

Safety data sheet Safety data sheet

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



RBS® T 105 , Laboratory cleaning agent

article number: **PY99**
Version: **4.0 en**
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Version: (3)

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

1.1 Product identifier

Identification of the substance **RBS® T 105 , Laboratory cleaning agent**
Article number **PY99**

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

Relevant identified uses: Laboratory chemical
Laboratory and analytical use
Cleaning agent

Uses advised against: Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin. Do not use for private purposes (household). Food, drink and animal feedingstuffs.

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone:+49 (0) 721 - 56 06 0
Telefax: +49 (0) 721 - 56 06 149
e-mail: sicherheit@carlroth.de
Website: www.carlroth.de

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

e-mail (competent person): **sicherheit@carlroth.de**

1.4 Emergency telephone number

| Name | Street | Postal code/city | Telephone | Website |
|---|-----------|----------------------|--------------|---------|
| National Poisons Information Service City Hospital | Dudley Rd | B187QH Birmingham | 844 892 0111 | |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class | Cat-egory | Hazard class and category | Hazard statement |
|---------|---|-----------|---------------------------|------------------|
| 2.16 | Substance or mixture corrosive to metals | 1 | Met. Corr. 1 | H290 |
| 3.2 | Skin corrosion/irritation | 1B | Skin Corr. 1B | H314 |
| 3.3 | Serious eye damage/eye irritation | 1 | Eye Dam. 1 | H318 |
| 4.1C | Hazardous to the aquatic environment - chronic hazard | 3 | Aquatic Chronic 3 | H412 |

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For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling

Signal word

Danger

Pictograms

GHS05



Hazard statements

H290

May be corrosive to metals

H314

Causes severe skin burns and eye damage

H412

Harmful to aquatic life with long lasting effects

Precautionary statements

Precautionary statements - prevention

P280

Wear protective gloves/eye protection

Precautionary statements - response

P302+P352

IF ON SKIN: Wash with plenty of water

P305+P351+P338

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

P337+P313

If eye irritation persists: Get medical advice/attention

Hazardous ingredients for labelling:

Fatty alcohol alkoxyate acid phosphate ester, Sodium hydroxide, Sodium hypochlorite, solution ...
% Cl active

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 $\geq 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

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Description of the mixture

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms | Notes |
|---|---|------|---|------------|----------------|
| tetra-Potassium pyrophosphate | CAS No 7320-34-5 EC No 230-785-7 | < 15 | Eye Irrit. 2 / H319 | | |
| Fatty alcohol alkoxylate acid phosphate ester | CAS No 68649-29-6 | < 5 | Skin Irrit. 2 / H315 Eye Dam. 1 / H318 | | |
| Sodium hypochlorite, solution ... % Cl active | CAS No 7681-52-9 EC No 231-668-3 Index No 017-011-00-1 | < 5 | Skin Corr. 1B / H314 Eye Dam. 1 / H318 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 | | B(a) GHS-HC |
| Sodium hydroxide | CAS No 1310-73-2 EC No 215-185-5 Index No 011-002-00-6 | < 2 | Met. Corr. 1 / H290 Skin Corr. 1A / H314 Eye Dam. 1 / H318 | | GHS-HC |

Notes

B(a): The classification refers to an aqueous solution

GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

| Name of substance | Identifier | Specific Conc. Limits | M-Factors | ATE | Exposure route |
|---|---|--|---|-------------|----------------|
| Sodium hypochlorite, solution ... % Cl active | CAS No 7681-52-9 EC No 231-668-3 | - | M-factor (acute) = 10 M-factor (chronic) = 1 | 1.100 mg/kg | oral |
| Sodium hydroxide | CAS No 1310-73-2 EC No 215-185-5 | Skin Corr. 1A; H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0,5 % ≤ C < 2 % Eye Dam. 1; H318: C ≥ 2 % Eye Irrit. 2; H319: 0,5 % ≤ C < 2 % | - | - | |

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off immediately all contaminated clothing.

