



Safety Data Sheet

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

(This safety data sheet is for information only and does not
comply with the official language requirements of article 31 (5)
of REACH.)

OPN-Car-Shampoo Concentrate

Version number: 5.0
Replaces version of: 15.03.2023 (4)

Revision: 16.11.2023
First version: 16.03.2021

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

1.1 Product identifier

| | |
|---------------------------------|------------------------------------|
| Trade name | <u>OPN-Car-Shampoo Concentrate</u> |
| Article number | 16392 |
| Unique formula identifier (UFI) | E5DF-R1JN-K007-M880 |

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

| | |
|--------------------------|----------------|
| Relevant identified uses | Cleaning agent |
|--------------------------|----------------|

1.3 Details of the supplier of the safety data sheet

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1.4 24 hours Emergency telephone number

Poison Information Center Freiburg +49(0)761/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

| Classification | | | | |
|----------------|-----------------------------------|----------|---------------------------|------------------|
| Section | Hazard class | Category | Hazard class and category | Hazard statement |
| 3.3 | serious eye damage/eye irritation | 1 | Eye Dam. 1 | H318 |

For full text of abbreviations: see SECTION 16

2.2 Label elements

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

Signal word danger

Pictograms

GHS05



Hazard statements

H318 Causes serious eye damage.

Precautionary statements

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

P102 Keep out of reach of children.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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

P310 Immediately call a POISON CENTER/doctor.

P501 Dispose of contents / container in accordance with national regulations of the disposal.

Hazardous ingredients for labelling

alcohols, C13-iso-, ethoxylated
amides, C8-18 (even numbered) and C18-unsatd.,
N,N-bis(hydroxyethyl)
1-propanaminium, 3-amino-N-(carboxymethyl)-
N,N-dimethyl-, N-(C8-18(even numbered) and C18
unsaturated acyl) derivs., hydroxides, inner salts

Additional labelling requirements

see section 15 of the safety data sheet

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0,1\%$.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0,1\%$.

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SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

| Hazardous ingredients | | | | |
|--|---|----------|---|-----------------|
| Name of substance | Identifier | Wt% | Classification acc. to GHS | Notes |
| alcohols, C13-iso-, ethoxylated | CAS No 9043-30-5 | 5 – < 10 | Acute Tox. 4 / H302 Eye Dam. 1 / H318 | - |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | CAS No 147170-44-3 EC No 931-333-8 REACH Reg. No 01-2119489410-39-xxxx | 3 – < 5 | Eye Dam. 1 / H318 Aquatic Chronic 3 / H412 | - |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | EC No 931-329-6 REACH Reg. No 01-2119490100-53-xxxx | 1 – < 3 | Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Aquatic Chronic 2 / H411 | - |
| 2-butoxyethanol | CAS No 111-76-2 EC No 203-905-0 Index No 603-014-00-0 | 1 – < 3 | Acute Tox. 4 / H302 Acute Tox. 3 / H331 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 | GHS-HC IOELV |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | CAS No 1335202-95-3 EC No 931-216-1 REACH Reg. No 01-2119472309-33 | 1 – < 3 | Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 | - |

Notes

GHS- Harmonised classification (the classification of the substance corresponds to the entry in the list according to

HC: 1272/2008/EC, Annex VI)

IOELV: Substance with a community indicative occupational exposure limit value

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| Name of substance | Specific Conc. Limits | M-Factors | ATE | Exposure route |
|--|--|-----------|--------------------------|----------------------------|
| alcohols, C13-iso-, ethoxylated | - | - | 500 mg/kg | oral |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | Eye Dam. 1; H318: C ≥ 10 % Eye Irrit. 2; H319: 4 % ≤ C < 10 % | - | - | - |
| 2-butoxyethanol | - | - | 1.200 mg/kg 3 mg/l/4h | oral inhalation: vapour |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | Skin Irrit. 2; H315: C ≥ 28 % Eye Irrit. 2; H319: C ≥ 28 % | - | - | - |

For full text of H-phrases: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Self-protection of the first aider.

