

SAFETY DATA SHEET

Sodium hypochlorite solution, 3 - less than 5%

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

1.1. Product identifier

Trade name

Sodium hypochlorite solution, 3 - less than 5%

Other names / Synonyms

Commonly called bleach solution

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

▼ Relevant identified uses of the substance or mixture

Treatment of drinking water, 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., European Committee Approval , Manufacture of substance, Pulp and paper manufacturing, Disinfectant, Finishing agent, Cleaning product
Restricted to professional users.

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

▼ Company and address

Industrial Chemicals Limited

Jupiter House,
Warley Hill Business Park,
The Drive,
Warley,
Brentwood,
Essex,
CM13 3BE
United Kingdom
+44 (0)1375 389000
+44 (0)1375 389110
www.icgl.co.uk

E-mail

sds@icgl.co.uk

Revision

08/02/2024

SDS Version

4.0

Date of previous version

13/07/2023 (3.0)

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).
See section 4 "First aid measures".

SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.1. Classification of the substance or mixture

Met. Corr. 1; H290, May be corrosive to metals.

Skin Irrit. 2; H315, Causes skin irritation.

Eye Dam. 1; H318, Causes serious eye damage.

Aquatic Acute 1; H400, Very toxic to aquatic life.
 Aquatic Chronic 2; H411, Toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard pictogram(s)



Signal word

Danger

Hazard statement(s)

May be corrosive to metals. (H290)
 Causes skin irritation. (H315)
 Causes serious eye damage. (H318)
 Very toxic to aquatic life with long lasting effects. (H410)

Precautionary statement(s)

General

-

Prevention

Wash hands and exposed skin thoroughly after handling. (P264)
 Wear face protection/protective gloves/protective clothing. (P280)

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
 Continue rinsing. (P305+P351+P338)
 Absorb spillage to prevent material damage. (P390)

Storage

Store in a container with a resistant inner liner. (P406)

▼ Disposal

Dispose of contents/container in accordance with local regulation (P501)

Hazardous substances

sodium hypochlorite, solution
 sodium hydroxide;caustic soda

Additional labelling

The product contains a biocidal product.
 Active substance(s):
 sodium hypochlorite, solution (3 g/100g)

2.3. Other hazards

▼ Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.
 This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
sodium hypochlorite, solution	CAS No.: 7681-52-9 EC No.: 231-668-3 UK-REACH: 01-1874465138-3-0003 Index No.: 017-011-00-1	1-5%	EUH031 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)	
sodium hydroxide;caustic soda	CAS No.: 1310-73-2 EC No.: 215-185-5 UK-REACH: 01-6126796028-6-0018 Index No.: 011-002-00-6	<1%	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

▼ Inhalation

IF INHALED: Move to fresh air and keep at rest in a position comfortable for breathing. If symptoms: Call 112/ambulance for medical assistance. If no symptoms: Call a POISON CENTRE or a doctor.

▼ Skin contact

IF ON SKIN: Immediately wash skin with plenty of water. Thereafter take off all contaminated clothing and wash it before reuse. Continue to wash the skin with water for 15 minutes. Call a POISON CENTRE or a doctor.

▼ Eye contact

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Call 112/ambulance for medical assistance.

▼ Ingestion

IF SWALLOWED: Immediately rinse mouth. Give something to drink, if exposed person is able to swallow. Do NOT induce vomiting. Call 112/ambulance for medical assistance.

Burns

Not applicable.

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

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

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

IF exposed or concerned:
Get immediate medical advice/attention.

Information to medics

The eyes should also be rinsed repeatedly on the way to the doctor if eye exposure to alkaline chemicals (pH > 11), amines and acids like acetic acid, formic acid or propionic acid
Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Halogenated compounds
Some metal oxides
Oxygen, hypochlorous acid, chlorine.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.
Hazchem Code: 2X

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.
 Ensure adequate ventilation, especially in confined areas.
 Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
 Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.
 See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

It is recommended to install waste collection trays in order to prevent emissions to the waste water system and surrounding environment.
 Avoid direct contact with the product.
 Smoking, drinking and consumption of food is not allowed in the work area.
 See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
 Store in a container with a resistant inner liner.

Recommended storage material

Store in vented vessels of rubber lined mild steel or HDPE.
 so all containers must have a venting device

Storage temperature

Keep away from heat and direct sunlight.
 . If a damp cloth or paper towel is used to collect material, rinse it thoroughly with a large amount of water before reuse or disposal. Concentrated bleach may cause a fire in contact with paper, rags or other combustible material.
 Large amounts should be carefully collected into a plastic container for disposal.

Incompatible materials

Strong acids, alkali metals, metal powders, oxidizing materials and amines. Contact with metals can result in decomposition with the formation of oxygen.

- Common Metals
- Strong acids
- Ammonia Solutions
- Amines
- Methanol
- Copper

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

sodium hydroxide;caustic soda
 Short term exposure limit (15 minutes) (mg/m³): 2

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.
 EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

sodium hydroxide;caustic soda

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Inhalation	1 mg/m ³

sodium hypochlorite, solution

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Inhalation	1.55 mg/m ³
Long term – Systemic effects - Workers	Inhalation	1.55 mg/m ³
Short term – Local effects - Workers	Inhalation	3.1 mg/m ³
Short term – Systemic effects - Workers	Inhalation	3.1 mg/m ³

PNEC

sodium hypochlorite, solution

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		210 ng/L
Intermittent release (freshwater)		260 ng/L
Marine water		42 ng/L
Predators		11.1 mg/kg
Sewage treatment plant		4.69 mg/L

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Ensure that eyewash stations and safety showers are located within easy reach.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures

Take off contaminated clothing and wash it before reuse.

Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment

Generally

Use only UKCA marked protective equipment.

Respiratory Equipment

Type	Class	Colour	Standards
Combination filter A1B1E1K1-P3	Class 1/3	Brown/Gray/Yellow/Green /White	EN14387



Skin protection

Recommended	Type/Category	Standards
Plastic apron, sleeves, boots - if handling large quantities, full body suit.		
Eye Wash		

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Rubber or plastic gloves			

Eye protection

Type	Standards
Face shield	EN166



Chemical splash goggles

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Green-Yellow

Odour / Odour threshold

Irritating Chlorine

pH

-

pH in solution

(13%)

Density (g/cm³)

-

Relative density

1.26 (20 °C)

Kinematic viscosity

Testing not relevant or not possible due to the nature of the product.

Particle characteristics

Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C)

-17

Softening point/range (waxes and pastes) (°C)

Does not apply to liquids.

Boiling point (°C)

110

Vapour pressure

Testing not relevant or not possible due to the nature of the product.

Relative vapour density

Testing not relevant or not possible due to the nature of the product.

Decomposition temperature (°C)

Testing not relevant or not possible due to the nature of the product.

Data on fire and explosion hazards

Flash point (°C)

Testing not relevant or not possible due to the nature of the product.

Flammability (°C)

Testing not relevant or not possible due to the nature of the product.

Auto-ignition temperature (°C)

Testing not relevant or not possible due to the nature of the product.

Lower and upper explosion limit (% v/v)

Testing not relevant or not possible due to the nature of the product.

Solubility

Solubility in water

soluble in water

n-octanol/water coefficient (LogKow)

Testing not relevant or not possible due to the nature of the product.

Solubility in fat (g/L)

Testing not relevant or not possible due to the nature of the product.

9.2. Other information

Sensitivity to shock

react violently with the product: Acids

Decomposition temperature (Self-reactive substances and mixtures) (°C)

Thermal decomposition will evolve toxic vapours

Explosive power

Contact with acids liberates toxic chlorine gas. Reacts with amines and ammonia to form explosive compounds, and can react violently with methanol.

Oxidizing properties

Testing not relevant or not possible due to the nature of the product.

Other physical and chemical parameters

Avoid the following conditions: Avoid contact with acids

SECTION 10: Stability and reactivity

10.1. Reactivity

Contact with acids liberates toxic gas.

Reacts violently with alkali metals, metal powders, oxidizing materials and amines.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

Contact with acids liberates toxic gas.

10.4. Conditions to avoid

Protect from sunlight. Do not expose to temperatures exceeding 20 °C/68 °F.

10.5. Incompatible materials

Strong acids, alkali metals, metal powders, oxidizing materials and amines. Contact with metals can result in decomposition with the formation of oxygen.

Common Metals

Strong acids

Ammonia Solutions

Amines

Methanol

Copper

10.6. Hazardous decomposition products

Oxygen, hypochlorous acid, chlorine.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Skin sensitisation

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Long term effects

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

▼ Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

None known.

SECTION 12: Ecological information

12.1. ▼ Toxicity

Toxic to aquatic life with long lasting effects.

12.2. ▼ Persistence and degradability

Based on available data, the classification criteria are not met.

12.3. ▼ Bioaccumulative potential

Based on available data, the classification criteria are not met.

12.4. Mobility in soil

No data available.

12.5. ▼ Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. ▼ Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

SECTION 13: Disposal considerations

Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 4 - Irritant (skin irritation and eye damage)

HP 14 - Ecotoxic

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code



Not applicable.





Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	UN1791	HYPOCHLORITE SOLUTION	Transport hazard class: 8 Label: 8 Classification code: C9  	III	Yes	Limited quantities: 5 L Tunnel restriction code: (E) See below for additional information.

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
IMDG	UN1791	HYPOCHLORITE SOLUTION	Transport hazard class: 8 Label: 8 Classification code: C9  	III	Yes	Limited quantities: 5 L EmS: F-A S-B See below for additional information.
IATA	UN1791	HYPOCHLORITE SOLUTION	Transport hazard class: 8 Label: 8 Classification code: C9  	III	Yes	See below for additional information.

* Packing group

** Environmental hazards

Additional information

ADR / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

Hazchem Code: 2X

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application

Restricted to professional users.

Demands for specific education

No specific requirements.

SEVESO - Categories / dangerous substances

E1 - ENVIRONMENTAL HAZARDS, Qualifying quantity (lower-tier): 100 tonnes / (upper-tier): 200 tonnes

Biocidal Products Regulations

Product type: PT2 - Disinfectants and algacides not intended for direct application to humans or animals, PT3 - Veterinary hygiene, PT4 - Food and feed area, PT5 - Drinking water

Restrictions on use

-

Directions for use and dose rate

-

Additional information

-

Additional information

Not applicable.

Sources

The Management of Health and Safety at Work Regulations 1999.

Control of Major Accident Hazards (COMAH) Regulations 2015.

In accordance with Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products as retained and amended in UK law.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H314, Contact with acids liberates toxic gas.

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.

▼ Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne (European conformity)

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EuPCS = European Product Categorisation System

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

The classification of the substance/mixture in regard of environmental hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

▼ The safety data sheet is validated by

M Bartlett

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en