Following inhalation

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

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Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

Following ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

4.2 Most important symptoms and effects, both acute and delayed

Corrosion, Risk of blindness, Gastric perforation, Risk of serious damage to eyes

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings!
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

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.

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6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal.

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

Handle and open container with care. Clear contaminated areas thoroughly.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

Specific designs for storage rooms or vessels

Do not keep the container sealed.
Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

| Country | Name of agent | CAS No | Identifier | TWA [ppm] | TWA [mg/m ³] | STEL [ppm] | STEL [mg/m ³] | Ceiling-C [ppm] | Ceiling-C [mg/m ³] | Notation | Source |
|---------|------------------|-----------|------------|-----------|--------------------------|------------|---------------------------|-----------------|--------------------------------|----------|-----------|
| GB | sodium hydroxide | 1310-73-2 | WEL | | | | 2 | | | | EH40/2005 |

Notation

Ceiling-C Ceiling value is a limit value above which exposure should not occur
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)

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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 |
| tetra-Potassium pyrophosphate | 7320-34-5 | DNEL | 17,63 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | DNEL | 1,55 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | DNEL | 3,1 mg/m ³ | human, inhalatory | worker (industry) | acute - systemic effects |
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | DNEL | 1,55 mg/m ³ | human, inhalatory | worker (industry) | chronic - local effects |
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | DNEL | 3,1 mg/m ³ | human, inhalatory | worker (industry) | acute - local effects |

| Relevant PNECs of components | | | | | | |
|---|-----------|-----------|-----------------|-------------------|------------------------------|------------------------------|
| Name of substance | CAS No | End-point | Threshold level | Organism | Environmental compartment | Exposure time |
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | PNEC | 0,21 µg/l | aquatic organisms | freshwater | short-term (single instance) |
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | PNEC | 0,042 µg/l | aquatic organisms | marine water | short-term (single instance) |
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | PNEC | 4,69 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection. Wear face protection.

Skin protection



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• hand protection

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. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

NBR (Nitrile rubber)

• material thickness

0,3 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: ABEK (combined filters against gases and vapours, colour code: Brown/Grey/Yellow/Green).

Environmental exposure controls

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 | yellow |
| Odour | odourless |
| 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) | 13,3 (20 °C) |

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| | |
|---|---|
| Kinematic viscosity | 1,964 mm ² /s at 20 °C |
| Dynamic viscosity | 2,2 mPa s at 20 °C |
| <u>Solubility(ies)</u> | |
| Water solubility | miscible in any proportion |
| <u>Partition coefficient</u> | |
| Partition coefficient n-octanol/water (log value): | not relevant (inorganic) |
| Vapour pressure | not determined |
| <u>Density and/or relative density</u> | |
| Density | 1,12 g/cm ³ at 20 °C |
| Relative vapour density | information on this property is not available |
| Particle characteristics | not relevant (liquid) |
| <u>Other safety parameters</u> | |
| Oxidising properties | none |
| 9.2 Other information | |
| Information with regard to physical hazard classes: | |
| Corrosive to metals | category 1: corrosive to metals |
| Other safety characteristics: | |
| Miscibility | completely miscible with water |

SECTION 10: Stability and reactivity

10.1 Reactivity

Substance or mixture corrosive to metals.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Violent reaction with: Strong acid

10.4 Conditions to avoid

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

10.5 Incompatible materials

different metals

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Release of flammable materials with

Metals, Light metals (due to the release of hydrogen in an acid/alkaline medium)

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

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

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components

| Name of substance | CAS No | Exposure route | ATE |
|---|-----------|----------------|-------------|
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | oral | 1.100 mg/kg |

Acute toxicity of components

| Name of substance | CAS No | Exposure route | Endpoint | Value | Species |
|---|-----------|----------------|----------|---------------|---------|
| tetra-Potassium pyrophosphate | 7320-34-5 | dermal | LD50 | >2.000 mg/kg | rabbit |
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | oral | LD50 | 1.100 mg/kg | rat |
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | dermal | LD50 | >20.000 mg/kg | rabbit |

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

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Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

• If in eyes

causes burns, Causes serious eye damage, risk of blindness

• If inhaled

Data are not available.

