

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

### Sodium hypochlorite, 12% active chlorine

Version number: GHS 5.1 Revision: 2020-07-15

Replaces version of: 2020-06-03 (GHS 4)

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

#### 1.1 Product identifier

Trade name Sodium hypochlorite, 12% active chlorine

Registration number (REACH) not relevant (mixture)

CAS number 7681-52-9

Alternative name(s) sodium hypochlorite

Article number A0005510

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

Relevant identified uses General use

Uses advised against Do not use for squirting or spraying. Do not use

for products which come into direct contact with

the skin.

#### 1.3 Details of the supplier of the safety data sheet

Chemos GmbH & Co. KG Sonnenring 7 84032 Altdorf Germany

Telephone: +49 871-966346-0 Telefax: +49 871-966346-13 e-mail: chemos@chemos.de Website: http://www.chemos.de/

e-mail (competent person) chemos@chemos.de

#### 1.4 Emergency telephone number

Emergency information service +49 89 1 92 40

| Poison centre  |   |                      |                   |         |
|----------------|---|----------------------|-------------------|---------|
| Country        | Name  | Postal code/<br>city | Telephone         | Telefax |
| United Kingdom | National Poison Information Centre<br>Medical Toxicology Unit | SE14 5ER Lon-<br>don | +44 171 635 91 91 |         |

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

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

| Section | Hazard class  | Category | Hazard class and cat-<br>egory | Hazard state-<br>ment |
|---------|---|----------|--------------------------------|-----------------------|
| 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                  |
| 4.1A    | hazardous to the aquatic environment - acute hazard | 1        | Aquatic Acute 1                | H400                  |

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| Section | Hazard class  | Category | Hazard class and cat-<br>egory | Hazard state-<br>ment |
|---------|---|----------|--------------------------------|-----------------------|
| 4.1C    | hazardous to the aquatic environment - chronic hazard | 1        | Aquatic Chronic 1              | H410                  |

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

- Signal word danger

- Pictograms

GHS05, GHS09



#### - Hazard statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage. H410 Very toxic to aquatic life with long lasting effects.

#### - Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

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

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or

shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.
P390 Absorb spillage to prevent material damage.

P391 Collect spillage.

P501 Dispose of contents/container to industrial combustion plant.

### - Supplemental hazard information

EUH031 Contact with acids liberates toxic gas.

- Hazardous ingredients for labelling Sodium hypochlorite 12% chlorine, sodium hydroxide

#### 2.3 Other hazards

#### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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#### **SECTION 3: Composition/information on ingredients**

#### 3.1 Substances

Not relevant (mixture)

Identifiers

CAS No 7681-52-9
EC No 231-668-3
Molar mass 74.44 g/<sub>mol</sub>

#### 3.2 Mixtures

Description of the mixture

| Name of substance                   | Identifier  | Wt%    | Classification acc. to GHS  | Pictograms       |
|-------------------------------------|---|--------|---|------------------|
| Sodium hypochlorite 12%<br>chlorine | CAS No<br>7681-52-9<br>EC No<br>231-668-3                             | 5 – 15 | Met. Corr. 1 / H290<br>Skin Corr. 1 / H314<br>Eye Dam. 1 / H318<br>STOT SE 3 / H335<br>Aquatic Acute 1 / H400<br>Aquatic Chronic 1 / H410 | (!) ( <u>*</u> ) |
| sodium hydroxide                    | CAS No<br>1310-73-2<br>EC No<br>215-185-5<br>Index No<br>011-002-00-6 | 1-<2   | Met. Corr. 1 / H290<br>Skin Corr. 1A / H314<br>Eye Dam. 1 / H318<br>Aquatic Chronic 3 / H412  |                  |

For full text of abbreviations: see SECTION 16.

### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

#### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.

#### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Symptoms and effects are not known to date.

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### 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, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

Water jet

#### 5.2 Special hazards arising from the substance or mixture

Substance or mixture corrosive to metals.

#### 5.3 Advice for firefighters

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.

#### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

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 contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

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

Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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#### **SECTION 7: Handling and storage** 7.1 **Precautions for safe handling**

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

- Handling of incompatible substances or mixtures

Do not mix with acids.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

#### 7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

- Specific designs for storage rooms or vessels

Do not keep the container sealed.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

#### 7.3 Specific end use(s)

See section 16 for a general overview.

#### SECTION 8: Exposure controls/personal protection

#### 8.1 **Control parameters**

Occupational exposure limit values (Workplace Exposure Limits)

| Coun-<br>try | Name of agent    | CAS No    | Identi-<br>fier | TWA<br>[ppm] | TWA<br>[mg/m³] |   | Ceiling-C<br>[mg/m³] | Source        |
|--------------|------------------|-----------|-----------------|--------------|----------------|---|----------------------|---------------|
| GB           | sodium hydroxide | 1310-73-2 | WEL             |              |                | 2 |                      | EH40/<br>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)

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

time-weighted average (unless otherwise specified)

#### **Human health values**

#### Relevant DNFLs and other threshold levels

| Relevant BIVE | Netevalie 5/1225 and other an estimate evens |                                    |                   |                            |  |  |  |  |
|---------------|--|------------------------------------|-------------------|----------------------------|--|--|--|--|
| Endpoint      | Threshold level                              | Protection goal, route of exposure | Used in           | Exposure time              |  |  |  |  |
| DNEL          | 1.55 mg/m³                                   | human, inhalatory                  | worker (industry) | chronic - systemic effects |  |  |  |  |
| DNEL          | 3.1 mg/m³                                    | human, inhalatory                  | worker (industry) | acute - systemic effects   |  |  |  |  |

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### Relevant DNELs and other threshold levels

| Endpoint | Threshold level       | Protection goal, route of exposure | Used in           | Exposure time           |  |
|----------|-----------------------|------------------------------------|-------------------|-------------------------|--|
| DNEL     | 1.55 mg/m³            | human, inhalatory                  | worker (industry) | chronic - local effects |  |
| DNEL     | 3.1 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry) | acute - local effects   |  |

### Relevant DNELs of components of the mixture

| Name of substance                   | CAS No    | Endpoint | Threshold<br>level     | Protection goal,<br>route of exposure | Used in           | Exposure time                 |
|-------------------------------------|-----------|----------|------------------------|---------------------------------------|-------------------|-------------------------------|
| Sodium hypochlorite<br>12% chlorine | 7681-52-9 | DNEL     | 1.55 mg/m <sup>3</sup> | human, inhalatory                     | worker (industry) | chronic - systemic<br>effects |
| Sodium hypochlorite<br>12% chlorine | 7681-52-9 | DNEL     | 3.1 mg/m <sup>3</sup>  | human, inhalatory                     | worker (industry) | acute - systemic ef-<br>fects |
| Sodium hypochlorite<br>12% chlorine | 7681-52-9 | DNEL     | 1.55 mg/m <sup>3</sup> | human, inhalatory                     | worker (industry) | chronic - local ef-<br>fects  |
| Sodium hypochlorite<br>12% chlorine | 7681-52-9 | DNEL     | 3.1 mg/m <sup>3</sup>  | human, inhalatory                     | worker (industry) | acute - local effects         |
| sodium hydroxide                    | 1310-73-2 | DNEL     | 1 mg/m³                | human, inhalatory                     | worker (industry) | chronic - local ef-<br>fects  |

#### **Environmental values**

#### Relevant PNECs and other threshold levels

| Endpoint | Threshold level                    | Organism          | Environmental compartment    | Exposure time                |
|----------|------------------------------------|-------------------|------------------------------|------------------------------|
| PNEC     | 0.21 <sup>µg</sup> / <sub>l</sub>  | aquatic organisms | freshwater                   | short-term (single instance) |
| PNEC     | 0.042 <sup>µg</sup> / <sub>l</sub> | aquatic organisms | marine water                 | short-term (single instance) |
| PNEC     | 4.69 <sup>mg</sup> / <sub>l</sub>  | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |

### Relevant PNECs of components of the mixture

| Name of substance                   | CAS No    | Endpoint | Threshold<br>level                 | Organism          | Environmental compartment       | Exposure time                |
|-------------------------------------|-----------|----------|------------------------------------|-------------------|---------------------------------|------------------------------|
| Sodium hypochlorite<br>12% chlorine | 7681-52-9 | PNEC     | 0.21 <sup>µg</sup> / <sub>l</sub>  | aquatic organisms | freshwater                      | short-term (single instance) |
| Sodium hypochlorite<br>12% chlorine | 7681-52-9 | PNEC     | 0.042 <sup>µg</sup> / <sub>I</sub> | aquatic organisms | marine water                    | short-term (single instance) |
| Sodium hypochlorite<br>12% chlorine | 7681-52-9 | PNEC     | 4.69 <sup>mg</sup> / <sub>l</sub>  | aquatic organisms | sewage treatment<br>plant (STP) | short-term (single instance) |

#### 8.2 Exposure controls

Appropriate engineering controls

General ventilation.

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Individual protection measures (personal protective equipment)

#### Eye/face protection

Wear eye/face protection.

#### Skin protection

#### - Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. 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.

#### - Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

#### 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

#### **Appearance**

| Physical state | liquid         |
|----------------|----------------|
| Colour         | yellowish      |
| Odour          | characteristic |

#### Other safety parameters

| pH (value)                              | 12 – 13 (20 °C) (base)                      |
|---|---|
| Melting point/freezing point            | -28.9 °C at 1,013 hPa                       |
| Initial boiling point and boiling range | 98 °C                                       |
| Flash point                             | >111 °C at 101.3 kPa                        |
| Evaporation rate                        | not determined                              |
| Flammability (solid, gas)               | not relevant, (fluid)                       |
| Explosive limits                        | not determined                              |
| Vapour pressure                         | 23 hPa at 20 °C                             |
| Density                                 | 1.24 <sup>g</sup> / <sub>cm³</sub> at 20 °C |
| Vapour density                          | this information is not available           |

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|            | <br>   |       |       |
|------------|--------|-------|-------|
| <b>C</b> - | <br>_: | I:⊥   | (ies) |
| $\sim$     | <br>nı | IIT\/ | 11001 |
|            |        |       |       |

| - Water solubility | 1,000,000 <sup>mg</sup> / <sub>l</sub> at 25 °C |
|--------------------|---|
|                    | 1   |

#### Partition coefficient

| - n-octanol/water (log KOW) | -3.42 (pH value: 12.5, 20 °C) (ECHA) |
|-----------------------------|--------------------------------------|
| Auto-ignition temperature   | not determined                       |
| Decomposition temperature   | >111 °C                              |

#### Viscosity

| - Kinematic viscosity | 2.258 <sup>mm²</sup> / <sub>s</sub> at 20 °C |
|-----------------------|--|
| - Dynamic viscosity   | 2.8 mPa s at 20 °C                           |
| Explosive properties  | none   |
| Oxidising properties  | none   |

#### 9.2 Other information

| Surface tension | 82.4 <sup>mN</sup> / <sub>m</sub> (20 °C) (ECHA) |
|-----------------|--|
| Solvent content | 15 %   |
| Solid content   | 2 %  |

### **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". Substance or mixture corrosive to metals.

#### 10.2 Chemical stability

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

There is no additional information.

Release of toxic materials with:

Acids

### 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.

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#### **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 according to GHS (1272/2008/EC, CLP)

Acute toxicity

Shall not be classified as acutely toxic.

- Acute toxicity estimate (ATE)

Oral 1,100 <sup>mg</sup>/<sub>kg</sub>

#### Acute toxicity estimate (ATE) of components of the mixture

| Name of substance                | CAS No    | Exposure route | ATE                                 |
|----------------------------------|-----------|----------------|-------------------------------------|
| Sodium hypochlorite 12% chlorine | 7681-52-9 | oral           | 1,100 <sup>mg</sup> / <sub>kg</sub> |

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).

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.