Remove affected person from the danger area and lay down.

Do not leave affected person unattended.

Take off immediately all contaminated clothing.

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

Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

This information is not available.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Hazardous combustion products

nitrogen oxides (NO_x), carbon monoxide (CO), carbon dioxide (CO₂)

5.3 Advice for firefighters

Non-combustible.

Keep containers cool with water spray.

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Wear self-contained breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to clean up a spill

Collect spillage.

Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes.

Do not breathe vapour/spray.

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Specific notes/details

None.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

frost

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Consideration of other advice

Keep away from food, drink and animal feeding stuffs.

Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Keep container tightly closed and in a well-ventilated place.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Occupational exposure limit values (Workplace Exposure Limits) | | | | | | | | | |
|--|-----------------|----------|------------|-----------|-------------|------------|--------------|-------------|------------|
| Country | Name of agent | CAS No | Identifier | TWA [ppm] | TWA [mg/m³] | STEL [ppm] | STEL [mg/m³] | Notation | Source |
| DE | 2-butoxyethanol | 111-76-2 | MAK | 10 | 49 | 20 | 98 | H, DE-MAK-1 | DFG |
| DE | 2-butoxyethanol | 111-76-2 | AGW | 10 | 49 | 20 | 98 | H, Y | TRGS 900 |
| EU | 2-butoxyethanol | 111-76-2 | IOELV | 20 | 98 | 50 | 246 | H | 2000/39/EC |

Notation

DE-MAK-1 MAK value for the sum of the air concentrations of 2-butoxyethanol and 2-butoxyethyl acetate.

H absorbed through the skin

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Y a risk of developmental toxicity does not need to be expected if the occupational exposure limit value and the biological limit value (BGW) are adhered to

| Biological limit values | | | | | | | |
|-------------------------|-----------------|---------------------|------------|------------|----------|----------|----------|
| Country | Name of agent | Parameter | Notation | Identifier | Value | Material | Source |
| DE | 2-butoxyethanol | 2-butoxyacetic acid | hydr, crea | BAT | 150 mg/l | urine | DFG |
| DE | 2-butoxyethanol | 2-butoxyacetic acid | hydr, crea | BLV | 150 mg/l | urine | TRGS 903 |

Notation

crea creatinine

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Notation

hydr hydrolysis

Human health values

| Relevant DNELs of components | | | | | | |
|--|--------------|-----------|------------------------|------------------------------------|-------------------|----------------------------|
| Name of substance | CAS No | End-point | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | DNEL | 44 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | DNEL | 12,5 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | DNEL | 73,4 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | DNEL | 4,16 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| 2-butoxyethanol | 111-76-2 | DNEL | 98 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | DNEL | 44 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |

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Relevant DNELs of components

| Name of substance | CAS No | End-point | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
|---|--------------|-----------|--------------------|------------------------------------|-------------------|----------------------------|
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | DNEL | 312,5 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |

Environmental values

Relevant PNECs of components

| Name of substance | CAS No | Endpoint | Threshold level | Environmental compartment |
|--|-------------|----------|-----------------|------------------------------|
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | PNEC | 0,013 mg/l | freshwater |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | PNEC | 0,001 mg/l | marine water |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | PNEC | 3.000 mg/l | sewage treatment plant (STP) |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | PNEC | 14,8 mg/kg | freshwater sediment |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | PNEC | 1,48 mg/kg | marine sediment |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | PNEC | 0,8 mg/kg | soil |

