MATERIAL 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%
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 use:	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.

1.3 Details of the supplier of the safety data sheet

Company name:	East Harbour Group Ltd Miranda House, The Quay Harwich, Essex, CO12 3HH United Kingdom
Telephone:	+44 (0) 333 242 0100
Email:	info@eastharbourgroup.com

1.4 Emergency telephone number

Emergency telephone:	0800 246 1274

Section 2: Hazardous identification

2.1 Classification of the substance or mixture

Classification (EC 1272/2008)	
Physical Hazards	Met. Corr. 1 – H290
Health Hazards	Skin Corr. 1B – H314
Environmental Hazards	Aquatic Acute 1 – H400 Aquatic Chronic 2 – H411
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.

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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

2.2 Label elements

EC number: 231-668-3

Signal word: Danger

Hazard statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P234	Keep only in original packaging.
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.
P390	Absorb spillage to prevent material damage.
P391	Collect spillage.
P405	Store locked up.
P406	Store in a corrosion-resistant container with a resistant inner liner.
P501	Dispose of contents/ container in accordance with national regulations.

Supplement Label Information

EUH031	Contact with acids liberates toxic gas.

Contains: Sodium hypochlorite

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Section 3: Composition/information on ingredients

3.2 Mixtures

CAS #	Content (W/W)	Ingredients
7681-52-9	10-30%	Sodium hypochlorite
1310-73-2	<1%	Sodium hydroxide

Chemical name: Sodium Hypochlorite
Common name / synonyms: Bleach solution

Section 4: First aid measures

4.1 Description of first aid measures
In case of skin contact: Remove contaminated clothing and rinse skin thoroughly with water.
In case of 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.
If swallowed: 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.
If inhaled: Move affected person to fresh air at once. For breathing difficulties, oxygen may be necessary.

Section 5: Fire-fighting measures

5.1 Fire Fighting Media and Instructions:
Suitable extinguishing media: Use fire-extinguishing media suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture
Thermal decomposition will evolve Chlorine. Contact with heavy metals, their compounds and alloys the product decomposes with evolution of oxygen.

5.3 Advice 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
Wear protective clothing as described in this safety data sheet.

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

6.3 Methods and material for containment and 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.

Section 7: Handling and storage

7.1 Precautions for safe handling
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
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.

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
Provide adequate general and local exhaust ventilation.

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8.3 Personal protective equipment

Eye/face protection: Chemical splash goggles or face shield.

Skin protection: Plastic apron, sleeves, boots – if handling large quantities, full body suit.

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	Green-yellow
Physical State	Liquid
Odor	Irritating. Chlorine.
Odor Threshold	No information available
pH	>13
Melting Point/Range	-17 C
Boiling Point/Range	110 C @ Decomposes with heat
Flash Point	No information available
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Explosion Limits	No information available
Vapor Pressure	No information available
Vapor Density	No information available
Specific Gravity / Density	0.925 g/cm3 at 20 °C (68 °F)
Relative Density	5%: ~1.10 15%: 1.26 @ 20C
Water Solubility	Completely soluble in water
Solubility in other solvents	No information available
Partition Coefficient	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available

Section 10: Stability and Reactivity

10.1 Reactivity	The following materials may react violently with the product: Acids. Sodium bisulfite
10.2 Chemical Stability	Avoid the following conditions: Avoid contact with acids.
10.3 Possibility of hazardous reactions	Contact with acids liberates toxic chlorine gas. Reacts with amines

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	and ammonia to form explosive compounds, and can react violently with methanol. Reacts strongly with sodium bisulfite
10.4 Conditions to avoid	Store in a cool dry place away from direct sunlight.
10.5 Incompatible materials	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	Thermal decomposition will evolve toxic vapours.

Section 11: Toxicological Information

Product Information
11.1 Acute Toxicity

Acute toxicity dermal (L50 mg/kg): 2,000.0
Species: rat

Skin corrosion/irritation
Animal data: Corrosive

Skin sensitisation: not sensitising

Germ cell mutagenicity
Genotoxicity – in vivo: This substance has no evidence of mutagenic properties.

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.

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Section 12: Ecological Information

12.1 Toxicity
Ecotoxicity effects

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
Persistence and degradability: The product quickly decomposes in water or soil
Bioaccumulative potential: The product is not bioaccumulating.
Mobility: The product is soluble in water.
Results of PBT and vPvB assessment: This product does not contain any substances classified as PBT or vPvB.

Section 13: Disposal considerations

13.1 Waste treatment 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

UN number:	
ADR/RID	1791
IMDG	1791
ICAO	1791
UN proper shipping name:	
ADR/RID	HYPOCHLORITE SOLUTION
IMDG	HYPOCHLORITE SOLUTION
ICAO	HYPOCHLORITE SOLUTION
AND	HYPOCHLORITE SOLUTION
Transport hazard classes	
ADR/RID class	8
ADR/RID label	8
IMDG class	8

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ICAO class/division	8
Transport labels	

Packing group	
ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II

Environmental hazards
Environmentally hazardous substance/marine pollutant

Special precautions for user	
EmS	F-A, S-B
Emergency Action Code	2X
Hazard Identification Number	80
Tunnel restriction code	(E)

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

Section 15: Regulatory Information

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.

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