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Replacing version dated / version: 25.07.2018 / 0002
Valid from: 22.02.2019
PDF print date: 11.04.2019
ATTILA DER KRUSTENBRECHER

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

1.1 Product identifier

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

Relevant identified uses of the substance or mixture:

Cleaner

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

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DR.SCHNELL GmbH & Co. KGaA, Taurusstr. 19, 80807 München, Germany
Phone:089/350608-0, Fax:089/350608-47
info@dr-schnell.com

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (DSC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

| Hazard class | Hazard category | Hazard statement |
|--------------|-----------------|---|
| Eye Dam. | 1 | H318-Causes serious eye damage. |
| Met. Corr. | 1 | H290-May be corrosive to metals. |
| Skin Corr. | 1 | H314-Causes severe skin burns and eye damage. |

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)



Danger

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H290-May be corrosive to metals. H314-Causes severe skin burns and eye damage.

P260-Do not breathe vapours or spray. P280-Wear protective gloves / protective clothing and eye protection / face protection.
 P301+P330+P331-IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353-IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310-Immediately call a POISON CENTER / doctor.

Potassium hydroxide
 Isotridecanol, ethoxylated

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

| 2-(2-butoxyethoxy)ethanol | Substance for which an EU exposure limit value applies. |
|---|--|
| Registration number (REACH) | 01-2119475104-44-XXXX |
| Index | 603-096-00-8 |
| EINECS, ELINCS, NLP | 203-961-6 |
| CAS | 112-34-5 |
| content % | 5-10 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Eye Irrit. 2, H319 |
| 2-amino-2-methylpropanol | |
| Registration number (REACH) | 01-2119475788-16-XXXX |
| Index | 603-070-00-6 |
| EINECS, ELINCS, NLP | 204-709-8 |
| CAS | 124-68-5 |
| content % | 1-5 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 3, H412 |
| Isotridecanol, ethoxylated | |
| Registration number (REACH) | --- |
| Index | --- |
| EINECS, ELINCS, NLP | 931-138-8 (REACH-IT List-No.) |
| CAS | 69011-36-5 |
| content % | 1-2,5 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Eye Dam. 1, H318 Aquatic Chronic 3, H412 |
| 3-butoxypropan-2-ol | |
| Registration number (REACH) | 01-2119475527-28-XXXX |
| Index | 603-052-00-8 |
| EINECS, ELINCS, NLP | 225-878-4 |
| CAS | 5131-66-8 |

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| | |
|--|---|
| content % | 1-2,5 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Eye Irrit. 2, H319 Skin Irrit. 2, H315 |

| | |
|--|---|
| Potassium hydroxide | |
| Registration number (REACH) | 01-2119487136-33-XXXX |
| Index | 019-002-00-8 |
| EINECS, ELINCS, NLP | 215-181-3 |
| CAS | 1310-58-3 |
| content % | 0,5-2 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Skin Corr. 1A, H314 Acute Tox. 4, H302 Met. Corr. 1, H290 Eye Dam. 1, H318 |

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
 The substances named in this section are given with their actual, appropriate classification!
 For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

SECTION 4: First aid measures

4.1 Description of first aid measures

First-aiders should ensure they are protected!
 Never pour anything into the mouth of an unconscious person!

Inhalation

Remove person from danger area.
 Supply person with fresh air and consult doctor according to symptoms.

Skin contact

Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.
 Cauterizations not treated lead to wounds difficult to heal.

Eye contact

Remove contact lenses.
 Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.
 Protect uninjured eye.
 Follow-up examination by an ophthalmologist.

Ingestion

Rinse the mouth thoroughly with water.
 Do not induce vomiting - give copious water to drink. Consult doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.
 In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.
 Corrosive burns on skin as well as mucous membrane possible.

Necrosis
 Risk of serious damage to eyes.
 Corneal damage.
 Danger of blindness.