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| Relevant PNECs of components | | | | |
|---|--------------|----------|-----------------|------------------------------|
| Name of substance | CAS No | Endpoint | Threshold level | Environmental compartment |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | PNEC | 0,007 mg/l | freshwater |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | PNEC | 0,001 mg/l | marine water |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | PNEC | 830 mg/l | sewage treatment plant (STP) |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | PNEC | 0,195 mg/kg | freshwater sediment |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | PNEC | 0,019 mg/kg | marine sediment |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | PNEC | 0,035 mg/kg | soil |
| 2-butoxyethanol | 111-76-2 | PNEC | 8,8 mg/l | freshwater |
| 2-butoxyethanol | 111-76-2 | PNEC | 0,88 mg/l | marine water |
| 2-butoxyethanol | 111-76-2 | PNEC | 463 mg/l | sewage treatment plant (STP) |
| 2-butoxyethanol | 111-76-2 | PNEC | 34,6 mg/kg | freshwater sediment |
| 2-butoxyethanol | 111-76-2 | PNEC | 3,46 mg/kg | marine sediment |
| 2-butoxyethanol | 111-76-2 | PNEC | 2,33 mg/kg | soil |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | PNEC | 0,002 mg/l | freshwater |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | PNEC | 0 mg/l | marine water |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | PNEC | 2,96 mg/l | sewage treatment plant (STP) |

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| Relevant PNECs of components | | | | |
|---|--------------|----------|-----------------|---------------------------|
| Name of substance | CAS No | Endpoint | Threshold level | Environmental compartment |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | PNEC | 0,58 mg/kg | freshwater sediment |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | PNEC | 0,058 mg/kg | marine sediment |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | PNEC | 0,115 mg/kg | soil |

8.2 Exposure controls

Appropriate engineering controls

Use local and general ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection. (EN 166).

Hand protection

| Protective gloves | | |
|--|--------------------------|--|
| Material | Material thickness | Breakthrough times of the glove material |
| IIR: isobutene-isoprene (butyl) rubber | no information available | no information available |

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Body protection

Protective clothing against liquid chemicals.

(EN 13832, EN 340, EN 14605).

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White).

(EN 136, EN 140, EN 14387, EN 143, EN 149).

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Environmental exposure controls

Use appropriate container to avoid environmental contamination.
Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|-----------------------------------|
| Physical state | liquid |
| Colour | light green |
| Odour | characteristic |
| Melting point/freezing point | not determined |
| Boiling point or initial boiling point and boiling range | not determined |
| Flammability | non-combustible |
| Lower and upper explosion limit | not determined |
| Flash point | not determined |
| Auto-ignition temperature | not determined |
| Decomposition temperature | not relevant |
| pH (value) | 7 |
| Kinematic viscosity | not determined |
| Dynamic viscosity | not determined |
| Solubility(ies) | |
| Water solubility | miscible in any proportion |
| Partition coefficient n-octanol/water (log value) | not determined |
| Vapour pressure | not determined |
| Density and/or relative density | |
| Density | ~1 g/cm ³ at 20 °C |
| Relative vapour density | this information is not available |
| Particle characteristics | not relevant (liquid) |

9.2 Other information

| | |
|--|--|
| Information with regard to physical hazard classes | hazard classes acc. to GHS (physical hazards): not relevant |
|--|--|

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Other safety characteristics

there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

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

Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Test data are not available for the complete mixture.

| Acute toxicity of components | | | | | | | |
|--|-------------|----------------|-----------|-------------|---------|--------------------|--------|
| Name of substance | CAS No | Exposure route | End-point | Value | Species | Method | Source |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., | 147170-44-3 | oral | LD50 | 2.335 mg/kg | rat | OECD Guideline 401 | ECHA |

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| Acute toxicity of components | | | | | | | |
|--|--------------|----------------|-----------|--------------|------------|--------------------|--------|
| Name of substance | CAS No | Exposure route | End-point | Value | Species | Method | Source |
| hydroxides, inner salts | | | | | | | |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | dermal | LD0 | >2.000 mg/kg | rat | OECD Guideline 402 | ECHA |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | oral | LD50 | >2.000 mg/kg | rat | OECD Guideline 401 | ECHA |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | dermal | LD50 | >2.000 mg/kg | rabbit | - | ECHA |
| 2-butoxyethanol | 111-76-2 | dermal | LD0 | >2.000 mg/kg | guinea pig | OECD Guideline 402 | ECHA |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | oral | LD0 | >2.000 mg/kg | rat | EU method B.1 | ECHA |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | dermal | LD0 | >2.000 mg/kg | rat | OECD Guideline 402 | ECHA |

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Skin sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

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Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant.

Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0,1\%$.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Test data are not available for the complete mixture.

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

Aquatic toxicity (acute) of components

| Name of substance | CAS No | Endpoint | Exposure time | Value | Species | Method | Source |
|--|-------------|----------|---------------|-----------|--------------------------------------|--------------------|--------|
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsatur- | 147170-44-3 | LC50 | 96 h | 1,11 mg/l | fathead minnow (Pimephales promelas) | OECD Guideline 203 | ECHA |

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| Name of substance | CAS No | Endpoint | Exposure time | Value | Species | Method | Source |
|--|-------------|----------|---------------|------------|---------------------------------------|--------------------|--------|
| ated acyl) derivs., hydroxides, inner salts | | | | | | | |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | EC50 | 48 h | 1,9 mg/l | daphnia magna | OECD Guideline 202 | ECHA |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | LC50 | 96 h | 2,4 mg/l | rainbow trout (Oncorhynchus mykiss) | OECD Guideline 203 | ECHA |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | EC50 | 48 h | 3,2 mg/l | daphnia magna | OECD Guideline 202 | ECHA |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | EC50 | 72 h | 6.000 mg/l | activated sludge (Pseudomonas putida) | DIN 38412-8 | ECHA |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | EbC50 | 72 h | 23,4 mg/l | algae (Desmodesmus subspicatus) | EU method C.3 | ECHA |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | ErC50 | 24 h | 18,6 mg/l | algae (Desmodesmus subspicatus) | EU method C.3 | ECHA |
| 2-butoxyethanol | 111-76-2 | LC50 | 96 h | 1.474 mg/l | rainbow trout (Oncorhynchus mykiss) | OECD Guideline 203 | ECHA |

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| Name of substance | CAS No | Endpoint | Exposure time | Value | Species | Method | Source |
|---|--------------|----------|---------------|-------------|----------------------------------|--------------------|--------|
| 2-butoxyethanol | 111-76-2 | ErC50 | 72 h | >1.000 mg/l | algae (raphidocelis subcapitata) | OECD Guideline 201 | ECHA |
| 2-butoxyethanol | 111-76-2 | EC50 | 48 h | 1.550 mg/l | daphnia magna | OECD Guideline 202 | ECHA |
| 2-butoxyethanol | 111-76-2 | EbC50 | 72 h | 623 mg/l | algae (raphidocelis subcapitata) | OECD Guideline 201 | ECHA |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | EC50 | 48 h | 2,23 mg/l | daphnia magna | EU method C.2 | ECHA |

Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

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

Aquatic toxicity (chronic) of components

| Name of substance | CAS No | Endpoint | Exposure time | Value | Species | Method | Source |
|--|-------------|----------|---------------|------------|-------------------------------------|--------------------|--------|
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | NOEC | 37 d | 0,135 mg/l | rainbow trout (Oncorhynchus mykiss) | OECD Guideline 210 | ECHA |
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | LOEC | 37 d | 0,405 mg/l | rainbow trout (Oncorhynchus mykiss) | OECD Guideline 210 | ECHA |

