



SAFETY DATA SHEET

Sodium hypochlorite solution, 5-20%

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

1.1. Product identifier

Product name	Sodium hypochlorite solution, 5-20%
Synonyms; trade names	Commonly called bleach solution
REACH registration number	01-2119488154-34
CAS number	7681-52-9
EC number	231-668-3

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

Identified uses	Treatment of drinking water, has received approval by the European Committee for Standardisation. Washing and cleaning products Cleaning agent. Pulp and paper manufacturing Treatment of waste water. Finishing agent (textiles) Manufacture of substances. Disinfectant. Bleach
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1.3. Details of the supplier of the safety data sheet

Supplier	Chemisphere UK Ltd 4 Richmond Road, Trafford Park Manchester M17 1RE United Kingdom T:+44 (0)161 8747200 F:+44 (0)161 874 7201 safetydata@chemisphereuk.co.uk
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1.4. Emergency telephone number

Emergency telephone	+44 (0)776 724 8499 (24-hour)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Skin Corr. 1B - H314 Eye Dam. 1 - H318
Environmental hazards	Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Classification (67/548/EEC or 1999/45/EC) C;R34. N;R50. R31.

Human health	Vapours may irritate throat/respiratory system. A single exposure may cause the following adverse effects: Coughing. Difficulty in breathing. Corrosive to skin and eyes.
Environmental	The product contains a substance which is very toxic to aquatic organisms.
Physicochemical	Contact with acids liberates toxic chlorine gas Product may be corrosive to some metals

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2.2. Label elements

EC number 231-668-3

Hazard pictograms



Signal word Danger

Hazard statements
 H400 Very toxic to aquatic life.
 H318 Causes serious eye damage.
 H314 Causes severe skin burns and eye damage.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements
 P260 Do not breathe vapour/ spray.
 P264 Wash contaminated skin thoroughly after handling.
 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.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 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.
 P321 Specific treatment (see medical advice on this label).
 P363 Wash contaminated clothing before reuse.
 P391 Collect spillage.
 P405 Store locked up.
 P501 Dispose of contents/ container in accordance with national regulations.

Contains Sodium hypochlorite

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name

3.2. Mixtures

Water	60-100%
CAS number: 7732-18-5	
Classification	Classification (67/548/EEC or 1999/45/EC)
Not Classified	-

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Sodium hypochlorite	10-30%
CAS number: 7681-52-9	EC number: 231-668-3
M factor (Acute) = 10	
Classification Met. Corr. 1 - H290 Skin Corr. 1B - H314 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411	Classification (67/548/EEC or 1999/45/EC) C;R34. N;R50. R31.
Sodium chloride	10-30%
CAS number: —	
Classification Not Classified	Classification (67/548/EEC or 1999/45/EC) -
SODIUM HYDROXIDE	<1%
CAS number: 1310-73-2	EC number: 215-185-5
Classification Met. Corr. 1 - H290 Skin Corr. 1A - H314 Eye Dam. 1 - H318	Classification (67/548/EEC or 1999/45/EC) C;R35

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention immediately.
Inhalation	Move affected person to fresh air at once. For breathing difficulties, oxygen may be necessary.
Ingestion	Do not induce vomiting. If confined to the mouth, rinse mouth thoroughly and ensure water is not swallowed. If swallowed, drink plenty of water. If substance has been swallowed, give water to drink immediately
Skin contact	Remove contaminated clothing and rinse skin thoroughly with water.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes.

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

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Thermal decomposition will evolve Chlorine. Contact with heavy metals, their compounds and alloys the product decomposes with evolution of oxygen.

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5.3. Advice for firefighters

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Flush away spillage with plenty of water. Large Spillages: Absorb spillage with sand or other inert absorbent. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into suitable waste disposal containers and seal securely.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with eyes. Handle with care as an alkaline material. Wear appropriate protective clothing. Avoid inhalation of vapours and spray/mists. Do not mix with acids, or other cleaning fluids (especially ammonia). Do not mix with sodium bisulfite

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Unsuitable container materials: Common metals. Store in vented vessels of rubber lined mild steel or HDPE. Uncontrolled pressure build up may occur in closed systems (vessels, pipes etc.) so all containers must have a venting device. Sludge may build up in tanks over time, due to salt deposition. Keep away from acids, ammonia solutions, amines and methanol. Keep away from heat and direct sunlight.

