

BUFFER SOLUTION PH 10.00 ± 0.01

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 31/10/2017 Version: 0.0

Doc. No: SDS-908.B10/1



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

1.1. Product identifier

Product form : Mixture
Product name : BUFFER SOLUTION PH 10.00 ± 0.01 AT 20°C
Type of product : Solution

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

ISOLAB Laborgeräte GmbH
Am Dillhof 2 - 63863 Eschau / GERMANY
Tel: + 49 93 74 / 978 55-0
Fax: +49 93 74 / 978 55-29
prodsafe@isolab.de

1.4. Emergency telephone number

| Country | Organisation/Company | Address | Emergency number | Comment |
|---------|--|-----------------------------------|------------------|---------|
| Germany | Giftnotruf der Charité CBF, Haus VIII (Wirtschaftgebäude), UG | Hindenburgdamm 30 12203 Berlin | +49 30 19240 | |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

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

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--|---|-----------|---|
| disodium tetraborate, anhydrous, boric acid, disodium salt substance listed as REACH Candidate (Disodium tetraborate, anhydrous) | (CAS-No.) 1330-43-4 (EC-No.) 215-540-4 (EC Index-No.) 005-011-00-4 | 0.1 - 2.5 | Repr. 1B, H360FD |
| sodium hydroxide, caustic soda | (CAS-No.) 1310-73-2 (EC-No.) 215-185-5 (EC Index-No.) 011-002-00-6 (REACH-no) 01-2119457892-27 | 0.1 - 0.5 | Skin Corr. 1A, H314 Eye Dam. 1, H318 Met. Corr. 1, H290 |
| hydrochloric acid ... % | (EC-No.) 231-595-7 (EC Index-No.) 017-002-01-X | < 0.1 | Skin Corr. 1B, H314 STOT SE 3, H335 |

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Specific concentration limits:

| Name | Product identifier | Specific concentration limits |
|--|---|---|
| disodium tetraborate, anhydrous, boric acid, disodium salt | (CAS-No.) 1330-43-4 (EC-No.) 215-540-4 (EC Index-No.) 005-011-00-4 | (C >= 4.5) Repr. 1B, H360FD |
| sodium hydroxide, caustic soda | (CAS-No.) 1310-73-2 (EC-No.) 215-185-5 (EC Index-No.) 011-002-00-6 (REACH-no) 01-2119457892-27 | (0.5 =<C < 2) Skin Irrit. 2, H315 (0.5 =<C < 2) Eye Irrit. 2, H319 (2 =<C < 5) Skin Corr. 1B, H314 (C >= 5) Skin Corr. 1A, H314 |
| hydrochloric acid ... % | (EC-No.) 231-595-7 (EC Index-No.) 017-002-01-X | (C >= 10) STOT SE 3, H335 (10 =<C < 25) Eye Irrit. 2, H319 (10 =<C < 25) Skin Irrit. 2, H315 (C >= 25) Skin Corr. 1B, H314 |