Ingestion:
 Pain in the mouth and throat
 Gastrointestinal disturbances
 Oesophageal perforation
 Gastric perforation

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

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5.1 Extinguishing media

Suitable extinguishing media

Adapt to the nature and extent of fire.
Water jet spray/foam/CO2/dry extinguisher

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon
Oxides of nitrogen
Toxic gases

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
According to size of fire
Full protection, if necessary.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not take any measures that are associated with personal risk or have not been sufficiently trained.
Keep unprotected persons away.
Ensure sufficient supply of air.
Avoid contact with eyes or skin.
If applicable, caution - risk of slipping.

6.2 Environmental precautions

If leakage occurs, dam up.
Resolve leaks if this possible without risk.
Prevent surface and ground-water infiltration, as well as ground penetration.
Prevent from entering drainage system.
If accidental entry into drainage system occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.
Fill the absorbed material into lockable containers.
Neutralising is possible (only from a specialist).
Diluting with water is possible.
Flush residue using copious water.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.
Avoid contact with eyes or skin.
Handle and open container with care.
There should be an eyewash station and safety shower located near the area of use.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.

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Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
Store product closed and only in original packing.
Not to be stored in gangways or stair wells.
Do not store with acids.
Do not use alkali sensitive materials.
Store at room temperature.
Store in a dry place.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| GB | Chemical Name | 2-(2-butoxyethoxy)ethanol | Content %:5-10 |
|----|------------------------|--|---|
| | WEL-TWA: | 10 ppm (67,5 mg/m ³) (WEL, EU) | WEL-STEL: 15 ppm (101,2 mg/m ³) (WEL, EU) --- |
| | Monitoring procedures: | --- | |
| | BMGV: | --- | Other information: --- |

| GB | Chemical Name | Potassium hydroxide | Content %:0,5-2 |
|----|------------------------|--|-----------------------------------|
| | WEL-TWA: | --- | WEL-STEL: 2 mg/m ³ --- |
| | Monitoring procedures: | ISO 15202 (Determination of metals and metalloids in airborne particulate matter by inductive coupled plasma emission spectrometry) - 2000(Part 1), 2001(Part 2), 2004 (Part 3) - DFG (E), DFG (D) (Alkali metal hydroxides and alkali earth hydroxides) - 2001, 1998 - EU project BC/CEN/ENTR/000/2002-16 card 44-2 (2004) - OSHA ID-121 (Metal and metalloid particulates in workplace atmospheres) - 2002 - EU project BC/CEN/ENTR/000/2002-16 card 44-5 (2004) - NIOSH 7401 (Alkaline dusts) - 1994 | |
| | BMGV: | --- | Other information: --- |

| 2-(2-butoxyethoxy)ethanol | | | | | | |
|---------------------------|--|-----------------------------|------------|-------|-------------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| | Environment - freshwater | | PNEC | 1,1 | mg/l | |
| | Environment - marine | | PNEC | 0,11 | mg/l | |
| | Environment - water, sporadic (intermittent) release | | PNEC | 11 | mg/l | |
| | Environment - sediment, freshwater | | PNEC | 4,4 | mg/kg | |
| | Environment - sediment, marine | | PNEC | 0,44 | mg/kg | |
| | Environment - soil | | PNEC | 0,32 | mg/kg | |
| | Environment - sewage treatment plant | | PNEC | 200 | mg/l | |
| Consumer | Human - inhalation | Short term, local effects | DNEL | 60,7 | mg/m ³ | |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 50 | mg/kg bw/d | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 40,5 | mg/m ³ | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 5 | mg/kg bw/d | |

