

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006**Sodium hypochlorite 10-15% (All grades)**Version 7.1
Revision Date 2011/01/20Print Date 2011/01/20
MSDS code: MSHY100**1. Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Trade name : Sodium hypochlorite 10-15% (All grades)
Substance name : sodium hypochlorite, solution 10-15 % Cl active
Index-No. : 017-011-00-1
CAS-No. : 7681-52-9
EC-No. : 231-668-3

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

Use of the Substance/Mixture : At this time we do not yet have information on identified uses. They will be included in this safety data sheet when available.

Recommended restrictions on use : At that time we do not yet have information on use restrictions. They will be included in this safety data sheet when available.

1.3. Details of the supplier of the safety data sheet

Company : Brenntag UK & Ireland
Albion House, Rawdon Park
GB LS19 7XX Leeds Yeadon
Telephone : 0113 3879 200
Telefax : 0113 3879 280
E-mail address : msds@brenntag.co.uk

1.4. Emergency telephone number

Emergency telephone number : Emergency only telephone number (open 24 hours):
01865 407333 (N.C.E.C. Culham)

2. Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008****REGULATION (EC) No 1272/2008**

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Hazard class	Hazard category	Target Organs	Hazard statements
Skin corrosion	Category 1B		H314
Acute aquatic toxicity	Category 1		H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Directive 67/548/EEC or 1999/45/EC	
Hazard symbol / Category of danger	Risk phrases
Corrosive (C)	R34
	R31
Dangerous for the environment (N)	R50

For the full text of the R-phrases mentioned in this Section, see Section 16.

Most important adverse effects

- Human Health : See section 11 for toxicological information.
No further information available.
- Physical and chemical hazards : See section 9 for physicochemical information., No further information available.
- Potential environmental effects : See section 12 for environmental information.

2.2. Label elements**Labelling according to Regulation (EC) No 1272/2008**

Hazard symbols : 

Signal word : Danger

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Hazard statements	: H314 H400	Causes severe skin burns and eye damage. Very toxic to aquatic life.
Precautionary statements		
Prevention	: P260 P273 P280	Do not breathe vapours. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response	: P301 + P330 + P331 P303 + P361 + P353 P305 + P351 + P338	IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Additional Labelling:

EUH031 Contact with acids liberates toxic gas.

Hazardous components which must be listed on the label:

|| • sodium hypochlorite, solution

2.3. Other hazards

No other information is available.

3. Composition/information on ingredients**3.1. Substances**

|| Chemical nature : sodium hypochlorite
Aqueous solution

Chemical Name	Identification Number	Amount [%]
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sodium hypochlorite, solution	Index-No.	: 017-011-00-1	
	CAS-No.	: 7681-52-9	
	EC-No.	: 231-668-3	>= 10 - <= 15
	Registration number	: 01-2119488154-34-xxxx	
sodium hydroxide	Index-No.	: 011-002-00-6	
	CAS-No.	: 1310-73-2	
	EC-No.	: 215-185-5	>= 0 - < 5

4. First aid measures**4.1 Description of first aid measures**

General advice	: Take off all contaminated clothing immediately.
If inhaled	: In case of accident by inhalation: remove casualty to fresh air and keep at rest. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.
In case of skin contact	: Wash off immediately with soap and plenty of water. If irritation appears or if the contamination is important, seek medical advice.
In case of eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.
If swallowed	: Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting - seek medical advice. If a person vomits when lying on his back, place him in the recovery position.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	: Inhalation may provoke the following symptoms: Cough Headache Lung oedema
Effects	: Risk of serious damage to the lungs (by aspiration).

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4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.
Later control for pneumonia and lung oedema.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.

Unsuitable extinguishing media : Exempt

5.2. Special hazards arising from the substance or mixture

Specific hazards during fire fighting : Fire may cause evolution of:
Chlorine
Hydrogen chloride gas
chlorine oxides

5.3. Advice for firefighters

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus. Wear appropriate body protection (full protective suit)

Further information : Cool closed containers exposed to fire with water spray. Heating will cause a pressure rise - with risk of bursting. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment. Wear respiratory

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protection. Keep people away from and upwind of spill/leak.
Provide adequate ventilation. Danger of slipping if spilled
Avoid contact with skin and eyes. Do not breathe vapour.

6.2 Environmental precautions



Environmental precautions : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.
If the product contaminates rivers and lakes or drains inform
respective authorities.
If material reaches soil inform authorities responsible for such
cases.

6.3 Methods and materials for containment and cleaning up



Methods and materials for : Absorb with liquid-binding material (sand, diatomite, acid
containment and cleaning binders, universal binders). Keep in suitable, closed
up containers for disposal.



Further information : Treat recovered material as described in the section "Disposal
considerations".