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| Name of substance | CAS No | Endpoint | Exposure time | Value | Species | Method | Source |
|--|----------|------------------------|---------------|-----------|---------------------------------------|--------------------|--------|
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | NOEC | 21 d | 0,07 mg/l | daphnia magna | OECD Guideline 211 | ECHA |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | NOEC | 28 d | 0,32 mg/l | rainbow trout (Oncorhynchus mykiss) | OECD Guideline 204 | ECHA |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | NOEC | 3 d | 2 mg/l | algae (Desmodesmus subspicatus) | EU method C.3 | ECHA |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | LOEC | 21 d | 0,24 mg/l | daphnia magna | OECD Guideline 211 | ECHA |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | LOEC | 28 d | 1 mg/l | rainbow trout (Oncorhynchus mykiss) | OECD Guideline 204 | ECHA |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | growth rate (ErCx) 10% | 72 h | 0,83 g/l | activated sludge (Pseudomonas putida) | DIN 38412-8 | ECHA |
| 2-butoxyethanol | 111-76-2 | EC50 | 21 d | 297 mg/l | daphnia magna | OECD Guideline 211 | ECHA |
| 2-butoxyethanol | 111-76-2 | NOEC | 72 h | 62,5 mg/l | algae (raphidocelis subcapitata) | OECD Guideline 201 | ECHA |
| 2-butoxyethanol | 111-76-2 | NOEC | 21 d | 100 mg/l | daphnia magna | OECD Guideline 211 | ECHA |

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| Name of substance | CAS No | Endpoint | Exposure time | Value | Species | Method | Source |
|---|--------------|------------------------|---------------|-----------|---------------------------------------|--------------------|--------|
| 2-butoxyethanol | 111-76-2 | growth (Eb-Cx) 10% | 21 d | 134 mg/l | daphnia magna | OECD Guideline 211 | ECHA |
| 2-butoxyethanol | 111-76-2 | growth (Eb-Cx) 10% | 72 h | 308 mg/l | algae (raphidocelis subcapitata) | OECD Guideline 201 | ECHA |
| 2-butoxyethanol | 111-76-2 | growth rate (ErCx) 10% | 72 h | 679 mg/l | algae (raphidocelis subcapitata) | OECD Guideline 201 | ECHA |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | EC50 | 30 min | 60 mg/l | activated sludge (Pseudomonas putida) | DIN 38412 | ECHA |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | growth (Eb-Cx) 10% | 30 min | 29,6 mg/l | activated sludge (Pseudomonas putida) | DIN 38412 | ECHA |

12.2 Persistence and degradability

Biodegradation

Test data are not available for the complete mixture.

Degradability of components

| Name of substance | CAS No | Process | Degradation rate | Time | Method | Source |
|---------------------------------|-----------|------------------|------------------|------|-------------------------------------|--------|
| alcohols, C13-iso-, ethoxylated | 9043-30-5 | oxygen depletion | 60 % | 28 d | OECD 301B, Read-across EC 269-123-7 | - |

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| Name of substance | CAS No | Process | Degradation rate | Time | Method | Source |
|---|--------------|---------------------------|------------------|------|----------------------|--------|
| 1-pro-panaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | carbon dioxide generation | 87,2 % | 28 d | EPA OPPTS 835.3120 | ECHA |
| 1-pro-panaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | DOC removal | 80 % | 62 d | OECD Guideline 311 | ECHA |
| 2-butoxyethanol | 111-76-2 | carbon dioxide generation | 90,4 % | 28 d | OECD Guideline 301 B | ECHA |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | 1335202-95-3 | carbon dioxide generation | 116 % | 28 d | OECD Guideline 301 B | ECHA |

Persistence

No data available.

12.3 Bioaccumulative potential

Test data are not available for the complete mixture.

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Bioaccumulative potential of components

| Name of substance | CAS No | BCF | Log KOW |
|--|-------------|-------|------------------------------------|
| 1-propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C8-18(even numbered) and C18 unsaturated acyl) derivs., hydroxides, inner salts | 147170-44-3 | 3 | 1,79 – 7,17 |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | - | 65,36 | 1,35 – 4,84 (pH value: 5,5, 20 °C) |
| 2-butoxyethanol | 111-76-2 | - | 0,81 (pH value: 7, 25 °C) |

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0,1\%$.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0,1\%$.

12.7 Other adverse effects

Data are not available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 2.