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| | | | | | | |
|---------------------|--------------------|------------------------------|------|-------|-------------------|--|
| Consumer | Human - inhalation | Long term, local effects | DNEL | 40,5 | mg/m ³ | |
| Workers / employees | Human - oral | Long term, local effects | DNEL | 67,5 | mg/m ³ | |
| Workers / employees | Human - dermal | Short term, systemic effects | DNEL | 89 | mg/kg bw/d | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 83 | mg/kg bw/d | |
| Workers / employees | Human - inhalation | Short term, local effects | DNEL | 101,2 | mg/m ³ | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 67,5 | mg/m ³ | |

| 3-butoxypropan-2-ol | | | | | | |
|----------------------------|--|-----------------------------|------------|--------|-------------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| | Environment - freshwater | | PNEC | 0,525 | mg/l | |
| | Environment - marine | | PNEC | 0,0525 | mg/l | |
| | Environment - periodic release | | PNEC | 5,25 | mg/l | |
| | Environment - sewage treatment plant | | PNEC | 10 | mg/l | |
| | Environment - sediment, freshwater | | PNEC | 2,36 | mg/kg dry weight | |
| | Environment - sediment, marine | | PNEC | 0,236 | mg/kg dry weight | |
| | Environment - soil | | PNEC | 0,16 | mg/kg dry weight | |
| Consumer | Human - dermal | Short term, local effects | DNEL | 50 | % (w/w) | |
| Consumer | Human - inhalation | Short term, local effects | DNEL | 50 | % (w/w) | |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 44 | mg/kg | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 270,5 | mg/m ³ | |
| Consumer | Human - dermal | Long term, local effects | DNEL | 50 | % (w/w) | |
| Workers / employees | Human - dermal | Short term, local effects | DNEL | 50 | % (w/w) | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 16 | mg/kg | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 33,8 | mg/m ³ | |
| Workers / employees | Human - oral | Long term, systemic effects | DNEL | 8,75 | mg/kg | |
| Workers / employees | Human - dermal | Long term, local effects | DNEL | 50 | % (w/w) | |

| Potassium hydroxide | | | | | | |
|----------------------------|--|--------------------------|------------|-------|-------------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| Consumer | Human - inhalation | Long term, local effects | DNEL | 1 | mg/m ³ | |
| Workers / employees | Human - inhalation | Long term, local effects | DNEL | 1 | mg/m ³ | |

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| Nitrilotriethanol | | | | | | |
|---------------------|--|-----------------------------|------------|-------|------------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| | Environment - freshwater | | PNEC | 0,32 | mg/l | |
| | Environment - marine | | PNEC | 0,032 | mg/l | |
| | Environment - water, sporadic (intermittent) release | | PNEC | 5,12 | mg/l | |
| | Environment - sewage treatment plant | | PNEC | 10 | mg/l | |
| | Environment - sediment, freshwater | | PNEC | 1,7 | mg/kg | |
| | Environment - sediment, marine | | PNEC | 0,17 | mg/kg | |
| | Environment - soil | | PNEC | 0,151 | mg/kg dry weight | |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 3,1 | mg/kg bw/day | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 13 | mg/kg bw/day | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 1,25 | mg/m3 | |
| Consumer | Human - inhalation | Long term, local effects | DNEL | 1,25 | mg/m3 | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 6,3 | mg/kg bw/day | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 5 | mg/m3 | |
| Workers / employees | Human - inhalation | Long term, local effects | DNEL | 5 | mg/m3 | |

GB WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).
(8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).
(8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
Applies only if maximum permissible exposure values are listed here.
Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.
These are specified by e.g. BS EN 14042.
BS EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

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Tight fitting protective goggles with side protection (EN 166).
If applicable
Face protection (EN 166).

Skin protection - Hand protection:
Use alkali resistant protective gloves (EN 374).
Recommended
Protective Neoprene® / polychloroprene gloves (EN 374).
Minimum layer thickness in mm:
0,5
Permeation time (penetration time) in minutes:
240
Protective nitrile gloves (EN 374).
Minimum layer thickness in mm:
0,5
Permeation time (penetration time) in minutes:
480
Protective hand cream recommended.
The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:
Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:
Normally not necessary.
If OES or MEL is exceeded.
Filter A P2 (EN 14387), code colour brown, white
Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:
Not applicable

