



## SAFETY DATA SHEET

### Sodium hypochlorite solution, 5-20%

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

##### 1.1. Product identifier

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

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

<b>Identified uses</b>	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.
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##### 1.3. Details of the supplier of the safety data sheet

<b>Supplier</b>	Industrial Chemicals Limited Hogg Lane Grays Essex RM17 5DU United Kingdom T:+44 (0)1375 389000 F:+44 (0)1375 389110 sds@icgl.co.uk
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##### 1.4. Emergency telephone number

<b>Emergency telephone</b>	+44 (0)1865 407333 (24-hour)
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#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification (EC 1272/2008)

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

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

<b>Human health</b>	Vapours may irritate throat/respiratory system. A single exposure may cause the following adverse effects: Coughing. Difficulty in breathing. Corrosive to skin and eyes.
<b>Environmental</b>	The product contains a substance which is very toxic to aquatic organisms.
<b>Physicochemical</b>	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	-

## Sodium hypochlorite solution, 5-20%

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

<b>General information</b>	Get medical attention immediately.
<b>Inhalation</b>	Move affected person to fresh air at once. For breathing difficulties, oxygen may be necessary.
<b>Ingestion</b>	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
<b>Skin contact</b>	Remove contaminated clothing and rinse skin thoroughly with water.
<b>Eye contact</b>	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)

## 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/m<sup>3</sup>

WEL = Workplace Exposure Limit

**Ingredient comments** Chlorine vapour STEL 15min 0.5 ppm, 1.5 mg/m<sup>3</sup>

#### DNEL

Industry - Inhalation; Long term : 1.55 mg/m<sup>3</sup>

Industry - Inhalation; Short term : 3.1 mg/m<sup>3</sup>

Consumer - Inhalation; Long term : 1.55 mg/m<sup>3</sup>

Consumer - Inhalation; Short term : 3.1 mg/m<sup>3</sup>

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

### 8.2. Exposure controls

#### Protective equipment



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

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Colour</b>	Green-yellow.
<b>Odour</b>	Irritating. Chlorine.
<b>pH</b>	pH (concentrated solution): > 13
<b>Melting point</b>	-17°C°C
<b>Initial boiling point and range</b>	110°C @ Decomposes with heat
<b>Relative density</b>	5%: ~1.10 15%: 1.26 @ 20°C
<b>Solubility(ies)</b>	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 (LD<sub>50</sub> 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  
LC<sub>50</sub>, 96 hours: 0.01-0.1 mg/l, Fish

Acute toxicity - aquatic invertebrates EC<sub>50</sub>, 48 hours: 0.01-0.1 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC<sub>50</sub>, 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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## Sodium hypochlorite solution, 5-20%

**Emergency Action Code** 2X

**Hazard Identification Number (ADR/RID)** 80

**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

<b>Revision comments</b>	Updated Section(s) 2
<b>Issued by</b>	M.Bartlett
<b>Revision date</b>	26/06/2020
<b>Revision</b>	9
<b>Supersedes date</b>	01/11/2018
<b>Risk phrases in full</b>	R31 Contact with acids liberates toxic gas. R34 Causes burns. R35 Causes severe burns. R50 Very toxic to aquatic organisms.
<b>Hazard statements in full</b>	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.