Keep away from drains, surface and ground water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

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SECTION 14: Transport information

| | | |
|------|---|--------------|
| 14.1 | UN number or ID number | not assigned |
| 14.2 | UN proper shipping name | - |
| 14.3 | Transport hazard class(es) | - |
| 14.4 | Packing group | - |
| 14.5 | Environmental hazards | - |
| 14.6 | Special precautions for user | - |
| 14.7 | Maritime transport in bulk according to IMO instruments | - |

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

| Name | Name acc. to inventory | CAS No | Restriction |
|---|--|--------|-------------|
| Autoshampoo SPEZIAL | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC | - | R3 |
| amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) | substances in tattoo inks and permanent make-up | - | R75 |
| fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized | substances in tattoo inks and permanent make-up | - | R75 |
| 2-butoxyethanol | substances in tattoo inks and permanent make-up | - | R75 |

Legend

- R3
1. Shall not be used in:
 - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
 - tricks and jokes,
 - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
 2. Articles not complying with paragraph 1 shall not be placed on the market.
 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
 - can be used as fuel in decorative oil lamps for supply to the general public, and
 - present an aspiration hazard and are labelled with H304.
 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
 5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the follow-

Legend

- R75 1. Shall not be placed on the market in mixtures for use for tattooing purposes, and mixtures containing any such substances shall not be used for tattooing purposes, after 4 January 2022 if the substance or substances in question is or are present in the following circumstances:
- (a) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
 - (b) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as reproductive toxicant category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
 - (c) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin sensitiser category 1, 1A or 1B, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
 - (d) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2, or as serious eye damage category 1 or eye irritant category 2, the substance is present in the mixture in a concentration equal to or greater than:
 - (i) 0,1 % by weight, if the substance is used solely as a pH regulator;
 - (ii) 0,01 % by weight, in all other cases;
 - (e) in the case of a substance listed in Annex II to Regulation (EC) No 1223/2009 (*1), the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
 - (f) in the case of a substance for which a condition of one or more of the following kinds is specified in column g (Product type, Body parts) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight:
 - (i) "Rinse-off products";
 - (ii) "Not to be used in products applied on mucous membranes";
 - (iii) "Not to be used in eye products";
 - (g) in the case of a substance for which a condition is specified in column h (Maximum concentration in ready for use preparation) or column i (Other) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration, or in some other way, that does not accord with the condition specified in that column;
 - (h) in the case of a substance listed in Appendix 13 to this Annex, the substance is present in the mixture in a concentration equal to or greater than the concentration limit specified for that substance in that Appendix.
2. For the purposes of this entry use of a mixture "for tattooing purposes" means injection or introduction of the mixture into a person's skin, mucous membrane or eyeball, by any process or procedure (including procedures commonly referred to as permanent make-up, cosmetic tattooing, micro-blading and micro-pigmentation), with the aim of making a mark or design on his or her body.
3. If a substance not listed in Appendix 13 falls within more than one of points (a) to (g) of paragraph 1, the strictest concentration limit laid down in the points in question shall apply to that substance. If a substance listed in Appendix 13 also falls within one or more of points (a) to (g) of paragraph 1, the concentration limit laid down in point (h) of paragraph 1 shall apply to that substance.
4. By way of derogation, paragraph 1 shall not apply to the following substances until 4 January 2023:
- (a) Pigment Blue 15:3 (CI 74160, EC No 205-685-1, CAS No 147-14-8);
 - (b) Pigment Green 7 (CI 74260, EC No 215-524-7, CAS No 1328-53-6).
5. If Part 3 of Annex VI to Regulation (EC) No 1272/2008 is amended after 4 January 2021 to classify or re-classify a substance such that the substance then becomes caught by point (a), (b), (c) or (d) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the date of application of that new or revised classification is after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect on the date of application of that new or revised classification.
6. If Annex II or Annex IV to Regulation (EC) No 1223/2009 is amended after 4 January 2021 to list or change the listing of a substance such that the substance then becomes caught by point (e), (f) or (g) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the amendment takes effect after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect from the date falling 18 months after entry into force of the act by which that amendment was made.
7. Suppliers placing a mixture on the market for use for tattooing purposes shall ensure that, after 4 January 2022, the mixture is marked with the following information:
- (a) the statement "Mixture for use in tattoos or permanent make-up";