Additional information on hand protection - No tests have been performed.
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|----------------|
| Physical state: | Liquid |
| Colour: | Light yellow |
| Odour: | Characteristic |
| Odour threshold: | Not determined |
| pH-value: | 13,5 (100 %) |
| Melting point/freezing point: | Not determined |
| Initial boiling point and boiling range: | Not determined |
| Flash point: | Not determined |
| Evaporation rate: | Not determined |
| Flammability (solid, gas): | n.a. |
| Lower explosive limit: | Not determined |
| Upper explosive limit: | Not determined |
| Vapour pressure: | Not determined |

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|--|---|
| Vapour density (air = 1): | Not determined |
| Density: | Not determined |
| Bulk density: | n.a. |
| Solubility(ies): | Not determined |
| Water solubility: | Soluble |
| Partition coefficient (n-octanol/water): | Not determined |
| Auto-ignition temperature: | Not determined |
| Decomposition temperature: | Not determined |
| Viscosity: | Not determined |
| Explosive properties: | Product is not explosive. When using: development of explosive vapour/air mixture possible. |
| Oxidising properties: | No |

9.2 Other information

| | |
|---------------------------|----------------|
| Miscibility: | Not determined |
| Fat solubility / solvent: | Not determined |
| Conductivity: | Not determined |
| Surface tension: | Not determined |
| Solvents content: | Not determined |

SECTION 10: Stability and reactivity

10.1 Reactivity

Product corrodes metals.

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

Avoid contact with strong acids (exothermic reaction possible).

Avoid contact with certain metals e.g. aluminium (development of hydrogen gas possible).

10.4 Conditions to avoid

None known

10.5 Incompatible materials

Avoid contact with strong acids.

Avoid contact with strong oxidizing agents.

Avoid contact with alkali sensitive materials.

Avoid contact with certain metals e.g. aluminium.

10.6 Hazardous decomposition products

No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

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| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
|---|----------|-------|-------|----------|-------------|------------------|
| Acute toxicity, by oral route: | ATE | >2000 | mg/kg | | | calculated value |
| Acute toxicity, by dermal route: | | | | | | n.d.a. |
| Acute toxicity, by inhalation: | | | | | | n.d.a. |
| Skin corrosion/irritation: | | | | | | n.d.a. |
| Serious eye damage/irritation: | | | | | | n.d.a. |
| Respiratory or skin sensitisation: | | | | | | n.d.a. |
| Germ cell mutagenicity: | | | | | | n.d.a. |
| Carcinogenicity: | | | | | | n.d.a. |
| Reproductive toxicity: | | | | | | n.d.a. |
| Specific target organ toxicity - single exposure (STOT-SE): | | | | | | n.d.a. |

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| | | | | | | |
|---|--|--|--|--|--|--------|
| Specific target organ toxicity - repeated exposure (STOT-RE): | | | | | | n.d.a. |
| Aspiration hazard: | | | | | | n.d.a. |
| Symptoms: | | | | | | n.d.a. |

| 2-(2-butoxyethoxy)ethanol | | | | | | |
|------------------------------------|-----------------|--------------|-------------|-----------------|---|---|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | LD50 | >5000 | mg/kg | Rat | OECD 401 (Acute Oral Toxicity) | |
| Acute toxicity, by dermal route: | LD50 | 2764 | mg/kg | Rabbit | OECD 402 (Acute Dermal Toxicity) | |
| Skin corrosion/irritation: | | | | Rabbit | OECD 404 (Acute Dermal Irritation/Corrosion) | Negative |
| Serious eye damage/irritation: | | | | Rabbit | OECD 405 (Acute Eye Irritation/Corrosion) | Eye Irrit. 2 |
| Respiratory or skin sensitisation: | | | | Guinea pig | OECD 406 (Skin Sensitisation) | No (skin contact) |
| Germ cell mutagenicity: | | | | | OECD 471 (Bacterial Reverse Mutation Test) | Negative |
| Germ cell mutagenicity: | | | | | OECD 473 (In Vitro Mammalian Chromosome Aberration Test) | Negative |
| Germ cell mutagenicity: | | | | | OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test) | Negative |
| Germ cell mutagenicity: | | | | | OECD 476 (In Vitro Mammalian Cell Gene Mutation Test) | Negative |
| Reproductive toxicity: | | | | Rat | OECD 414 (Prenatal Developmental Toxicity Study) | Negative, Analogous conclusion |
| Aspiration hazard: | | | | | | No |
| Symptoms: | | | | | | breathing difficulties, respiratory distress, diarrhoea, coughing, mucous membrane irritation, dizziness, watering eyes, nausea |