• If on skin

causes severe burns, causes poorly healing wounds

• Other information

none

11.2 Endocrine disrupting properties

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

11.3 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

| Aquatic toxicity (acute) of components | | | | | |
|---|-----------|----------|-----------------------------|-----------------------|---------------|
| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
| tetra-Potassium pyrophosphate | 7320-34-5 | LC50 | $>100 \text{ mg/l}$ | fish | 96 h |
| tetra-Potassium pyrophosphate | 7320-34-5 | EC50 | $>100 \text{ mg/l}$ | aquatic invertebrates | 48 h |
| tetra-Potassium pyrophosphate | 7320-34-5 | ErC50 | $>100 \text{ mg/l}$ | algae | 72 h |
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | EC50 | $35 \text{ } \mu\text{g/l}$ | aquatic invertebrates | 48 h |
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | ErC50 | $0,036 \text{ mg/l}$ | algae | 72 h |
| Sodium hydroxide | 1310-73-2 | LC50 | $<180 \text{ mg/l}$ | fish | 96 h |
| Sodium hydroxide | 1310-73-2 | EC50 | $40,4 \text{ mg/l}$ | aquatic invertebrates | 48 h |

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| Aquatic toxicity (chronic) of components | | | | | |
|--|-----------|----------|-------------|----------------|---------------|
| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
| tetra-Potassium pyrophosphate | 7320-34-5 | EC50 | >1.000 mg/l | microorganisms | 3 h |
| Sodium hydroxide | 1310-73-2 | EC50 | 22 mg/l | microorganisms | 15 min |

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

| Bioaccumulative potential of components | | | | |
|--|-----------|-----|-------------------------------|----------|
| Name of substance | CAS No | BCF | Log KOW | BOD5/COD |
| Sodium hypochlorite, solution ... % Cl active | 7681-52-9 | | -3,42 (pH value: 12,5, 20 °C) | |

12.4 Mobility in soil

Data are not 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.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

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Properties of waste which render it hazardous

HP 4 irritant - skin irritation and eye damage

HP 14 ecotoxic

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number or ID number

ADRRID UN 3266

IMDG-Code UN 3266

ICAO-TI UN 3266

14.2 UN proper shipping name

ADRRID CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.

IMDG-Code CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.

ICAO-TI Corrosive liquid, basic, inorganic, n.o.s.

Technical name (hazardous ingredients) Sodium hydroxide, Sodium hypochlorite, solution ... % Cl active

14.3 Transport hazard class(es)

ADRRID 8

IMDG-Code 8

ICAO-TI 8

14.4 Packing group

ADRRID III

IMDG-Code III

ICAO-TI III

14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

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Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) Additional information

| | |
|---|--|
| Proper shipping name | CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. |
| Particulars in the transport document | UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S., (contains: Sodium hydroxide, Sodium hypochlorite, solution ... % Cl active), 8, III, (E) |
| Classification code | C5 |
| Danger label(s) | 8 |
|  | |
| Special provisions (SP) | 274 |
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 5 L |
| Transport category (TC) | 3 |
| Tunnel restriction code (TRC) | E |
| Hazard identification No | 80 |
| Emergency Action Code | 2X |

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

| | |
|---|-----|
| Classification code | C5 |
| Danger label(s) | 8 |
|  | |
| Special provisions (SP) | 274 |
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 5 L |
| Transport category (TC) | 3 |
| Hazard identification No | 80 |