Legend

ing requirements are met:

- (a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage";
- (b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter fluid may lead to life threatening lung damage';
- (c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.;

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Legend

- (b) a reference number to uniquely identify the batch;
- (c) the list of ingredients in accordance with the nomenclature established in the glossary of common ingredient names pursuant to Article 33 of Regulation (EC) No 1223/2009, or in the absence of a common ingredient name, the IUPAC name. In the absence of a common ingredient name or IUPAC name, the CAS and EC number. Ingredients shall be listed in descending order by weight or volume of the ingredients at the time of formulation. "Ingredient" means any substance added during the process of formulation and present in the mixture for use for tattooing purposes. Impurities shall not be regarded as ingredients. If the name of a substance, used as ingredient within the meaning of this entry, is already required to be stated on the label in accordance with Regulation (EC) No 1272/2008, that ingredient does not need to be marked in accordance with this Regulation;
- (d) the additional statement "pH regulator" for substances falling under point (d)(i) of paragraph 1;
- (e) the statement "Contains nickel. Can cause allergic reactions." if the mixture contains nickel below the concentration limit specified in Appendix 13;
- (f) the statement "Contains chromium (VI). Can cause allergic reactions." if the mixture contains chromium (VI) below the concentration limit specified in Appendix 13;
- (g) safety instructions for use insofar as they are not already required to be stated on the label by Regulation (EC) No 1272/2008.

The information shall be clearly visible, easily legible and marked in a way that is indelible.

The information shall be written in the official language(s) of the Member State(s) where the mixture is placed on the market, unless the Member State(s) concerned provide(s) otherwise.

Where necessary because of the size of the package, the information listed in the first subparagraph, except for point (a), shall be included instead in the instructions for use.

Before using a mixture for tattooing purposes, the person using the mixture shall provide the person undergoing the procedure with the information marked on the package or included in the instructions for use pursuant to this paragraph.

8. Mixtures that do not contain the statement "Mixture for use in tattoos or permanent make-up" shall not be used for tattooing purposes.

9. This entry does not apply to substances that are gases at temperature of 20 °C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).

10. This entry does not apply to the placing on the market of a mixture for use for tattooing purposes, or to the use of a mixture for tattooing purposes, when placed on the market exclusively as a medical device or an accessory to a medical device, within the meaning of Regulation (EU) 2017/745, or when used exclusively as a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and of this Regulation shall apply cumulatively.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

None of the ingredients are listed.

Seveso Directive

Not assigned.

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

None of the ingredients are listed.

Regulation 648/2004/EC on detergents

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| Labelling of contents | |
|-----------------------|--|
| Wt% | Constituents |
| ≥5% - <15% | non-ionic surfactants |
| < 5 % | cationic surfactants amphoteric surfactants |
| - | perfumes preservation agents (PHENOXYETHANOL, SODIUM BENZOATE, 2-BUTYL-1,2-BENZOTHAZOL-3-ONE, LAURYLAMINE DIPROPYLENEDIAMINE) |

Regulation on the marketing and use of explosives precursors

None of the ingredients are listed.

Regulation on drug precursors

None of the ingredients are listed.

Regulation on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.

Regulation concerning the export and import of hazardous chemicals (PIC)

None of the ingredients are listed.