6.4 Reference to other sections

For personal protection see section 8.

7. Handling and storage

7.1 Precautions for safe handling



Advice on safe handling : Do not keep the container sealed. Handle and open container
with care. Ensure adequate ventilation. Use personal protective
equipment. Avoid contact with the skin and the eyes. Do not
breathe vapours or spray mist. Use respirator with appropriate
filter if vapours or aerosol are released. Emergency eye wash
fountains and emergency showers should be available in the
immediate vicinity.

Hygiene measures : Keep away from food, drink and animal feedingstuffs. Smoking,

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eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist.

7.2 Conditions for safe storage, including any incompatibilities



Requirements for storage areas and containers : Keep in an area equipped with alkali resistant flooring. Keep only in the original container. Store in a receptacle equipped with a vent.



Advice on protection against fire and explosion : The product is not flammable. Normal measures for preventive fire protection.



Further information on storage conditions : Keep in a well-ventilated place. Protect against light. Store in cool place. Do not keep the container sealed.



Advice on common storage : Keep away from food, drink and animal feedingstuffs. Do not store together with acids and ammonium salts.



German storage class : 8B: Non-combustible substances, corrosive

7.3 Specific end uses

Specific use(s) : No information available.

8. Exposure controls/personal protection

8.1. Control parameters

Component: sodium hydroxide

**CAS-No.
1310-73-2**

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Other OELs

Regulatory Basis : UK. EH40 Workplace Exposure Limits (WELs)
Regulatory List : EH40 WEL
Value type : Short Term Exposure Limit (STEL):
Value : 2 mg/m³

Component: chlorine

CAS-No.
7782-50-5

Other OELs

Regulatory Basis : EU. Indicative Exposure and Directives relating to the protection of risks related to work exposure to chemical, physical, and biological agents.
Regulatory List : EU ELV
Value type : Short Term Exposure Limit (STEL):
Value : 0.5 ppm
Value : 1.5 mg/m³
Remarks : Indicative

Regulatory Basis : UK. EH40 Workplace Exposure Limits (WELs)
Regulatory List : EH40 WEL
Value type : Short Term Exposure Limit (STEL):
Value : 0.5 ppm
Value : 1.5 mg/m³

8.2. Exposure controls**Engineering measures**

Refer to protective measures listed in sections 7 and 8.

Personal protective equipment*Respiratory protection*

Advice : Use respirator with appropriate filter if vapours or aerosol are released.
Recommended Filter type:
Combination filter:B-P2
Combination filter:B-P3

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Hand protection

|| Advice : The glove material has to be impermeable and resistant to the product / the substance / the preparation.
Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Protective gloves should be replaced at first signs of wear.

|| Material : butyl-rubber

|| Gloves : 8 h

|| Glove thickness : 0.5 mm

|| Material : Polyvinylchloride

|| Gloves : 8 h

|| Glove thickness : 0.5 mm

|| Material : polychloroprene

|| Gloves : 8 h

|| Glove thickness : 0.5 mm

Eye protection

|| Advice : Tightly fitting safety goggles

Skin and body protection

|| Advice : alkali resistant protective clothing

Environmental exposure controls

|| General advice : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.
If the product contaminates rivers and lakes or drains inform respective authorities.

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If material reaches soil inform authorities responsible for such cases.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	: liquid
Colour	: yellowish green
Odour	: slight chlorine
Odour Threshold	: Currently we do not have any Information from our supplier about this.
pH	: > 11
Melting point/range	: -17 °C
Boiling point/boiling range	: 110 °C
Flash point	: not applicable
Evaporation rate	: Currently we do not have any Information from our supplier about this.
Flammability (solid, gas)	: does not ignite
Upper explosion limit	: not applicable
Lower explosion limit	: not applicable
Vapour pressure	: Currently we do not have any Information from our supplier about this.
Relative vapour density	: > 1.0 (Air = 1.0)
Density	: 1.2 - 1.3 g/cm ³
Water solubility	: completely soluble
Partition coefficient: n-octanol/water	: Currently we do not have any Information from our supplier about this.

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Ignition temperature	: not applicable
Thermal decomposition	: Currently we do not have any Information from our supplier about this.
Viscosity, dynamic	: 3.45 mPa.s 20 °C (Aqueous, solution, 15 %)
Explosive properties	: Not explosive
Oxidizing properties	: Currently we do not have any Information from our supplier about this.

9.2 Other information

No further information available.

10. Stability and reactivity

10.1. Reactivity

Advice : This product is a very reactive substance that can react with many inorganic and organic compounds.

10.2. Chemical stability

Advice : Decomposes on heating.
Decomposes on exposure to light.

10.3. Possibility of hazardous reactions

H Hazardous reactions : May develop chlorine if mixed with acidic solutions.

