



# Safety Data Sheet

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

## Sodium Hypochlorite Solution

Version number: 2.1  
Replaces version of: 2017-10-13

Revision: 2018-01-25  
First version: 2014-06-27

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

#### 1.1 Product identifier

<b>Trade name</b>	<u>Sodium Hypochlorite Solution</u>
<b>Registration number (REACH)</b>	not relevant (mixture)
<b>CAS number</b>	not relevant (mixture)

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

<b>Relevant identified uses</b>	Chemicals for various applications
<b>Uses advised against</b>	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

BERGCHEMIE J.C.Bröcking & Co. GmbH Telephone: ++49 (0) 202 - 45 60 60  
Rudolfstrasse 14 Telefax: ++49 (0) 202 / 44 79 32  
42285 Wuppertal  
Germany

**e-mail (competent person)** sdb@csb-online.de

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact BERGCHEMIE J.C.Bröcking & Co. GmbH.

#### 1.4 Emergency telephone number

As above or next toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Classification				
Section	Hazard class	Category	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

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Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
4.1A	hazardous to the aquatic environment - acute hazard	1	Aquatic Acute 1	H400
4.1C	hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

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

### Supplemental hazard information

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**EUH031** Contact with acids liberates toxic gas.

**Hazardous ingredients for labelling** sodium hypochlorite, solution  $\geq 25\%$  Cl active

## 2.3 Other hazards

There is no additional information.

## Results of PBT and vPvB assessment

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



## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

Hazardous ingredients							
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes	Specific Conc. Limits	M-Factors
sodium hypochlorite, solution $\geq 25\%$ Cl active	CAS No 7681-52-9 EC No 231-668-3 Index No 017-011-00-1 REACH Reg. No 01-211948815-4-34-xxxx	10 – 15	Met. Corr. 1 / H290 Skin Corr. 1B / H314 Eye Dam. 1 / H318 STOT SE 3 / H335 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		B(a) GHS-HC		M-factor (acute) = 10.0
sodium hydroxide	CAS No 1310-73-2 EC No 215-185-5 REACH Reg. No 01-211945789-2-27-XXXX	0.5 – 1	Met. Corr. 1 / H290 Skin Corr. 1A / H314 Eye Dam. 1 / H318		GHS-HC	Skin Corr. 1A; H314: $C \geq 5\%$ Skin Corr. 1B; H314: $2\% \leq C < 5\%$ Skin Irrit. 2; H315: $0.5\% \leq C < 2\%$ Eye Dam. 1; H318: $C \geq 2\%$ Eye Irrit. 2; H319: $0.5\% \leq C < 2\%$	

#### Notes

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

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## Notes

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Self-protection of the first aider.

Remove victim out of the danger area.

Take off immediately all contaminated clothing.

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

#### Following inhalation

Provide fresh air.

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

#### Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.

Call a physician immediately. Causes poorly healing wounds.

#### Following eye contact

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

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

#### Following ingestion

Rinse mouth immediately and drink plenty of water.

Do NOT induce vomiting.

Call a physician in any case.

#### Notes for the doctor

none

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

Causes severe skin burns and eye damage.

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

none

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

water spray

#### Unsuitable extinguishing media

none

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

Hazardous decomposition products: Section 10.

Substance or mixture corrosive to metals.

Danger of fire in contact with combustible materials.

### 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.

#### Special protective equipment for firefighters

chemical protection suit, self-contained breathing apparatus (EN 133)

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Do not get in eyes, on skin, or on clothing.

Do not breathe mist/vapours/spray.

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

Keep away from combustible material.

#### For emergency responders

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

### 6.2 Environmental precautions

In case of formation of gases/vapours/mists suppress with water spray

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

### Advices on how to clean up a spill

Collect spillage.

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

### Appropriate containment techniques

Use of adsorbent materials.

### Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

## 6.4 Reference to other sections

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

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

Use local and general ventilation.

Never add water to this product.

#### Specific notes/details

None.

#### Handling of incompatible substances or mixtures

Do not mix with acids.

Do not mix with reducing agents.

#### Keep away from

organic absorbing material, pulp/paper, combustible materials

#### Measures to protect the environment

Avoid release to the environment.

#### Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Wash hands after use.

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

Remove contaminated clothing and protective equipment before entering eating areas.

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## 7.2 Conditions for safe storage, including any incompatibilities

### Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

### Flammability hazards

None.

### Incompatible substances or mixtures

Incompatible materials: see section 10.  
Observe hints for combined storage.

### Protect against external exposure, such as

heat, frost, UV-radiation/sunlight

### Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

### Ventilation requirements

Provision of sufficient ventilation.