| Isotridecanol, ethoxylated | | | | | | |
|-----------------------------------|-----------------|--------------|-------------|-----------------|--------------------|------------------------------------|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | LD50 | >2000 | mg/kg | Rat | | Analogous conclusion |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rabbit | | Analogous conclusion |
| Skin corrosion/irritation: | | | | Rabbit | | Not irritant, Analogous conclusion |
| Serious eye damage/irritation: | | | | Rabbit | | Eye Dam. 1>10% solution |

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| | | | | | | | |
|--|--|--|--|--|--|--|--|
| 12.2. Persistence and degradability: | | | | | | | The surfactant(s) contained in this mixture complies(compl y) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer. |
| 12.3. Bioaccumulative potential: | | | | | | | n.d.a. |
| 12.4. Mobility in soil: | | | | | | | n.d.a. |
| 12.5. Results of PBT and vPvB assessment | | | | | | | n.d.a. |
| 12.6. Other adverse effects: | | | | | | | n.d.a. |
| Other information: | | | | | | | DOC-elimination degree(complex ing organic substance)>= 80%/28d: n.a. |

| 2-(2-butoxyethoxy)ethanol | | | | | | | |
|----------------------------|-----------|-------|-------|------|-------------------------|--|-------|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| 12.1. Toxicity to algae: | NOEC/NOEL | 96h | >100 | mg/l | Desmodesmus subspicatus | OECD 201 (Alga, Growth Inhibition Test) | |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 48h | >=100 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| Toxicity to bacteria: | EC10 | 30min | >1995 | mg/l | activated sludge | OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)) | |

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| | | | | | | | |
|--|---------|-----|------|------|---------------------|--|---|
| 12.3. Bioaccumulative potential: | Log Pow | | 1 | | | OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method) | |
| 12.1. Toxicity to fish: | LC50 | 96h | 1300 | mg/l | Lepomis macrochirus | OECD 203 (Fish, Acute Toxicity Test) | |
| 12.1. Toxicity to daphnia: | EC50 | 48h | >100 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| 12.2. Persistence and degradability: | | 28d | 76 | % | | OECD 301 D (Ready Biodegradability - Closed Bottle Test) | |
| 12.2. Persistence and degradability: | | 28d | 100 | % | activated sludge | OECD 302 B (Inherent Biodegradability - Zahn-Wellens/EMPA Test) | |
| 12.5. Results of PBT and vPvB assessment | | | | | | | No PBT substance, No vPvB substance |
| Other information: | | | | | | | Does not contain any organically bound halogens which can contribute to the AOX value in waste water. |

| Isotridecanol, ethoxylated | | | | | | | |
|--------------------------------------|-----------------|-------------|--------------|-------------|-------------------------|--|-----------------------|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| 12.1. Toxicity to fish: | LC50 | 96h | >1-10 | mg/l | Cyprinus caprio | OECD 203 (Fish, Acute Toxicity Test) | |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 21d | 1,36 | mg/l | Daphnia magna | QSAR | |
| 12.1. Toxicity to daphnia: | EC50 | 48h | >1-10 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| 12.1. Toxicity to algae: | EC50 | 72h | >1-10 | mg/l | Desmodesmus subspicatus | OECD 201 (Alga, Growth Inhibition Test) | |
| 12.2. Persistence and degradability: | | 28d | >60 | % | | OECD 301 B (Ready Biodegradability - Co2 Evolution Test) | Readily biodegradable |
| 12.3. Bioaccumulative potential: | | | | | | | Not to be expected |
| Toxicity to bacteria: | EC50 | | >140 | mg/l | Pseudomonas putida | ISO 10712 | |