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### **SECTION 12: Ecological information**

### 12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

#### Aquatic toxicity (acute)

| Endpoint | Value                              | Species               | Exposure time |
|----------|------------------------------------|-----------------------|---------------|
| EC50     | 141 <sup>µg</sup> / <sub>l</sub>   | aquatic invertebrates | 48 h          |
| ErC50    | 0.036 <sup>mg</sup> / <sub>l</sub> | algae                 | 72 h          |

### Aquatic toxicity (acute) of components of the mixture

| Name of substance                   | CAS No    | Endpoint | Value                              | Species               | Exposure<br>time |
|-------------------------------------|-----------|----------|------------------------------------|-----------------------|------------------|
| Sodium hypochlorite<br>12% chlorine | 7681-52-9 | EC50     | 141 <sup>µg</sup> / <sub>l</sub>   | aquatic invertebrates | 48 h             |
| Sodium hypochlorite<br>12% chlorine | 7681-52-9 | ErC50    | 0.036 <sup>mg</sup> / <sub>l</sub> | algae                 | 72 h             |
| sodium hydroxide                    | 1310-73-2 | EC50     | 40.4 <sup>mg</sup> / <sub>l</sub>  | aquatic invertebrates | 48 h             |

### Aquatic toxicity (chronic)

| Endpoint | Value                             | Species        | Exposure time |
|----------|-----------------------------------|----------------|---------------|
| LC50     | 0.05 <sup>mg</sup> / <sub>l</sub> | fish           | 120 h         |
| EC50     | 563 <sup>mg</sup> / <sub>l</sub>  | microorganisms | 3 h           |

### Aquatic toxicity (chronic) of components of the mixture

| Name of substance                   | CAS No    | Endpoint | Value                             | Species        | Exposure<br>time |
|-------------------------------------|-----------|----------|-----------------------------------|----------------|------------------|
| Sodium hypochlorite<br>12% chlorine | 7681-52-9 | LC50     | 0.05 <sup>mg</sup> / <sub>l</sub> | fish           | 120 h            |
| Sodium hypochlorite<br>12% chlorine | 7681-52-9 | EC50     | 563 <sup>mg</sup> / <sub>l</sub>  | microorganisms | 3 h              |

#### 12.2 Persistence and degradability

Data are not available.

#### 12.3 Bioaccumulative potential

Data are not available.

#### Bioaccumulative potential of components of the mixture

| Name of substance                | CAS No    | BCF | Log KOW                       | BOD5/COD |
|----------------------------------|-----------|-----|-------------------------------|----------|
| Sodium hypochlorite 12% chlorine | 7681-52-9 |     | -3.42 (pH value: 12.5, 20 °C) |          |

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#### 12.4 Mobility in soil

Data are not available.

#### 12.5 Results of PBT and vPvB assessment

Data are not available.

#### 12.6 Other adverse effects

Data are not available.

#### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

Waste treatment-relevant information

Recycling/reclamation of other inorganic materials.

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. 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. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

#### **SECTION 14: Transport information**

| 14.1 | UN number | 1791 |  |
|------|-----------|------|--|
|      |           |      |  |

#### **14.2 UN proper shipping name** HYPOCHLORITE SOLUTION

14.3 Transport hazard class(es)

Class 8 (corrosive substances) (environmentally hazardous)

**14.4 Packing group** II (substance presenting medium danger)

**14.5 Environmental hazards** hazardous to the aquatic environment

#### 14.6 Special precautions for user

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

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

The cargo is not intended to be carried in bulk.

