (dermal): 2000 mg/kg bw | 5 - 10 |
| 68154-97-2 | ALKOHOLE, C10-C12, ETHOXYLATED, PROPOXYLATED Eye Irrit. 2 H319 | 1 - 5 |
| 215-181-3 1310-58-3 019-002-00-8 | potassium hydroxide Acute Tox. 4 H302 / Skin Corr. 1A H314 Specific concentration limit (SCL): Skin Corr. 1A H314 >= 5 / Skin Corr. 1B H314 >= 2 / Skin Irrit. 2 H315 >= 0.5 / Eye Irrit. 2 H319 >= 0.5 | 1 - 5 |
| 229-912-9 6834-92-0 014-010-00-8 | 01-2119449811-37 disodium metasilicate Skin Corr. 1B H314 / STOT SE 3 H335 / Met. Corr. 1 H290 | 1 - 5 |
| 248-983-7 28348-53-0 | 01-2119489411-37 Sodium cumenesulfanate Eye Irrit. 2 H319 | 1 - 5 |
| 248-827-8 28085-69-0 | 01-2119489427-24 potassium cumenesulfonate Eye Irrit. 2 H319 | 1 - 5 |

Additional information

Full text of H-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

Following skin contact

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

Following ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

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

In all cases of doubt, or when symptoms persist, seek medical advice.

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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Suitable extinguishing media

alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

Unsuitable extinguishing media

strong water jet

5.2. Special hazards arising from the substance or mixture

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

5.3. Advice for firefighters

Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ventilate affected area. Do not breathe vapours.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Clean using cleansing agents. Do not use solvents.

6.4. Reference to other sections

Observe protective provisions (see section 7 and 8).

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advices on safe handling

Avoid contact with skin, eyes and clothes. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Further information on storage conditions

Store in a well-ventilated and dry room at temperatures between 15 °C and 30 °C. Keep container tightly closed. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

7.3. Specific end use(s)

Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values:

2-butoxyethanol

Index No. 603-014-00-0 / EC No. 203-905-0 / CAS No. 111-76-2

WEL, TWA: 123 mg/m³; 25 ppm

WEL, STEL: 246 mg/m³; 50 ppm

Remark: (may be absorbed through the skin)

BMGV, TWA: 240 mmol/mol creatinine

Remark: Butoxyacetic acid; urine; end of exposure or end of shift

potassium hydroxide

Index No. 019-002-00-8 / EC No. 215-181-3 / CAS No. 1310-58-3

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WEL, STEL: 2 mg/m³

Additional information

TWA : Long-term occupational exposure limit value
STEL : short-term occupational exposure limit value
Ceiling : peak limitation

DNEL:

2-butoxyethanol

Index No. 603-014-00-0 / EC No. 203-905-0 / CAS No. 111-76-2

DNEL acute dermal, short-term (systemic), Workers: 89 mg/kg bw/day

DNEL long-term dermal (systemic), Workers: 75 mg/kg bw/day

DNEL acute inhalative (local), Workers: 246 mg/m³

DNEL acute inhalative (systemic), Workers: 663 mg/m³

DNEL long-term inhalative (systemic), Workers: 98 mg/m³

DNEL long-term oral (repeated), Consumer: 3,2 mg/kg bw/day

DNEL acute dermal, short-term (systemic), Consumer: 44,5 mg/kg

DNEL long-term dermal (systemic), Consumer: 38 mg/kg

DNEL acute inhalative (local), Consumer: 123 mg/m³

DNEL acute inhalative (systemic), Consumer: 426 mg/m³

DNEL long-term inhalative (systemic), Consumer: 49 mg/m³

DNEL short-term oral (systemic): 13,4 mg/kg bw/day

PNEC:

2-butoxyethanol

Index No. 603-014-00-0 / EC No. 203-905-0 / CAS No. 111-76-2

PNEC aquatic, freshwater: 8,8 mg/L

PNEC aquatic, marine water: 0,88 mg/L

PNEC aquatic, intermittent release: 9,1 mg/L

PNEC sediment, freshwater: 34,6 mg/kg dw

PNEC sediment, marine water: 3,46 mg/kg dw

PNEC, soil: 2,8 mg/kg dw

PNEC sewage treatment plant (STP): 463 mg/L

8.2. Exposure controls

Provide good ventilation. This can be achieved with local or room suction.

Personal protection equipment

Respiratory protection

Not applicable.

Hand protection

For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)

Thickness of the glove material 0,4 mm Breakthrough time: 30 min

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin: Recommended glove articles EN ISO 374

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye/face protection

Wear closely fitting protective glasses in case of splashes.

Body protection

Wear suitable protective clothing and gloves.