### Specific designs for storage rooms or vessels

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

### Packaging compatibilities

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

## 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Notation	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Source
GB	sodium hydroxide	1310-73-2		WEL				2	EH40/2005

#### Notation

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

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Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
sodium hypochlorite, solution $\geq 25\%$ Cl active	7681-52-9	DNEL	1.55 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
sodium hypochlorite, solution $\geq 25\%$ Cl active	7681-52-9	DNEL	1.55 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
sodium hydroxide	1310-73-2	DNEL	1 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects

Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
sodium hypochlorite, solution $\geq 25\%$ Cl active	7681-52-9	PNEC	0.21 $\mu\text{g}/\text{l}$	freshwater
sodium hypochlorite, solution $\geq 25\%$ Cl active	7681-52-9	PNEC	0.042 $\mu\text{g}/\text{l}$	marine water
sodium hypochlorite, solution $\geq 25\%$ Cl active	7681-52-9	PNEC	4.69 $\text{mg}/\text{l}$	sewage treatment plant (STP)

## 8.2 Exposure controls

### Appropriate engineering controls

General ventilation.

### Individual protection measures (personal protective equipment)

#### Eye/face protection

Wear eye/face protection.

#### Hand protection

Material	Material thickness	Breakthrough times of the glove material
PVC: polyvinyl chloride	no information available	no information available

Wear suitable gloves.

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

Check leak-tightness/impermeability prior to use.

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.



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## 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
Form	fluid
Colour	yellow
Odour	irritant
Odour threshold	these information are not available

#### Other safety parameters

pH (value)	13.5 (150 g/l, 20 °C), base
Melting point/freezing point	<-16 °C
Initial boiling point and boiling range	these information are not available
Flash point	not applicable
Evaporation rate	these information are not available
Flammability (solid, gas)	not relevant (fluid)

#### Explosive limits

**Lower explosion limit (LEL)** these information are not available

**Upper explosion limit (UEL)** these information are not available

Vapour pressure	17 hPa at 20 °C
Density	1,220 kg/m <sup>3</sup> at 20 °C
Vapour density	these information are not available
Relative density	these information are not available

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## Solubility(ies)

<b>Water solubility</b>	miscible in any proportion
<b>Partition coefficient</b>	
n-octanol/water (log KOW)	these information are not available
Auto-ignition temperature	these information are not available
Relative self-ignition temperature for solids	not relevant (Fluid)
Decomposition temperature	these information are not available
<b>Viscosity</b>	
<b>Kinematic viscosity</b>	these information are not available
<b>Dynamic viscosity</b>	2.65 mPa s at 20 °C
Explosive properties	not explosive
Oxidising properties	shall not be classified as oxidising

## 9.2 Other information

None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Substance or mixture corrosive to metals.  
Danger of fire in contact with combustible materials.

### 10.2 Chemical stability

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

Contact with acids liberates toxic gas.

### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5 Incompatible materials

acids, reducing agents, Combustible materials, metal

### 10.6 Hazardous decomposition products

Oxygen.

# Sodium Hypochlorite Solution

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification procedure

If not otherwise specified the classification is based on:  
Ingredients of the mixture (additivity formula).

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

#### Acute toxicity

Acute toxicity of components of the mixture						
Name of substance	CAS No	Exposure route	Endpoint	Value	Species	Source
sodium hypochlorite, solution ≥25 % Cl active	7681-52-9	dermal	LD50	>20,000 mg/kg	rabbit	ECHA

#### Skin corrosion/irritation

Causes severe skin burns and eye damage.

#### Classification procedure

The classification is based on an extreme pH value.

#### Serious eye damage/eye irritation

Causes serious eye damage.

#### Respiratory or skin sensitisation

##### Skin sensitisation

Classification could not be established because:

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

##### Respiratory sensitisation

Classification could not be established because:

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

#### Germ cell mutagenicity

Classification could not be established because:

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

#### Carcinogenicity

Classification could not be established because:

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

#### Reproductive toxicity

Classification could not be established because:

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

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## Specific target organ toxicity - single exposure

Classification could not be established because:

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

## Specific target organ toxicity - repeated exposure

Classification could not be established because:

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

## Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity (acute)

Very toxic to aquatic organisms.

Test data are not available for the complete mixture.

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

Name of substance	CAS No	Endpoint	Value	Species	Source	Exposure time
sodium hypochlorite, solution $\geq 25$ % Cl active	7681-52-9	EC50	141 $\mu\text{g}/\text{l}$	daphnia magna	ECHA	48 h
sodium hypochlorite, solution $\geq 25$ % Cl active	7681-52-9	ErC50	0.036 $\text{mg}/\text{l}$	algae (pseudokirchneriella subcapitata)	ECHA	72 h
sodium hydroxide	1310-73-2	EC50	40.4 $\text{mg}/\text{l}$	Ceriodaphnia dubia (water flea)	ECHA	48 h

#### Aquatic toxicity (chronic)

Toxic to aquatic life with long lasting effects.