#### Information for each of the UN Model Regulations

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

UN number 1791

Proper shipping name HYPOCHLORITE SOLUTION

Classification code 8

Classification code C9

Packing group II

Danger label(s) 8, fish and tree

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Environmental hazards yes (hazardous to the aquatic environment)

Special provisions (SP) 521
Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L
Transport category (TC) 2
Tunnel restriction code (TRC) E
Hazard identification No 80
Emergency Action Code 2X

**International Maritime Dangerous Goods Code (IMDG)** 

UN number 1791

Proper shipping name HYPOCHLORITE SOLUTION

Class 8

Marine pollutant yes (P) (hazardous to the aquatic environment)

Packing group II

Danger label(s) 8, fish and tree



Special provisions (SP) 274, 900

Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L
EmS F-A, S-B

Stowage category B

Segregation group 8 - Hypochlorites

**International Civil Aviation Organization (ICAO-IATA/DGR)** 

UN number 1791

Proper shipping name Hypochlorite solution

Class 8

Environmental hazards yes (hazardous to the aquatic environment)

Packing group II
Danger label(s) 8



Special provisions (SP)

Excepted quantities (EQ)

Limited quantities (LQ)

A3

E2

Limited quantities (LQ)

0,5 L

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## 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)

### **Deco-Paint Directive (2004/42/EC)**

| ١, | VOC content | 0 % |  |
|----|-------------|-----|--|
|    |             |     |  |

#### Directive on industrial emissions (VOCs, 2010/75/EU)

| VOC content | 0 % |
|-------------|-----|
|-------------|-----|

### 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-rel-<br>evant |
|---------|--|---|----------------------|
| 2.1     |  | Classification according to Regulation (EC) No<br>1272/2008 (CLP):<br>change in the listing (table)             | yes                  |
| 2.2     |  | - Pictograms:<br>change in the listing (table)  | yes                  |
| 2.2     |  | - Hazard statements:<br>change in the listing (table)   | yes                  |
| 3.2     |  | Description of the mixture:<br>change in the listing (table)  | yes                  |
| 11.1    | Acute toxicity:<br>Harmful if swallowed. | Acute toxicity:<br>Shall not be classified as acutely toxic.  | yes                  |
| 16      |  | Abbreviations and acronyms:<br>change in the listing (table)  | yes                  |
| 16      |  | List of relevant phrases (code and full text as<br>stated in chapter 2 and 3):<br>change in the listing (table) | yes                  |

### Abbreviations and acronyms

| Abbr.           | Descriptions of used abbreviations  |
|-----------------|---|
| ADN             | Accord européen relatif au transport international des marchandises dangereuses par voies de naviga-<br>tion intérieures (European Agreement concerning the International Carriage of Dangerous Goods by In-<br>land Waterways) |
| ADR             | Accord européen relatif au transport international des marchandises dangereuses par route (European<br>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   |

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

# Sodium hypochlorite, 12% active chlorine

Version number: GHS 5.1 Revision: 2020-07-15 Replaces version of: 2020-06-03 (GHS 4)

| Abbr.      | Descriptions of used abbreviations  |
|------------|---|
| BOD        | Biochemical Oxygen Demand   |
| CAS        | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)  |
| Ceiling-C  | Ceiling value   |
| CLP        | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures  |
| 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) |
| EH40/2005  | EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-li-<br>cence/)  |
| 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            |
| 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   |
| IATA/DGR   | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO       | International Civil Aviation Organization   |
| 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  |
| LC50       | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 9 lethality during a specified time interval                                 |
| log KOW    | n-Octanol/water   |
| MARPOL     | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")   |
| Met. Corr. | Substance or mixture corrosive to metals  |
| 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  |

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

### Sodium hypochlorite, 12% active chlorine

Version number: GHS 5.1 Revision: 2020-07-15 Replaces version of: 2020-06-03 (GHS 4)

| Abbr.       | Descriptions of used abbreviations   |
|-------------|--|
| RID         | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula-<br>tions concerning the International carriage of Dangerous goods by Rail) |
| Skin Corr.  | Corrosive to skin  |
| Skin Irrit. | Irritant to skin   |
| STEL        | Short-term exposure limit  |
| STOT SE     | Specific target organ toxicity - single exposure   |
| 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

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

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: 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 chapter 2 and 3)

| Code | Text  |
|------|---|
| H290 | May be corrosive to metals.                           |
| H314 | Causes severe skin burns and eye damage.              |
| H318 | Causes serious eye damage.                            |
| H335 | May cause respiratory 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.

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