Protective measures

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls

Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:

Liquid

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| | |
|---|--|
| Colour: | refer to label |
| Odour: | characteristic |
| Odour threshold: | not applicable |
| Melting point/freezing point: | not applicable |
| Initial boiling point and boiling range: | 100 °C Source: PH EN 501166 GEFBEZ@tr4000 |
| Flammability | Combustible liquid. |
| Lower and upper explosion limit: | |
| Lower explosion limit: | 1.1 Vol-% |
| Upper explosion limit: | 10.6 Vol-% Source: 2-butoxyethanol |
| Flash point: | not applicable Method: DIN 53213 |
| Auto-ignition temperature: | 240 °C Source: 2-butoxyethanol |
| Decomposition temperature: | not applicable |
| pH at 20 °C: | not applicable |
| Cinematic viscosity (40°C): | < 20 mm²/s |
| Viscosity at 20 °C: | 10 - 12 sec DIN 4 mm |
| Solubility(ies): | |
| Water solubility at 20 °C: | miscible |
| Partition coefficient: n-octanol/water: | see section 12 |
| Vapour pressure at 20 °C: | 23 mbar Source: PH EN 501166 GEFBEZ@tr4000 |
| Density and/or relative density: | |
| Density at 20 °C: | 1.00 g/cm³ |
| Relative vapour density: | not applicable |
| particle characteristics: | not applicable |
| 9.2. Other information | |
| Solid content: | 7 weight-% |
| solvent content: | |
| Organic solvents: | 8 weight-% |
| Water: | 85 weight-% |

SECTION 10: Stability and reactivity

- 10.1. **Reactivity**
No information available.
- 10.2. **Chemical stability**
Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.
- 10.3. **Possibility of hazardous reactions**
Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.
- 10.4. **Conditions to avoid**
Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures.
- 10.5. **Incompatible materials**
not applicable
- 10.6. **Hazardous decomposition products**
Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

SECTION 11: Toxicological information

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

Acute toxicity

2-butoxyethanol

oral, LD50, Rat: 1300 mg/kg

Method: OECD 401

dermal, LD50, Rat: > 2000 mg/kg

oral, LD50, Guinea pig: 1414 mg/kg

Method: OECD 401

inhalative (vapours), LC0, Guinea pig, female: > 3,1 mg/L

Method: (49 CFR 173.132)

inhalative (vapours), LC0, Guinea pig, male: > 3,4 mg/L

Method: (49 CFR 173.132)

dermal, LD50, Rabbit, male: 1,06 mg/kg

Skin corrosion/irritation; Serious eye damage/eye irritation

Causes skin irritation.

Causes serious eye irritation.

2-butoxyethanol

Skin, Rabbit (4 h)

Method: Directive 67/548/EEC, Annex V, B.4.

eyes, Rabbit (24 h)

Method: OECD 405

Respiratory or skin sensitisation

2-butoxyethanol

Skin, Guinea pig: ; Evaluation not sensitising.

Method: OECD 406

Maximization test

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

2-butoxyethanol

Germ cell mutagenicity; Evaluation In vitro tests showed no mutagenic effects.

Carcinogenicity; Evaluation Didn't show any carcinogenic effects in animal tests.

Reproductive toxicity; Evaluation Some effects on reproduction were observed in animals only at high doses where toxic effects on parents were induced.

teratogenicity; Evaluation Didn't show any effect on fetus development in animal studies.

STOT-single exposure; 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.

Practical experience/human evidence

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: headache, dizziness, fatigue, amyosthenia, drowsiness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

Overall assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

11.2. Information on other hazards

Endocrine disrupting properties

No information available.

SECTION 12: Ecological information

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

Do not allow to enter into surface water or drains.

12.1. Toxicity

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2-butoxyethanol

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 1474 mg/L (96 h)
Method: OECD 203
Daphnia toxicity, EC50, Daphnia pulex (water flea): 1550 mg/L (48 h)
Method: OECD 202
Algae toxicity, ErC50, Pseudokirchneriella subcapitata: > 1 mg/L (72 h)
Method: OECD 201
Algae toxicity, NOEC, Pseudokirchneriella subcapitata: 62,5 mg/L (72 h)
Method: OECD 201
Bacterial toxicity, EC0, Pseudomonas putida: 700 mg/L (16 h)
Method: DIN 38412
Daphnia toxicity, EC50, Daphnia magna: 1,55 mg/L (48 h)
Method: OECD 202
Algae toxicity, EbC50, Desmodesmus subspicatus.: 623 mg/L (72 h)
Method: OECD 201
Daphnia toxicity, EC50, Daphnia magna: 297 mg/L (21 d)
Method: OECD 211
Daphnia toxicity, NOEC, Daphnia magna: 100 mg/L (21 d)
Method: OECD 211
Daphnia toxicity, growth test (Eb-Cx) 10%“, Daphnia magna: 134 mg/L (21 d)
Method: OECD 211
Algae toxicity, growth test (Eb-Cx) 10%“, Pseudokirchneriella subcapitata: 308 mg/L (72 h)
Method: OECD 201
Algae toxicity, Growth rate (ErCx) 10%, Pseudokirchneriella subcapitata: 679 mg/L (72 h)
Method: OECD 201

Long-term Ecotoxicity

Toxicological data are not available.