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| | | | | | | | |
|-----------------------|------|-----|-------|-------|-----------------|---|--|
| Toxicity to annelids: | LC50 | 14d | >1000 | mg/kg | Eisenia foetida | OECD 207 (Earthworm, Acute Toxicity Tests) | |
|-----------------------|------|-----|-------|-------|-----------------|---|--|

| 3-butoxypropan-2-ol | | | | | | | |
|--|-----------|------|---------|-----------|----------------------------------|---|--|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| Other information: | ThOD | | 0,242 | g/g | | | |
| 12.1. Toxicity to fish: | LC50 | 96h | >100 | mg/l | Pimephales promelas | | |
| 12.1. Toxicity to daphnia: | EC50 | 48h | 1000 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| 12.1. Toxicity to algae: | NOEC/NOEL | 96h | 560 | mg/l | Pseudokirchnerie lla subcapitata | OECD 201 (Alga, Growth Inhibition Test) | |
| 12.1. Toxicity to algae: | EC50 | 96h | >1000 | mg/l | Pseudokirchnerie lla subcapitata | OECD 201 (Alga, Growth Inhibition Test) | |
| 12.2. Persistence and degradability: | DOC | 28d | 90 | % | activated sludge | OECD 301 E (Ready Biodegradability - Modified OECD Screening Test) | Readily biodegradable |
| 12.3. Bioaccumulative potential: | Log Pow | | 1,15 | | | | A notable biological accumulation potential is not to be expected (LogPow 1-3). |
| 12.3. Bioaccumulative potential: | BCF | | <100 | | | | |
| 12.4. Mobility in soil: | Koc | | 1,3-6 | | | | |
| 12.4. Mobility in soil: | H (Henry) | | 0,39111 | Pa*m3/mol | | | Expert judgement25°C |
| 12.5. Results of PBT and vPvB assessment | | | | | | | No PBT substance, No vPvB substance |
| Toxicity to bacteria: | EC50 | 180h | >1000 | mg/l | activated sludge | OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)) | |
| Water solubility: | | | 6 - 52 | g/l | | | |

| Potassium hydroxide | | | | | | | |
|--------------------------------------|----------|-------|-------|------|----------------------------|-------------|--|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| 12.1. Toxicity to fish: | LC50 | 96h | 80 | mg/l | Gambusia affinis | | |
| 12.1. Toxicity to fish: | LC50 | 24h | 165 | mg/l | Poecilia reticulata | | |
| 12.2. Persistence and degradability: | | | | | | | Not relevant for inorganic substances. |
| 12.3. Bioaccumulative potential: | | | | | | | Not to be expected |
| Toxicity to bacteria: | EC50 | 15min | 22 | mg/l | Photobacterium phosphoreum | | |

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.
Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)
20 01 29 detergents containing hazardous substances

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. suitable incineration plant.

E.g. dispose at suitable refuse site.

For contaminated packing material

Pay attention to local and national official regulations.

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

15 01 02 plastic packaging

SECTION 14: Transport information

General statements

14.1. UN number: 1719

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:

UN 1719 CAUSTIC ALKALI LIQUID, N.O.S (SODIUM HYDROXIDE,POTASSIUM HYDROXIDE)

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

Classification code:

C5

LQ:

5 L

14.5. Environmental hazards:

Not applicable

Tunnel restriction code:

E

Transport by sea (IMDG-code)

14.2. UN proper shipping name:

CAUSTIC ALKALI LIQUID, N.O.S (SODIUM HYDROXIDE,POTASSIUM HYDROXIDE)

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

EmS:

F-A, S-B

Marine Pollutant:

n.a

14.5. Environmental hazards:

Not applicable

Transport by air (IATA)

14.2. UN proper shipping name:

Caustic alkali liquid, n.o.s (SODIUM HYDROXIDE,POTASSIUM HYDROXIDE)

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

14.5. Environmental hazards:

Not applicable

14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.

All persons involved in transporting must observe safety regulations.

Precautions must be taken to prevent damage.