International Maritime Dangerous Goods Code (IMDG) - Additional information

| | |
|---|---|
| Proper shipping name | CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. |
| Particulars in the shipper's declaration | UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S., (contains: Sodium hydroxide, Sodium hypochlorite, solution ... % Cl active), 8, III |
| Marine pollutant | - |
| Danger label(s) | 8 |
|  | |
| Special provisions (SP) | 223, 274 |
| Excepted quantities (EQ) | E1 |


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| | |
|---|---|
| Limited quantities (LQ) | 5 L |
| EmS | F-A, S-B |
| Stowage category | A |
| Segregation group | 18 - Alkalis |
| International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information | |
| Proper shipping name | Corrosive liquid, basic, inorganic, n.o.s. |
| Particulars in the shipper's declaration | UN3266, Corrosive liquid, basic, inorganic, n.o.s., (contains: Sodium hydroxide, Sodium hypochlorite, solution ... % Cl active), 8, III |
| Danger label(s) | 8 |
|  | |
| Special provisions (SP) | A3 |
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 1 L |

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)

Seveso Directive

| 2012/18/EU (Seveso III) | | | |
|-------------------------|---------------------------------------|---|-------|
| No | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
| | not assigned | | |

Deco-Paint Directive

| | |
|--|-----------|
| VOC content | 4,9 % |
| VOC content (Water content was discounted) | 371,3 g/l |

Industrial Emissions Directive (IED)

| | |
|--|-----------|
| VOC content | 4,9 % |
| VOC content (Water content was discounted) | 371,3 g/l |

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

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

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Water Framework Directive (WFD)

| List of pollutants (WFD) | | | | |
|--|----------------------------|--------|-----------|---------|
| Name of substance | Name acc. to inventory | CAS No | Listed in | Remarks |
| Sodium hydroxide | Metals and their compounds | | a) | |
| tetra-Potassium pyrophosphate | Metals and their compounds | | a) | |
| Sodium hypochlorite, solution ... % Cl active | Metals and their compounds | | a) | |

Legend

a) Indicative list of the main pollutants

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(GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

none of the ingredients are listed

Restrictions according to GB REACH, Annex 17

| Dangerous substances with restrictions (GB REACH, Annex 17) | | | |
|---|--|--------|----|
| Name of substance | Name acc. to inventory | CAS No | No |
| RBS® T 105 | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC | | 3 |

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

| Country | Inventory | Status |
|---------|------------|--------------------------------|
| AU | AIIC | all ingredients are listed |
| CA | DSL | all ingredients are listed |
| CN | IECSC | all ingredients are listed |
| EU | ECSI | not all ingredients are listed |
| EU | REACH Reg. | not all ingredients are listed |

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| Country | Inventory | Status |
|---------|-----------|-------------------------------------|
| JP | CSCL-ENCS | not all ingredients are listed |
| JP | ISHA-ENCS | not all ingredients are listed |
| KR | KECI | all ingredients are listed |
| MX | INSQ | not all ingredients are listed |
| NZ | NZIoC | all ingredients are listed |
| PH | PICCS | all ingredients are listed |
| TR | CICR | not all ingredients are listed |
| TW | TCSI | all ingredients are listed |
| US | TSCA | all ingredients are listed (ACTIVE) |

Legend

| | |
|------------|---|
| AIIC | Australian Inventory of Industrial Chemicals |
| CICR | Chemical Inventory and Control Regulation |
| CSCL-ENCS | List of Existing and New Chemical Substances (CSCL-ENCS) |
| DSL | Domestic Substances List (DSL) |
| ECSI | EC Substance Inventory (EINECS, ELINCS, NLP) |
| IECSC | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ | National Inventory of Chemical Substances |
| ISHA-ENCS | Inventory of Existing and New Chemical Substances (ISHA-ENCS) |
| KECI | Korea Existing Chemicals Inventory |
| NZIoC | New Zealand Inventory of Chemicals |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances (PICCS) |
| REACH Reg. | REACH registered substances |
| TCSI | Taiwan Chemical Substance Inventory |
| TSCA | Toxic Substance Control Act |