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| disodium tetraborate, anhydrous, boric acid, disodium salt (1330-43-4) | | |
|--|--|---|
| Belgium | Local name | Borate, composés inorganiques de # Boraat, anorganische verbindingen van |
| Belgium | Limit value (mg/m ³) | 2 mg/m ³ |
| Belgium | Short time value (mg/m ³) | 6 mg/m ³ |
| Croatia | Local name | Dinatrijev tetraborat bezvodni; (Borna kiselina, dinatrijeva sol) |
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 1 mg/m ³ |
| Croatia | Naznake (HR) | T (otrovno); Repr. kat. 2 (tvari koje vjerojatno smanjuju plodnost kod ljudi i/ili – tvari koje vjerojatno uzrokuju razvojnu otrovnost kod ljudi) |
| Ireland | Local name | Borates, (tetra) sodium anhydrous |
| Ireland | OEL (8 hours ref) (mg/m ³) | 1 mg/m ³ |
| Ireland | Notes (IE) | Repr.1B |
| Spain | Local name | Borato de sodio, anhidro (Tetraborato de sodio, anhidro) |
| Spain | VLA-ED (mg/m ³) | 2 mg/m ³ |
| Spain | VLA-EC (mg/m ³) | 6 mg/m ³ |
| Spain | Notes | TR1B (Cuando las pruebas utilizadas para la clasificación procedan principalmente de datos en animales). |
| sodium hydroxide, caustic soda (1310-73-2) | | |
| Belgium | Local name | Sodium (hydroxyde de) # Natriumhydroxide |
| Belgium | Limit value (mg/m ³) | 2 mg/m ³ |
| Belgium | Remark (BE) | M: La mention M indique que lors d'une exposition supérieure à la valeur limite, des irritations apparaissent ou un danger d'intoxication aiguë existe. Le procédé de travail doit être conçu de telle façon que l'exposition ne dépasse jamais la valeur limite. Lors des mesurages, la période d'échantillonnage doit être aussi courte que possible afin de pouvoir effectuer des mesurages fiables. Le résultat des mesurages est calculé en fonction de la période d'échantillonnage.# De vermelding M duidt aan dat bij de blootstelling boven de grenswaarde irritatie optreedt of er gevaar bestaat voor acute vergiftiging. Het werkproces moet zo zijn ontworpen dat de blootstelling de grenswaarde nooit overschrijdt. Bij een controle geldt dat de bemonsterde periode zo kort mogelijk moet zijn om een betrouwbare meting te kunnen verrichten. het meetresultaat wordt dan gerelateerd aan de beschouwde periode |
| Croatia | Local name | Natrijev hidroksid; (kaustična soda) |
| Croatia | KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³) | 2 mg/m ³ |
| Croatia | Naznake (HR) | C (nagrizajuće) |
| Ireland | Local name | Sodium hydroxide |
| Ireland | OEL (15 min ref) (mg/m ³) | 2 mg/m ³ |
| Romania | Local name | Hidroxizi alcalini exprimati în hidroxid de sodium |
| Romania | OEL TWA (mg/m ³) | 1 mg/m ³ |
| Romania | OEL STEL (mg/m ³) | 3 mg/m ³ |
| Slovenia | Local name | natrijev hidroksid |
| Slovenia | OEL TWA (mg/m ³) | 2 mg/m ³ |

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| sodium hydroxide, caustic soda (1310-73-2) | | |
|--|--|--|
| Slovenia | KTV factor SL | 1 |
| Spain | Local name | Hidróxido de sodio |
| Spain | VLA-EC (mg/m ³) | 2 mg/m ³ |
| USA - OSHA | Local name | Sodium hydroxide |
| USA - OSHA | OSHA PEL (TWA) (mg/m ³) | 2 mg/m ³ |
| hydrochloric acid ... % | | |
| EU | Local name | Hydrogen chloride |
| EU | IOELV TWA (mg/m ³) | 8 mg/m ³ |
| EU | IOELV TWA (ppm) | 5 ppm |
| EU | IOELV STEL (mg/m ³) | 15 mg/m ³ |
| EU | IOELV STEL (ppm) | 10 ppm |
| Austria | Local name | Chlorwasserstoff |
| Austria | MAK (mg/m ³) | 8 mg/m ³ |
| Austria | MAK (ppm) | 5 ppm |
| Austria | MAK Short time value (mg/m ³) | 15 mg/m ³ |
| Austria | MAK Short time value (ppm) | 10 ppm |
| Belgium | Local name | Hydrogène (chlorure d') # Waterstofchloride |
| Belgium | Limit value (mg/m ³) | 8 mg/m ³ |
| Belgium | Limit value (ppm) | 5 ppm |
| Belgium | Short time value (mg/m ³) | 15 mg/m ³ |
| Belgium | Short time value (ppm) | 10 ppm |
| Bulgaria | Local name | Хлороводород |
| Bulgaria | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Bulgaria | OEL TWA (ppm) | 5 ppm |
| Bulgaria | OEL STEL (mg/m ³) | 15 mg/m ³ |
| Bulgaria | OEL STEL (ppm) | 10 ppm |
| Bulgaria | Notes | • (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност) |
| Croatia | Local name | Vodikov klorid |
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 8 mg/m ³ |
| Croatia | GVI (granična vrijednost izloženosti) (ppm) | 5 ppm |
| Croatia | KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³) | 15 mg/m ³ |
| Croatia | KGVI (kratkotrajna granična vrijednost izloženosti) (ppm) | 10 ppm |
| Croatia | Naznake (HR) | EU* (naznaka da se radi o tvarima za koje su utvrđene indikativne granične vrijednosti izloženosti prema Direktivi 2000/39/ EC (prva lista)); T (otrovno); C (nagrizajuće) |
| Czech Republic | Local name | Chlorovodík |
| Czech Republic | Expoziční limity (PEL) (mg/m ³) | 8 mg/m ³ |
| Czech Republic | Expoziční limity (PEL) (ppm) | 5.43 ppm |
| Czech Republic | Expoziční limity (NPK-P) (mg/m ³) | 15 mg/m ³ |
| Czech Republic | Expoziční limity (NPK-P) (ppm) | 10.19 ppm |
| Denmark | Local name | Hydrogenchlorid (Chlorbrinte) |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 8 mg/m ³ |
| Denmark | Grænseværdie (langvarig) (ppm) | 5 ppm |
| Denmark | Anmærkninger (DK) | E (betyder, at stoffet har en EF-grænseværdi); L (markerer, at grænseværdien er en loftværdi, som ikke på noget tidspunkt må overskrides) |
| Estonia | Local name | Vesinikkloriid |
| Estonia | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Estonia | OEL TWA (ppm) | 5 ppm |