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

National regulations (Germany)

Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV)

Wassergefährdungsklasse, WGK 2
(water hazard class) - classification acc. to annex 1 (AwSV)

Technical instructions on air quality control (Germany)

| Number | Group of substances | Class | Conc. | Mass flow | Mass concentration | Notation |
|--------|---------------------|-------|---------------|-----------|----------------------|----------|
| 5.2.5 | organic substances | - | 10 – < 25 wt% | 0,5 kg/h | 50 mg/m ³ | 3) |

Notation

- 3) a total mass flow of 0.50 kg/h or a total mass concentration of 50 mg/m³, each of which to be indicated as total carbon, shall not be exceeded (except organic particulate matter)

Storage of hazardous substances in non-stationary containers (TRGS 510) (Germany)

Storage class (LGK) 12
(non-combustible liquids)

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Other information

Observe employment restrictions for young people according to § 22 JArbSchG.

Observe occupational restrictions for mothers acc. to § 11 MuSchG!

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value) |
|---------|---|--|
| 2.2 | - | Precautionary statements: change in the listing (table) |
| 3.2 | - | Hazardous ingredients: change in the listing (table) |
| 8.1 | - | Occupational exposure limit values (Workplace Exposure Limits): change in the listing (table) |
| 8.1 | - | Human health values Relevant DNELs of components of the mixture |
| 8.1 | - | Environmental values Relevant PNECs of components of the mixture |
| 8.2 | - | Body protection: Protective clothing against liquid chemicals. (EN 13832, EN 340, EN 14605). |
| 8.2 | Respiratory protection: In case of inadequate ventilation wear respiratory protection. Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White). | Respiratory protection: In case of inadequate ventilation wear respiratory protection. Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White). (EN 136, EN 140, EN 14387, EN 143, EN 149). |
| 15.1 | - | Restrictions according to REACH, Annex XVII: change in the listing (table) |
| 15.1 | Wassergefährdungsklasse, WGK (water hazard class): 1 - classification acc. to annex 1 (AwSV) | Wassergefährdungsklasse, WGK (water hazard class): 2 - classification acc. to annex 1 (AwSV) |

Abbreviations and acronyms

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| Abbr. | Descriptions of used abbreviations |
|-----------------|---|
| 2000/39/EC | Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC |
| Acute Tox. | Acute toxicity |
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road) |
| AGW | Workplace exposure limit |
| Aquatic Chronic | Hazardous to the aquatic environment - chronic hazard |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| CMR | Carcinogenic, Mutagenic or toxic for Reproduction |
| DFG | Deutsche Forschungsgemeinschaft MAK-und BAT-Werte-Liste, Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Wiley-VCH, Weinheim |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| EbC50 | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control |
| EC50 | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| ED | Endocrine disruptor |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| ErC50 | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control |
| Eye Dam. | Seriously damaging to the eye |
| Eye Irrit. | Irritant to the eye |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IATA | International Air Transport Association |

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| Abbr. | Descriptions of used abbreviations |
|-------------|---|
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| IMDG | International Maritime Dangerous Goods Code |
| index No | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 |
| IOELV | Indicative occupational exposure limit value |
| LC50 | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval |
| LD50 | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval |
| LGK | Lagerklasse (storage class according to TRGS 510, Germany) |
| LOEC | Lowest Observed Effect Concentration |
| log KOW | n-Octanol/water |
| NLP | No-Longer Polymer |
| NOEC | No Observed Effect Concentration |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| ppm | Parts per million |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| Skin Corr. | Corrosive to skin |
| Skin Irrit. | Irritant to skin |
| STEL | Short-term exposure limit |
| SVHC | Substance of Very High Concern |
| TRGS | Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany) |
| TRGS 900 | Arbeitsplatzgrenzwerte (TRGS 900) |
| TRGS 903 | Biologische Grenzwerte (TRGS 903) |
| TWA | Time-weighted average |
| vPvB | Very Persistent and very Bioaccumulative |

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
Regulation (EC) No. 1907/2006 (REACH).

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Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text |
|------|--|
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H331 | Toxic if inhaled. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

Disclaimer

This information is based upon the present state of our knowledge.

This SDS has been compiled and is solely intended for this product.