7.3. Specific end use(s) Disinfecting toilets, urinals, kitchen and bathroom areas.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

SODIUM HYDROXIDE

Long-term exposure limit (8-hour TWA): WEL

Short-term exposure limit (15-minute): WEL 2 mg/m³

WEL = Workplace Exposure Limit

Ingredient comments Chlorine vapour STEL 15min 0.5 ppm, 1.5 mg/m³

DNEL

Industry - Inhalation; Long term : 1.55 mg/m³

Industry - Inhalation; Short term : 3.1 mg/m³

Consumer - Inhalation; Long term : 1.55 mg/m³

Consumer - Inhalation; Short term : 3.1 mg/m³

Consumer - Oral; Long term systemic effects: 0.26 mg/kg/day

8.2. Exposure controls

Protective equipment



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Appropriate engineering controls	Provide adequate general and local exhaust ventilation.
Eye/face protection	The following protection should be worn: Chemical splash goggles or face shield.
Hand protection	Wear protective gloves. Rubber or plastic.
Other skin and body protection	Plastic apron, sleeves, boots - if handling large quantities, full body suit.
Hygiene measures	Provide eyewash station.
Respiratory protection	For respirator use cartridge type P3 SL

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Green-yellow.
Odour	Irritating. Chlorine.
pH	pH (concentrated solution): > 13
Melting point	-17°C°C
Initial boiling point and range	110°C @ Decomposes with heat
Relative density	5%: ~1.10 15%: 1.26 @ 20°C
Solubility(ies)	Completely soluble in water.

9.2. Other information

Surface tension

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The following materials may react violently with the product: Acids. Sodium bisulfite

10.2. Chemical stability

Stability Avoid the following conditions: Avoid contact with acids.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Contact with acids liberates toxic chlorine gas. Reacts with amines and ammonia to form explosive compounds, and can react violently with methanol. Reacts strongly with sodium bisulfite

10.4. Conditions to avoid

Conditions to avoid Store in a cool dry place away from direct sunlight.

10.5. Incompatible materials

Materials to avoid Contact with acids liberates toxic chlorine gas. Decomposition with evolution of oxygen is accelerated by heat and light, and also by contact with metals, particularly copper, nickel, iron and monel.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition will evolve toxic vapours.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀
mg/kg) 2,000.0

Species Rat

Skin corrosion/irritation

Animal data Corrosive

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vivo This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity There is no evidence that the product can cause cancer.

Inhalation

Mist/droplets are corrosive to the respiratory tract, and will cause a burning sensation in the throat, coughing and breathing difficulties.

Ingestion

If ingested will cause severe damage to gastrointestinal tract.

Skin contact

Causes burns. Prolonged or repeated contact may cause dermatitis.

Eye contact

Risk of serious damage to eyes. A single exposure may cause the following adverse effects:
Corneal damage.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish mg/l active chlorine
LC₅₀, 96 hours: 0.01-0.1 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 0.01-0.1 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC₅₀, 72 hours: Technically unfeasible mg/l, Algae

Acute toxicity - microorganisms LOEC, : 0.375 mg/l, Activated sludge

12.2. Persistence and degradability

Persistence and degradability The product quickly decomposes in water or soil

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating.

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

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12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Avoid the spillage or runoff entering drains, sewers or watercourses. Collect and place in suitable waste disposal containers and seal securely. Dispose of waste via a licensed waste disposal contractor. Contaminated area should be washed with large amounts of water

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1791

UN No. (IMDG) 1791

UN No. (ICAO) 1791

14.2. UN proper shipping name

Proper shipping name (ADR/RID) HYPOCHLORITE SOLUTION

Proper shipping name (IMDG) HYPOCHLORITE SOLUTION

Proper shipping name (ICAO) HYPOCHLORITE SOLUTION

Proper shipping name (ADN) HYPOCHLORITE SOLUTION

14.3. Transport hazard class(es)

ADR/RID class 8

ADR/RID label 8

IMDG class 8

ICAO class/division 8

Transport labels



14.4. Packing group

ADR/RID packing group II

IMDG packing group II

ICAO packing group II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS F-A, S-B

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Emergency Action Code 2X

Hazard Identification Number 80
(ADR/RID)

Tunnel restriction code (E)

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

SECTION 15: Regulatory information

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

EU legislation This product has been approved as a chemical used for the treatment of drinking water, under the appropriate BS EN Standard (see Sales Specification), and so it is also approved under Regulation 31 of the Water Supply (Water Quality) Regulations 2000. Regulation (EC) No 1907/2006 of the European Parliament and the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	Updated Section(s) 2
Issued by	M.Bartlett
Revision date	26/06/2020
Revision	9
Supersedes date	01/11/2018
Risk phrases in full	R31 Contact with acids liberates toxic gas. R34 Causes burns. R35 Causes severe burns. R50 Very toxic to aquatic organisms.
Hazard statements in full	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.