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| hydrochloric acid ... % | | |
|-------------------------|---|--|
| Estonia | OEL STEL (mg/m ³) | 15 mg/m ³ |
| Estonia | OEL STEL (ppm) | 10 ppm |
| Finland | Local name | Kloorivety, vedetön |
| Finland | HTP-arvo (15 min) | 7.6 mg/m ³ |
| Finland | HTP-arvo (15 min) (ppm) | 5 ppm |
| France | Local name | Chlorure d'hydrogène (Acide chlorhydrique) |
| France | VLE (mg/m ³) | 7.6 mg/m ³ |
| France | VLE (ppm) | 5 ppm |
| France | Note (FR) | Valeurs réglementaires contraignantes |
| Germany | Local name | Hydrogenchlorid |
| Germany | TRGS 900 Occupational exposure limit value (mg/m ³) | 3 mg/m ³ |
| Germany | TRGS 900 Occupational exposure limit value (ppm) | 2 ppm |
| Germany | Remark (TRGS 900) | DFG,EU,Y |
| Gibraltar | Eight hours mg/m ³ | 8 mg/m ³ |
| Gibraltar | Eight hours ppm | 5 ppm |
| Gibraltar | Short-term mg/m ³ | 15 mg/m ³ |
| Gibraltar | Short-term ppm | 10 ppm |
| Gibraltar | Name of agent | Hydrogen chloride |
| Greece | OEL TWA (mg/m ³) | 7 mg/m ³ |
| Greece | OEL TWA (ppm) | 5 ppm |
| Greece | OEL STEL (mg/m ³) | 7 mg/m ³ |
| Greece | OEL STEL (ppm) | 5 ppm |
| Hungary | Local name | SÓSAV |
| Hungary | AK-érték | 8 mg/m ³ |
| Hungary | CK-érték | 16 mg/m ³ |
| Hungary | Megjegyzések (HU) | i, m; EU1 |
| Ireland | Local name | Hydrogen chloride |
| Ireland | OEL (8 hours ref) (mg/m ³) | 8 mg/m ³ |
| Ireland | OEL (8 hours ref) (ppm) | 5 ppm |
| Ireland | OEL (15 min ref) (mg/m ³) | 15 mg/m ³ |
| Ireland | OEL (15 min ref) (ppm) | 10 ppm |
| Ireland | Notes (IE) | IOELV |
| Italy | Local name | Acido cloridrico |
| Italy | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Italy | OEL TWA (ppm) | 5 ppm |
| Italy | OEL STEL (mg/m ³) | 15 mg/m ³ |
| Italy | OEL STEL (ppm) | 10 ppm |
| Latvia | Local name | Hlorūdeņradis |
| Latvia | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Latvia | OEL TWA (ppm) | 5 ppm |
| Latvia | OEL STEL (mg/m ³) | 15 mg/m ³ |
| Latvia | OEL STEL (ppm) | 10 ppm |
| Lithuania | Local name | Vandenilio chloridas |
| Lithuania | IPRV (mg/m ³) | 8 mg/m ³ |
| Lithuania | IPRV (ppm) | 5 ppm |
| Lithuania | TPRV (mg/m ³) | 15 mg/m ³ |
| Lithuania | TPRV (ppm) | 10 ppm |
| Luxembourg | Local name | Chlorure d'hydrogène |