10.4. Conditions to avoid

Conditions to avoid : Heat.

10.5. Incompatible materials

I Materials to avoid : Acids
ammonium compounds
Acetic anhydride
Organic materials
Hydrogen peroxide

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metal salts
Copper
Nickel
Iron

10.6. Hazardous decomposition products

Hazardous decomposition products : Hydrogen chloride gas
Chlorine
chlorine oxides

11. Toxicological information**11.1. Information on toxicological effects**

Product: sodium hypochlorite, solution 10-15 % Cl active	CAS-No. 7681-52-9
Acute toxicity	
Oral	
Value type	: LD50
Value	: 2,900 - 3,400 mg/kg
Species	: mouse
Remarks	: Cause serious burns with severe pains, vomiting, pains in the stomach, possibly chock and damaged kidneys. The burn may occur even if only small amounts have been swallowed.
Inhalation	
Value type	: LC50
Value	: > 10.5 mg/l
Species	: rat
Dermal	
Value type	: LD50

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Value : > 2,000 mg/kg
Species : rabbit

Irritation**Skin**

Species : rabbit
Result : Severe skin irritation
Method : OECD Test Guideline 404

Species : human.
Result : corrosive effects

Eyes

Species : rabbit
Result : corrosive effects
Remarks : Risk of serious damage to eyes.

Sensitisation

Species : guinea pig
Result : not sensitizing

Further information

Other relevant toxicity information : All numerical values for acute toxicity are calculated on the pure substances.
If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information**12.1. Toxicity**

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Cl active**

**CAS-No.
7681-52-9**

Acute toxicity**Fish**

Species	: Pimephales promelas
Exposure Time	: 96 h
Value type	: LC50
Value	: 0.22 - 0.62 mg/l

Toxicity to daphnia and other aquatic invertebrates.

Species	: Daphnia magna
Exposure time	: 96 h
Value type	: EC50
Value	: 2.1 mg/l

algae

Species	: Desmodesmus subspicatus (green algae)
Exposure time	: 24 h
Value type	: EC50
Value	: 28 mg/l

12.2. Persistence and degradability

**Product: sodium hypochlorite, solution 10-15 %
Cl active**

**CAS-No.
7681-52-9**

Persistence and degradability**Persistence**

Remarks : no data available

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Biodegradability

Remarks : The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Product: sodium hypochlorite, solution 10-15 % Cl active	CAS-No. 7681-52-9
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Bioaccumulation

Remarks : Bioaccumulation is not expected.

12.4. Mobility in soil

Product: sodium hypochlorite, solution 10-15 % Cl active	CAS-No. 7681-52-9
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Mobility

Remarks : The product is mobile in water environment.

12.5. Results of PBT and vPvB assessment

Product: sodium hypochlorite, solution 10-15 % Cl active	CAS-No. 7681-52-9
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Results of PBT and vPvB assessment

Remarks : No information available.

12.6. Other adverse effects

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**Product: sodium hypochlorite, solution 10-15 %
Cl active**

**CAS-No.
7681-52-9**

Additional ecological information

Remarks : All numerical values for ecotoxicity effects are calculated on the pure substances.
Do not flush into surface water or sanitary sewer system.

13. Disposal considerations

13.1. Waste treatment methods

Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.
Contaminated packaging : Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

14. Transport information

14.1. UN number

1791

14.2. UN proper shipping name

ADR : HYPOCHLORITE SOLUTION
RID : HYPOCHLORITE SOLUTION
IMDG : HYPOCHLORITE SOLUTION

14.3. Transport hazard class(es)

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ADR-Class (Labels; Classification Code; Hazard identification No; Tunnel restriction code)	:	8 8; C9; 80; (E)
RID-Class (Labels; Classification Code; Hazard identification No)	:	8 8; C9; 80
IMDG-Class (Labels; EmS)	:	8 8; F-A, S-B

14.4. Packaging group

ADR	:	III
RID	:	III
IMDG	:	III

14.5. Environmental hazards

Labeling according to 5.2.1.8 ADR	:	Fish and tree
Labeling according to 5.2.1.8 RID	:	Fish and tree
Labeling according to 5.2.1.6.3 IMDG	:	Fish and tree
Classification as environmentally hazardous according to 2.9.3 IMDG	:	yes

14.6. Special precautions for user

Note : not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG : Not applicable.

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15. Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.2. Chemical Safety Assessment**

Currently we do not have any Information from our supplier about this.

16. Other information**Full text of R-phrases referred to under sections 2 and 3.**

R31 Contact with acids liberates toxic gas.
R34 Causes burns.
R50 Very toxic to aquatic organisms.

Full text of H-Statements referred to under sections 2 and 3.

H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.

Further information

Other information : Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use.
The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship.
The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

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|| Indicates updated section.