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|---------------------------|---|-----------------|
| 2.1 | | Classification acc. to GHS: change in the listing (table) | yes |
| 2.1 | | The most important adverse physicochemical, human health and environmental effects: Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses. | yes |
| 2.2 | Signal word: Warning | Signal word: Danger | yes |
| 2.2 | | Pictograms: change in the listing (table) | yes |
| 2.2 | | Hazard statements: change in the listing (table) | yes |
| 2.2 | | Hazardous ingredients for labelling: Fatty alcohol alkoxyate acid phosphate ester, Sodium hydroxide, Sodium hypochlorite, solution ... % Cl active | yes |

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| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|--|---|-----------------|
| 2.3 | Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB. | Results of PBT and vPvB assessment: Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0,1\%$. | yes |
| 2.3 | | Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0,1\%$. | yes |
| 14.1 | UN number or ID number: not subject to transport regulations | UN number or ID number | yes |
| 14.1 | | ADRRID: UN 3266 | yes |
| 14.1 | | IMDG-Code: UN 3266 | yes |
| 14.1 | | ICAO-TI: UN 3266 | yes |
| 14.2 | UN proper shipping name: not assigned | UN proper shipping name | yes |
| 14.2 | | ADRRID: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. | yes |
| 14.2 | | IMDG-Code: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. | yes |
| 14.2 | | ICAO-TI: Corrosive liquid, basic, inorganic, n.o.s. | yes |
| 14.2 | | Technical name (hazardous ingredients): Sodium hydroxide, Sodium hypochlorite, solution ... % Cl active | yes |
| 14.3 | Transport hazard class(es): none | Transport hazard class(es) | yes |
| 14.3 | | ADRRID: 8 | yes |
| 14.3 | | IMDG-Code: 8 | yes |
| 14.3 | | ICAO-TI: 8 | yes |
| 14.4 | Packing group: not assigned | Packing group | yes |
| 14.4 | | ADRRID: III | yes |
| 14.4 | | IMDG-Code: III | yes |
| 14.4 | | ICAO-TI: III | yes |
| 14.6 | Special precautions for user: There is no additional information. | Special precautions for user: Provisions for dangerous goods (ADR) should be complied within the premises. | yes |
| 14.8 | Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information: Not subject to ADR, RID and ADN. | Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) Additional information | yes |

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| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|--|--|-----------------|
| 14.8 | | Proper shipping name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. | yes |
| 14.8 | | Particulars in the transport document: UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S., (contains: Sodium hydroxide, Sodium hypochlorite, solution ... % Cl active), 8, III, (E) | yes |
| 14.8 | | Classification code: C5 | yes |
| 14.8 | | Danger label(s): 8 | yes |
| 14.8 | | Danger label(s): change in the listing (table) | yes |
| 14.8 | | Special provisions (SP): 274 | yes |
| 14.8 | | Excepted quantities (EQ): E1 | yes |
| 14.8 | | Limited quantities (LQ): 5 L | yes |
| 14.8 | | Transport category (TC): 3 | yes |
| 14.8 | | Tunnel restriction code (TRC): E | yes |
| 14.8 | | Hazard identification No: 80 | yes |
| 14.8 | | Emergency Action Code: 2X | yes |
| 14.8 | | Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)Additional information | yes |
| 14.8 | | Classification code: C5 | yes |
| 14.8 | | Danger label(s): 8 | yes |
| 14.8 | | Danger label(s): change in the listing (table) | yes |
| 14.8 | | Special provisions (SP): 274 | yes |
| 14.8 | | Excepted quantities (EQ): E1 | yes |
| 14.8 | | Limited quantities (LQ): 5 L | yes |
| 14.8 | | Transport category (TC): 3 | yes |
| 14.8 | | Hazard identification No: 80 | yes |
| 14.8 | International Maritime Dangerous Goods Code (IMDG) - Additional information: Not subject to IMDG. | International Maritime Dangerous Goods Code (IMDG) - Additional information | yes |