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| hydrochloric acid ... % | | |
|-------------------------|--|---|
| Luxembourg | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Luxembourg | OEL TWA (ppm) | 5 ppm |
| Luxembourg | OEL STEL (mg/m ³) | 15 mg/m ³ |
| Luxembourg | OEL STEL (ppm) | 10 ppm |
| Malta | Local name | Hydrogenchloride |
| Malta | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Malta | OEL TWA (ppm) | 5 ppm |
| Malta | OEL STEL (mg/m ³) | 15 mg/m ³ |
| Malta | OEL STEL (ppm) | 10 ppm |
| Netherlands | Local name | Zoutzuur |
| Netherlands | Grenswaarde TGG 8H (mg/m ³) | 8 mg/m ³ |
| Netherlands | Grenswaarde TGG 15MIN (mg/m ³) | 15 mg/m ³ |
| Poland | Local name | Chlorowodór |
| Poland | NDS (mg/m ³) | 5 mg/m ³ |
| Poland | NDSch (mg/m ³) | 10 mg/m ³ |
| Portugal | Local name | Ácido clorídrico |
| Portugal | OEL - Ceilings (ppm) | 2 ppm |
| Romania | Local name | Acid clorhidric |
| Romania | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Romania | OEL TWA (ppm) | 5 ppm |
| Romania | OEL STEL (mg/m ³) | 15 mg/m ³ |
| Romania | OEL STEL (ppm) | 10 ppm |
| Slovakia | Local name | Chlorovodík |
| Slovakia | NPHV (priemerná) (mg/m ³) | 8 mg/m ³ |
| Slovakia | NPHV (priemerná) (ppm) | 5 ppm |
| Slovakia | OEL STEL (mg/m ³) | 15 mg/m ³ |
| Slovakia | OEL STEL (ppm) | 10 ppm |
| Slovenia | Local name | vodikov klorid, brezvodni (klorovodik, brezvodni) |
| Slovenia | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Slovenia | OEL TWA (ppm) | 5 ppm |
| Slovenia | OEL STEL (mg/m ³) | 16 mg/m ³ |
| Slovenia | OEL STEL (ppm) | 10 ppm |
| Spain | Local name | Cloruro de hidrógeno |
| Spain | VLA-ED (mg/m ³) | 7.6 mg/m ³ |
| Spain | VLA-ED (ppm) | 5 ppm |
| Spain | VLA-EC (mg/m ³) | 15 mg/m ³ |
| Spain | VLA-EC (ppm) | 10 ppm |
| Spain | Notes | VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país). |
| Sweden | Local name | Saltsyra |
| Sweden | nivågränsvärde (NVG) (mg/m ³) | 3 mg/m ³ 3 mg/m ³ |
| Sweden | nivågränsvärde (NVG) (ppm) | 2 ppm 2 ppm |
| Sweden | kortidsvärde (KTV) (mg/m ³) | 6 mg/m ³ 6 mg/m ³ |

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| hydrochloric acid ... % | | |
|-------------------------|---|--|
| Sweden | kortidsvärde (KTV) (ppm) | 4 ppm 4 ppm |
| United Kingdom | Local name | Hydrogen chloride |
| United Kingdom | WEL TWA (mg/m ³) | 2 mg/m ³ gas and aerosol mists |
| United Kingdom | WEL TWA (ppm) | 1 ppm gas and aerosol mists |
| United Kingdom | WEL STEL (mg/m ³) | 8 mg/m ³ gas and aerosol mists |
| United Kingdom | WEL STEL (ppm) | 5 ppm gas and aerosol mists |
| Iceland | Local name | Vetrnisklórið (klórvetni) |
| Iceland | OEL (15 min ref) (mg/m ³) | 8 mg/m ³ |
| Iceland | OEL (15 min ref) (ppm) | 5 ppm |
| Russian Federation | Local name | Гидрохлорид |
| Russian Federation | OEL Ceiling (mg/m ³) | 5 mg/m ³ |
| Russian Federation | Remark (RU) | 2 класс опасности - высокоопасное; п (пары и/или газы); О (вещества с остронаправленным механизмом действия, требующие автоматического контроля за их содержанием в воздухе) |
| Norway | Local name | Hydrogenklorid (Saltsyre) |
| Norway | Grenseverdier (AN) (mg/m ³) | 7 mg/m ³ |
| Norway | Grenseverdier (AN) (ppm) | 5 ppm |
| Norway | Merknader (NO) | T (Takverdi er en øyeblikksverdi som angir maksimalkonsentrasjon av et kjemikalie i pustesonen som ikke skal overskrides); E (EU har en veiledende grenseverdi for stoffet) |
| Switzerland | Local name | Chlorwasserstoff |
| Switzerland | MAK (mg/m ³) | 3 mg/m ³ 3 mg/m ³ |
| Switzerland | MAK (ppm) | 2 ppm 2 ppm |
| Switzerland | KZGW (mg/m ³) | 6 mg/m ³ 6 mg/m ³ |
| Switzerland | KZGW (ppm) | 4 ppm 4 ppm |
| Switzerland | Remark (CH) | SSc - OAW ^{KT AN} - DFG, NIOSH, OSHA |
| Turkey | Local name | Hidrojen klorür |
| Turkey | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Turkey | OEL TWA (ppm) | 5 ppm |
| Turkey | OEL STEL (mg/m ³) | 15 mg/m ³ |
| Turkey | OEL STEL (ppm) | 10 ppm |
| Australia | Local name | Hydrogen chloride |
| USA - ACGIH | Local name | Hydrogen chloride |
| USA - ACGIH | ACGIH Ceiling (ppm) | 2 ppm |
| USA - ACGIH | Remark (ACGIH) | URT irr |
| USA - OSHA | Local name | Hydrogen chloride |
| USA - OSHA | OSHA PEL (Ceiling) (mg/m ³) | 7 mg/m ³ |
| USA - OSHA | OSHA PEL (Ceiling) (ppm) | 5 ppm |