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

Freighted as packaged goods rather than in bulk, therefore not applicable.

Minimum amount regulations have not been taken into account.

Danger code and packing code on request.

Comply with special provisions.



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SECTION 15: Regulatory information

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

Observe restrictions:
 Comply with national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!
 Regulation (EC) No 1907/2006, Annex XVII
 2-(2-butoxyethoxy)ethanol
 Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC): 3,7 %

REGULATION (EC) No 648/2004

less than 5 %
 amphoteric surfactants
 non-ionic surfactants

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 2, 3, 8, 11, 12, 16
 Employee training in handling dangerous goods is required.
 These details refer to the product as it is delivered.
 Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

| Classification in accordance with regulation (EC) No. 1272/2008 (CLP) | Evaluation method used |
|---|---------------------------------------|
| Eye Dam. 1, H318 | Classification based on the pH value. |
| Met. Corr. 1, H290 | Classification based on test data. |
| Skin Corr. 1, H314 | Classification based on the pH value. |

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H314 Causes severe skin burns and eye damage.
 H290 May be corrosive to metals.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H412 Harmful to aquatic life with long lasting effects.

Eye Dam. — Serious eye damage
 Met. Corr. — Substance or mixture corrosive to metals
 Skin Corr. — Skin corrosion
 Eye Irrit. — Eye irritation
 Skin Irrit. — Skin irritation
 Aquatic Chronic — Hazardous to the aquatic environment - chronic
 Acute Tox. — Acute toxicity - oral

Any abbreviations and acronyms used in this document:

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AC Article Categories
acc., acc. to according, according to
ACGIH American Conference of Governmental Industrial Hygienists
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOEL Acceptable Operator Exposure Level
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF Bioconcentration factor
BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)
BMGV Biological monitoring guidance value (EH40, UK)
BOD Biochemical oxygen demand
BSEF Bromine Science and Environmental Forum
bw body weight
CAS Chemical Abstracts Service
CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
CIPAC Collaborative International Pesticides Analytical Council
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
COD Chemical oxygen demand
CTFA Cosmetic, Toiletry, and Fragrance Association
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
DT50 Dwell Time - 50% reduction of start concentration
DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
dw dry weight
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EC European Community
ECHA European Chemicals Agency
EEA European Economic Area
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EN European Norms
EPA United States Environmental Protection Agency (United States of America)
ERC Environmental Release Categories
ES Exposure scenario
etc. et cetera
EU European Union
EWC European Waste Catalogue
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
HET-CAM Hen's Egg Test - Chorionallantoic Membrane
HGWP Halocarbon Global Warming Potential
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Container
IBC (Code) International Bulk Chemical (Code)
IC Inhibitory concentration
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform Chemical Information Database

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LC lethal concentration
LC50 lethal concentration 50 percent kill
LCLo lowest published lethal concentration
LD Lethal Dose of a chemical
LD50 Lethal Dose, 50% kill
LDLo Lethal Dose Low
LOAEL Lowest Observed Adverse Effect Level
LOEC Lowest Observed Effect Concentration
LOEL Lowest Observed Effect Level
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute of Occupational Safety and Health (United States of America)
NOAEC No Observed Adverse Effective Concentration
NOAEL No Observed Adverse Effect Level
NOEC No Observed Effect Concentration
NOEL No Observed Effect Level
ODP Ozone Depletion Potential
OECD Organisation for Economic Co-operation and Development
org. organic
PAH polycyclic aromatic hydrocarbon
PBT persistent, bioaccumulative and toxic
PC Chemical product category
PE Polyethylene
PNEC Predicted No Effect Concentration
POCP Photochemical ozone creation potential
ppm parts per million
PROC Process category
PTFE Polytetrafluorethylene
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SADT Self-Accelerating Decomposition Temperature
SAR Structure Activity Relationship
SU Sector of use
SVHC Substances of Very High Concern
Tel. Telephone
ThOD Theoretical oxygen demand
TOC Total organic carbon
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO World Health Organization
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

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**Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax:
+49 5233 94 17 90**

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