12.2. Persistence and degradability

2-butoxyethanol

Biodegradation: 90,4 percent (28 d); Evaluation Readily biodegradable (according to OECD criteria).

Method: OECD 301B

aerobic; activated sludge; based on: CO₂ formation (% of theoretical value).; The criterion for the 10 day time window is fulfilled.

12.3. Bioaccumulative potential

2-butoxyethanol

Distribution coefficient n-octanol/water (log KOW): 0,81 ; Evaluation Bioaccumulation is not to be expected.

Bioconcentration factor (BCF)

Toxicological data are not available.

12.4. Mobility in soil

2-butoxyethanol

Water: Evaluation The substance does not evaporate from the water surface into the atmosphere.

The product is water soluble.

soil: Evaluation Adsorption at ground level not to be expected.

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. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate disposal / Product

Recommendation

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

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List of proposed waste codes/waste designations in accordance with EWC

080111* Waste paint and varnish containing organic solvents or other dangerous substances

*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package

Recommendation

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

This mixture is not classified as dangerous according to international transport regulations (ADR/RID, IMDG, ICAO/IATA).

No dangerous good in sense of this transport regulation.

14.1. UN number or ID number

not applicable

14.2. UN proper shipping name

14.3. Transport hazard class(es)

not applicable

14.4. Packing group

not applicable

14.5. Environmental hazards

Land transport (ADR/RID)

not applicable

Marine pollutant

not applicable

14.6. Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

Further information

Land transport (ADR/RID)

Tunnel restriction code

-

Sea transport (IMDG)

EmS-No.

not applicable

14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according IBC - Code.

SECTION 15: Regulatory information

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

EU legislation

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]

VOC-value (in g/L): 80

National regulations

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable.

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC) or stricter national regulations, if applicable.

15.2. Chemical Safety Assessment

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

| EC No. CAS No. | Designation | REACH No. |
|------------------------|-----------------------|------------------|
| 203-905-0 111-76-2 | 2-butoxyethanol | 01-2119475108-36 |
| 229-912-9 6834-92-0 | disodium metasilicate | 01-2119449811-37 |

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|-------------------------|---------------------------|------------------|
| 248-983-7 28348-53-0 | Sodium cumenesulfanate | 01-2119489411-37 |
| 248-827-8 28085-69-0 | potassium cumenesulfonate | 01-2119489427-24 |

SECTION 16: Other information

Full text of classification in section 3

| | | |
|----------------------|-----------------------------------|--|
| Acute Tox. 4 / H332 | Acute toxicity (inhalative) | Harmful if inhaled. |
| Acute Tox. 4 / H312 | Acute toxicity (dermal) | Harmful in contact with skin. |
| Acute Tox. 4 / H302 | Acute toxicity (oral) | Harmful if swallowed. |
| Eye Irrit. 2 / H319 | Serious eye damage/eye irritation | Causes serious eye irritation. |
| Skin Irrit. 2 / H315 | Skin corrosion/irritation | Causes skin irritation. |
| Skin Corr. 1A / H314 | Skin corrosion/irritation | Causes severe skin burns and eye damage. |
| Skin Corr. 1B / H314 | Skin corrosion/irritation | Causes severe skin burns and eye damage. |
| STOT SE 3 / H335 | STOT-single exposure | May cause respiratory irritation. |
| Met. Corr. 1 / H290 | Corrosive to metals | May be corrosive to metals. |

Classification procedure

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

| | | |
|---------------|-----------------------------------|---------------------|
| Skin Irrit. 2 | Skin corrosion/irritation | Calculation method. |
| Eye Irrit. 2 | Serious eye damage/eye irritation | Calculation method. |

Abbreviations and acronyms

| | |
|-----------|---|
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| OEL | Occupational Exposure Limit Value |
| BLV | Biological Limit Value |
| CAS | Chemical Abstracts Service |
| CLP | Classification, Labelling and Packaging |
| CMR | Carcinogenic, Mutagenic and Reprotoxic |
| DIN | German Institute for Standardization / German industrial standard |
| DNEL | Derived No-Effect Level |
| EAKV | European Waste Catalogue Directive |
| EC | Effective Concentration |
| EC | European Community |
| EN | European Standard |
| IATA-DGR | International Air Transport Association – Dangerous Goods Regulations |
| IBC Code | International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk |
| ICAO-TI | International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air |
| IMDG Code | International Maritime Code for Dangerous Goods |
| ISO | International Organization for Standardization |
| LC | Lethal Concentration |
| LD | Lethal Dose |
| MARPOL | Maritime Pollution: The International Convention for the Prevention of Pollution from Ships |
| OECD | Organisation for Economic Cooperation and Development |
| PBT | persistent, bioaccumulative, toxic |
| PNEC | Predicted No Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| UN | United Nations |
| VOC | Volatile Organic Compounds |
| vPvB | very persistent and very bioaccumulative |

Further information

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

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.