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Eye protection:

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Protective goggles

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---|
| Physical state | : Liquid |
| Appearance | : Liquid. |
| Colour | : Colourless. According to product specification. |
| Odour | : characteristic. |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : 0 °C |
| Freezing point | : No data available |
| Boiling point | : 100 °C |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Not self-igniting |
| Vapour pressure | : 23 hPa (at 20 °C) |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Density | : 1.0291 g/cm ³ (20 °C) |
| Solubility | : Miscible with water. |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : Not explosive. |
| Oxidising properties | : No data available |
| Explosive limits | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|-----------------------------------|------------------|
| Acute toxicity | : Not classified |
| Skin corrosion/irritation | : Not classified |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|-------------------|---|
| Ecology - general | : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. |
|-------------------|---|

| sodium hydroxide, caustic soda (1310-73-2) | |
|--|---|
| LC50 fish 1 | > 35 mg/l |
| EC50 other aquatic organisms 1 | > 33 mg/l waterflea |
| hydrochloric acid ... % | |
| LC50 fish 1 | 282 mg/l (LC50; 96 h; Gambusia affinis) |
| EC50 Daphnia 1 | < 56 mg/l (EC50; 72 h; Daphnia magna) |

12.2. Persistence and degradability

| hydrochloric acid ... % | |
|---------------------------------|--|
| Persistence and degradability | Biodegradability: not applicable. No (test)data on mobility of the components available. |
| Biochemical oxygen demand (BOD) | Not applicable |
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |

12.3. Bioaccumulative potential

| sodium hydroxide, caustic soda (1310-73-2) | |
|--|--|
| Log Pow | -3.88 |
| hydrochloric acid ... % | |
| Log Pow | 0.25 (QSAR) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

12.4. Mobility in soil

| hydrochloric acid ... % | |
|-------------------------|---|
| Ecology - soil | May be harmful to plant growth, blooming and fruit formation. |

12.5. Results of PBT and vPvB assessment

| Component | |
|--|---|
| disodium tetraborate, anhydrous, boric acid, disodium salt (1330-43-4) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|-------------------------|---|
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
|-------------------------|---|

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SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IMDG | IATA | ADN | RID |
|---|----------------|----------------|----------------|----------------|
| 14.1. UN number | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.2. UN proper shipping name | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.3. Transport hazard class(es) | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.4. Packing group | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.5. Environmental hazards | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| No supplementary information available | | | | |

14.6. Special precautions for user

- Overland transport

Not applicable

- Transport by sea

Not applicable

- Air transport

Not applicable

- Inland waterway transport

Not applicable

- Rail transport

Not applicable

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: disodium tetraborate, anhydrous, boric acid, disodium salt (EC 215-540-4, CAS 1330-43-4)

Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) nwg, Non-hazardous to water (Classification according to VwVwS, Annex 4)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : disodium tetraborate, anhydrous, boric acid, disodium salt is listed

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NIET-limitatieve lijst van voor de voortplanting : disodium tetraborate, anhydrous, boric acid, disodium salt is listed
giftige stoffen – Ontwikkeling

Denmark

Recommendations Danish Regulation : The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

| | |
|-------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| EC50 | Median effective concentration |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | Persistent Bioaccumulative Toxic |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| vPvB | Very Persistent and Very Bioaccumulative |

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

| Full text of H- and EUH-statements: | |
|-------------------------------------|--|
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Met. Corr. 1 | Corrosive to metals, Category 1 |
| Repr. 1B | Reproductive toxicity, Category 1B |
| Skin Corr. 1A | Skin corrosion/irritation, Category 1A |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1B |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H290 | May be corrosive to metals. |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |
| H360FD | May damage fertility. May damage the unborn child. |

SDS ISOLAB

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product