MATERIAL SAFETY DATA SHEET

SODIUM HYPOCHLORITE SOLUTION

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	**SODIUM HYPOCHLORITE SOLUTION (10-15% AVAILABLE CHLORINE)**
Recommended Use / Restrictions on Use	Water treatment: Sanitising agent. Available chlorine = 10-15%.
Supplier	Cosmo Chemistry India Pvt. Ltd.
Street Address	Office No. 713, 7th Floor, Millennium Business Hub, Sarthana Jakatnaka, Varachha Main Road, Surat, Gujarat, India - 395006
Telephone Number	+91-7984584838
Email	info@cosmochemistryindia.com

Please refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work; HAZARDOUS CHEMICAL.

Classification of the Chemical:

Skin Corrosion - Sub-category 1B

Eye Damage - Category 1

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations: Acute Aquatic Toxicity - Category 1

Signal Word: DANGER

Hazard Statement(s):

H314 - Causes severe skin burns and eye damage.

Precautionary Statement(s) - Prevention:

P260 - Do not breathe mist, vapours, spray.

P264 - Wash hands thoroughly after handling.

P280 - Wear protective gloves / protective clothing / eye protection / face protection.

Response:

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/shower. P321 Specific treatment (see First Aid Measures).

P363 - Wash contaminated clothing before re-use.

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P310 Immediately call a Poison Center or doctor/physician.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:

P405 - Store locked up.

Disposal:

P501 - Dispose of contents and container in accordance with local, regional, national, international regulations.

Other Hazards:

AUH031 - Contact with acids liberates toxic gas.

Poisons Schedule (SUSMP): S5 Caution.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Water	7732-18-5	>60%	-
Sodium Hypochlorite	7681-52-9	10-<30%	H314, H400
Sodium Hydroxide	1310-73-2	<1%	H290, H314, H318

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre or a doctor.

Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:

If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor.

Eye Contact:

Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently

seek medical assistance. Transport promptly to hospital or medical centre. Continue to wash with large amounts of water until medical help is available.

Ingestion:

Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

Indication of Immediate Medical Attention and Special Treatment Needed:

Treat symptomatically. Can cause corneal burns. Delayed pulmonary oedema may result.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Not combustible, however, if material is involved in a fire use: fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 2X

Specific Hazards Arising from the Chemical: Non-combustible material.

Special Protective Equipment and Precautions for Fire-Fighters: Decomposes on heating emitting toxic fumes, including those of chlorine. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures/Environmental Precautions: Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred, advise local emergency services.

Personal Precautions/Protective Equipment/Methods and Materials for Containment and Cleaning Up: Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. For small amounts, in case of spillage, flush with large quantities of water.

7. HANDLING AND STORAGE

This material is a Scheduled Poison S5 and must be stored, maintained and used in accordance with the relevant regulations.

Precautions for Safe Handling: Avoid skin and eye contact and breathing in vapour, mists and aerosols. Keep out of reach of children.

Conditions for Safe Storage, Including Any Incompatibilities: Store in a cool, dry, well ventilated place. Store away from foodstuffs. Store away from acids. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s) and decomposition product(s):

Substance	Peak Limitation
Sodium Hydroxide	2 mg/m3
Chlorine	3 mg/m3 (1 ppm)

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants. Peak Limitation refers to a maximum or peak airborne concentration determined over the shortest analytically practicable period of time, not exceeding 15 minutes. These standards are guides for controlling occupational health hazards and are not a measure of relative toxicity.

Appropriate Engineering Controls: Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use. If safe exposure levels could be exceeded, engineering controls such as local exhaust ventilation must be considered and documented. If engineering controls are not required, a documented risk assessment using appropriate PPE must be carried out.