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| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|--|--|-----------------|
| 14.8 | | Proper shipping name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. | yes |
| 14.8 | | Particulars in the shipper's declaration: UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S., (contains: Sodium hydroxide, Sodium hypochlorite, solution ... % Cl active), 8, III | yes |
| 14.8 | | Marine pollutant: - | yes |
| 14.8 | | Danger label(s): 8 | yes |
| 14.8 | | Danger label(s): change in the listing (table) | yes |
| 14.8 | | Special provisions (SP): 223, 274 | yes |
| 14.8 | | Excepted quantities (EQ): E1 | yes |
| 14.8 | | Limited quantities (LQ): 5 L | yes |
| 14.8 | | EmS: F-A, S-B | yes |
| 14.8 | | Stowage category: A | yes |
| 14.8 | | Segregation group: 18 - Alkalis | yes |
| 14.8 | International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information: Not subject to ICAO-IATA. | International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information | yes |
| 14.8 | | Proper shipping name: Corrosive liquid, basic, inorganic, n.o.s. | yes |
| 14.8 | | Particulars in the shipper's declaration: UN3266, Corrosive liquid, basic, inorganic, n.o.s., (contains: Sodium hydroxide, Sodium hypochlorite, solution ... % Cl active), 8, III | yes |
| 14.8 | | Danger label(s): 8 | yes |
| 14.8 | | Danger label(s): change in the listing (table) | yes |
| 14.8 | | Special provisions (SP): A3 | yes |
| 14.8 | | Excepted quantities (EQ): E1 | yes |
| 14.8 | | Limited quantities (LQ): 1 L | yes |
| 15.1 | VOC content: 4,9 % 433,9 g/l | VOC content: 4,9 % | yes |
| 15.1 | | VOC content (Water content was discounted): 371,3 g/l | yes |

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| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|--|---|-----------------|
| 15.1 | VOC content (Water content was discounted): 433,9 g/l | VOC content (Water content was discounted): 371,3 g/l | yes |
| 15.1 | | List of pollutants (WFD): change in the listing (table) | yes |
| 15.1 | | National regulations(GB) | yes |
| 15.1 | | List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list: none of the ingredients are listed | yes |
| 15.1 | | Restrictions according to GB REACH, Annex 17 | yes |
| 15.1 | | Dangerous substances with restrictions (GB REACH, Annex 17): change in the listing (table) | yes |
| 15.1 | | National inventories: change in the listing (table) | yes |

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|-----------------|---|
| ADR | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road) |
| Aquatic Acute | Hazardous to the aquatic environment - acute hazard |
| Aquatic Chronic | Hazardous to the aquatic environment - chronic hazard |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BOD | Biochemical Oxygen Demand |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| Ceiling-C | Ceiling value |
| COD | Chemical oxygen demand |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| 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 |
| EH40/2005 | EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| 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 |

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| Abbr. | Descriptions of used abbreviations |
|-------------|--|
| Eye Dam. | Seriously damaging to the eye |
| Eye Irrit. | Irritant to the eye |
| GB REACH | The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | Technical instructions for the safe transport of dangerous goods by air |
| IMDG | International Maritime Dangerous Goods Code |
| IMDG-Code | 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 |
| 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 |
| log KOW | n-Octanol/water |
| Met. Corr. | Substance or mixture corrosive to metals |
| M-factor | Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present |
| NLP | No-Longer Polymer |
| 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 |
| TWA | Time-weighted average |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and very Bioaccumulative |
| WEL | Workplace exposure limit |

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

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Classification procedure

Physical and chemical properties. The classification is based on tested mixture.
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 |
|------|---|
| H290 | May be corrosive to metals. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H400 | Very toxic to aquatic life. |
| H410 | Very 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.