Test data are not available for the complete mixture.

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

Name of substance	CAS No	Endpoint	Value	Species	Source	Exposure time
sodium hypochlorite, solution $\geq 25$ % Cl active	7681-52-9	LC50	0.05 $\text{mg}/\text{l}$	fish	ECHA	120 h

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## 12.2 Persistence and degradability

### Biodegradation

Data are not available.

### Persistence

Data are not available.

## 12.3 Bioaccumulative potential

Data are not available.

### Bioaccumulative potential of components of the mixture

Name of substance	CAS No	Log KOW
sodium hypochlorite, solution $\geq 25\%$ Cl active	7681-52-9	-3.42 (pH value: 12.5, 20 °C)
sodium hydroxide	1310-73-2	-3.88

## 12.4 Mobility in soil

Data are not available.

## 12.5 Results of PBT and vPvB assessment

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

## 12.6 Other adverse effects

Data are not available.

### Endocrine disrupting potential

None of the ingredients are listed.

### Remarks

Wassergefährdungsklasse, WGK (water hazard class): 2

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

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

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

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.

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## Remarks

Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

<b>14.1</b>	<b>UN number</b>	1791
<b>14.2</b>	<b>UN proper shipping name</b>	HYPOCHLORITE SOLUTION
<b>14.3</b>	<b>Transport hazard class(es)</b>	
	<b>Class</b>	8
<b>14.4</b>	<b>Packing group</b>	II
<b>14.5</b>	<b>Environmental hazards</b>	hazardous to the aquatic environment
	<b>Environmentally hazardous substance (aquatic environment)</b>	sodium hypochlorite

## 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.

## 14.8 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	UN1791, HYPOCHLORITE SOLUTION, 8, II, (E), environmentally hazardous
Class	8
Classification code	C9
Packing group	II
Danger label(s)	8, fish and tree
	
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.

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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	UN1791, HYPOCHLORITE SOLUTION, 8, II, MAR- INE POLLUTANT
Class	8
Marine pollutant	yes (P) (hazardous to the aquatic environment)
Packing group	II
Danger label(s)	8, fish and tree
	
Special provisions (SP)	-
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	UN1791, Hypochlorite solution, 8, II
Class	8
Environmental hazards	yes (hazardous to the aquatic environment)
Packing group	II
Danger label(s)	8
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	0,5 L

# Sodium Hypochlorite Solution

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

#### Restrictions according to REACH, Annex XVII

none of the ingredients are listed

Dangerous substances with restrictions (REACH, Annex XVII)				
Name of substance	Name acc. to inventory	Type of registration	Restriction	No
Sodium Hypochlorite Solution	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	1907/2006/EC annex XVII	R3	3

#### Legend

- R3
- Shall not be used in:
    - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
    - tricks and jokes,
    - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
  - Articles not complying with paragraph 1 shall not be placed on the market.
  - Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
    - can be used as fuel in decorative oil lamps for supply to the general public, and,
    - present an aspiration hazard and are labelled with R65 or H304,
  - Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
  - Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
    - lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';
    - grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
    - lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
  - No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.
  - Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.



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## List of substances subject to authorisation (REACH, Annex XIV)

none of the ingredients are listed

## 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
41	sodium hypochlorite, mixture	200                      500	14)

### Notation

14) mixtures of sodium hypochlorite classified as aquatic acute category 1 [H400] containing less than 5 % active chlorine and not classified under any of the other hazard categories in Part 1 of Annex I

## Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

none of the ingredients are listed

## Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

## Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

none of the ingredients are listed

## Regulation 98/2013/EU on the marketing and use of explosives precursors

none of the ingredients are listed

## Regulation 648/2004/EC on detergents

Labelling of contents	
Wt%	Constituents
≥15% - <30%	chlorine-based bleaching agents
< 5 %	soap

## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier. Chemical safety assessments for substances in this mixture were not carried out.

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## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Indication of changes: Section 3, 14

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European 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
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
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 ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
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
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

# Sodium Hypochlorite Solution

Abbr.	Descriptions of used abbreviations
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
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
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.

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.

# Sodium Hypochlorite Solution

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Code	Text
H411	Toxic to aquatic life with long lasting effects.

## Responsible for the safety data sheet

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## Disclaimer

This information is based upon the present state of our knowledge.  
This SDS has been compiled and is solely intended for this product.