Individual Protection Measures (PPE): The selection of PPE is dependent on a detailed risk assessment considering the work situation, physical form of the chemical, handling methods and environmental factors. Recommended PPE: Overalls, chemical goggles, face shield, elbow-length impervious gloves (long), splash apron or equivalent chemical impervious outer garment, and rubber boots. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. If an inhalation risk is determined by risk assessment, wear an air-supplied respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Parameter	Value
Physical State	Liquid
Colour	Pale Yellow - Green
Odour	Chlorine
Solubility	Miscible in water
Specific Gravity	1.2 @ 20°C
Relative Vapour Density (air=1)	Not available
Vapour Pressure (20°C)	Not available
Flash Point (°C)	Not applicable
Flammability Limits (%)	Not applicable
Autoignition Temperature (°C)	Not available
Boiling Point/Range (°C)	Not available
pH	12.5 (1% w/w)

10. STABILITY AND REACTIVITY

Reactivity: Contact with acids liberates toxic gas.

Chemical Stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. The amount of available chlorine diminishes over time.

Possibility of Hazardous Reactions: Hazardous polymerisation will not occur. Reacts exothermically with acids. Reacts with ammonia, amines and ammonium salts to produce chloramines. Decomposes on heating to produce chlorine gas.

Conditions to Avoid: Avoid contact with foodstuffs. Avoid exposure to heat, sources of ignition, and open flame. Avoid exposure to light. Avoid contact with other chemicals. Avoid contact with acids.

Incompatible Materials: Incompatible with acids, metals, metal salts, peroxides, reducing agents, and ethylene diamine tetraacetic acid. Incompatible with ammonia and ammonium compounds such as amines and ammonium salts.

Hazardous Decomposition Products: Chlorine.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.

Eye Contact: A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury.

Skin Contact: Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.

Inhalation: Breathing in mists or aerosols may produce respiratory irritation. Delayed (up to 48 hours) fluid build up in the lungs may occur.

Acute Toxicity: No LD50 data available for the product. For the constituent Sodium Hypochlorite - Oral LD50 (mice): 5800 mg/kg

Serious Eye Damage/Irritation: Moderate irritant (rabbit). Standard Draize test.

Chronic Effects: No information available for the product.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Avoid contaminating waterways.

Persistence/Degradability: This material is biodegradable.

Bioaccumulative Potential: Does not bioaccumulate.

Aquatic Toxicity: Very toxic to aquatic organisms.

96hr LC50 (fish): 0.065 mg/L (for sodium hypochlorite)

13. DISPOSAL CONSIDERATIONS

Disposal Methods: Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Decontamination and destruction of containers should be considered.

14. TRANSPORT INFORMATION

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

Parameter	Value
UN No.	1791
Transport Hazard Class	8 Corrosive
Packing Group	III
Proper Shipping Name	Hypochlorite Solution
Hazchem or Emergency Action Code	2X
Marine Pollutant	YES

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

Parameter	Value
UN No.	1791
Transport Hazard Class	8 Corrosive
Packing Group	III
Proper Shipping Name	Hypochlorite Solution
IMDG EMS Fire	F-A
IMDG EMS Spill	S-B
Marine Pollutant	YES

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

Parameter	Value
UN No.	1791
Transport Hazard Class	8 Corrosive
Packing Group	III

Proper Shipping Name	Hypochlorite Solution
Marine Pollutant	YES

15. REGULATORY INFORMATION

Classification: This material is hazardous according to Safe Work; HAZARDOUS CHEMICAL.

Classification of the Chemical:

Skin Corrosion - Sub-category 1B

Eye Damage - Category 1

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations: Acute Aquatic Toxicity - Category 1

Hazard Statement(s): H314 - Causes severe skin burns and eye damage.

Poisons Schedule (SUSMP): S5 Caution.

16. OTHER INFORMATION

This safety data sheet has been prepared by Cosmo Chemistry India Pvt. Ltd.

This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Cosmo Chemistry India cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact Cosmo Chemistry India at the contact details on page 1.

Cosmo Chemistry India's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

This is a computer generated document. No stamp or signature is required.