

MATERIAL SAFETY DATA SHEET

IDENTIFICATION OF PRODUCT

Product Name:	12.5% Sodium Hypochlorite Solution
Common Chemical Names:	Hypochlorite solution sodium salt, sodium hypochlorite
Chemical Names of Ingredients [$>1.0\%$ by weight]:	Sodium hypochlorite
Chemical Family:	Inorganic halogen compound
CAS Registry Number:	7681-52-9
Empirical Formula:	NaOCl
Molecular Weight:	74.45

PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure:	12.1 mm Hg at 20°C [12.5% solution]	Flash Point:	Not Applicable.
Weight/Gallon:	10.0 lbs. (4.54 kg.)	pH:	11.2 – 11.4
Density [liquid]:	1.20 at 20°C (68°F)	Odor:	Slight Bleach
Bulk Density:	Not Applicable.	Boiling Point:	Decomposes
Melting Point:	Not Applicable.	Freezing Point:	-20° Fahrenheit
Physical State:	Liquid Solution	Color:	Straw Yellow
Solubility in Water:	Complete	Stability:	Stable

PHYSICAL HAZARDS

Potential for Fire:	None. Nonflammable and Noncombustible liquid.
Potential for Explosion:	None. Nonflammable and Noncombustible liquid.
Reactivity:	Violent reactions with amines, ammonium aldehyde, ammonium carbonate, aziridine, methanol, phenylacetonitrile, ammonium nitrate, ammonium oxylate ammonium phosphate, cellulose, ethylene imine. Do not mix acids, aqua ammonia, or other organic or inorganic chemicals with this product.
Extinguishing Media	N/A
Fire Fighting Procedures:	N/A

HEALTH HAZARDS

Signs and Symptoms of Exposure:	Eyes and skin irritation. Chemical burns to broken skin.
Medical Conditions Aggravated by Exposure:	No data available.
Oral [ingestion] LD₅₀:	No data available.
Dermal [skin absorption] LD₅₀:	No data available.
Inhalation [breathing] LC₅₀:	No data available.
Eye Irritation:	Irritating. May cause eye damage.
Skin Irritation:	Mild irritation. Not considered to be a skin sensitizer.
OSHA PEL:	None established.
ACGIH TLV/TWA:	None established.

POTENTIAL ROUTE [S] OF ENTRY

Inhalation [Breathing]:	Unlikely to occur. Vapor may cause irritation to upper respiratory tract.
Dermal [Skin]:	Contact with broken skin may cause burning, blistering, and tissue destruction if not washed off immediately.
Eyes:	Corrosive to eyes.
Ingestion:	Not anticipated. May cause severe chemical burns to esophagus and to stomach lining.

CARCINOGENIC [CANCER POTENTIAL] INFORMATION

National Toxicological Program [NTP] <i>Sixth Annual Report on Carcinogens</i>:	Not listed.
International Agency for Research on Cancer [IARC] <i>Monographs, V. 1-53, Supps. 1-8</i>:	Not listed.
Listed by Federal OSHA as Carcinogens:	Not listed.

Safe Drinking Water and Toxic Enforcement Act of 1986 [Proposition 65, California only]:

Small quantities – less than 100 ppm (parts per million) – of impurities, including bromates, may be found in all chlorinating products, including this product. Bromates are derived from bromides, which are present in sodium chloride (table salt) from which chlorine is manufactured. Additional small quantities of bromates may be generated during the disinfection process. Bromates are known by the State of California to cause cancer when administered by the oral (drinking or ingesting) route. Read and follow label directions and use care when handling or using this product. The US Environmental Protection Agency has established a maximum contaminant level (MCL) for bromates in drinking water at 10 ppb (parts per billion). Application of this product in accordance with label directions at use dilution will not exceed this level.

This warning is provided pursuant to Proposition 65, the Safe Drinking Water and Toxic Enforcement act of 1986, Chapter 6.6 of the California Health and Safety Code, which requires the Governor of California to publish a list of chemicals “known to the state to cause cancer or reproductive toxicity.” This list is compiled in accordance with the procedures established under the proposition, and can be obtained on the internet from California’s Office of Environmental Health Hazard Assessment at <http://www.oehha.ca.gov>. There are over 700 chemical substances on this list.

GENERAL PRECAUTIONS FOR SAFE USE AND HANDLING

Open containers carefully. Sodium hypochlorite solutions are packaged with vented closures. Do not use containers which are leaking or show evidence of having leaked. Mix only with water. Do not mix with other chemicals. Use clean, dry utensils when mixing. Do not discharge this product or mixtures of this product into lakes, streams, ponds, bays, estuaries, or the ocean. Sodium hypochlorite is toxic to aquatic organisms at very low levels.

PERSONAL PROTECTION AND HYGIENE

Wear goggles or face shield and rubber gloves when handling. Remove and wash contaminated clothing before reuse. Wash hands after handling.

CLEAN-UP OF SPILLS

Store this product in a cool, dry area, away from sunlight and heat to avoid deterioration. In case of spill, flood area where spill has occurred with large quantities of water. With permission from local authorities, diluted product may be flushed to a sanitary sewer. Product may also be absorbed with sand or diatomaceous earth. Absorbed products must be disposed of in accordance with applicable Federal, State, and/or local regulations. Contact Grasim Chemical Division, Inc. for guidance

FIRST AID

Eye Contact:	Flush with water. Remove contact lenses [if applicable]. Hold eyelids open. Continue flushing with water for 15 minutes. Get prompt medical attention.
Skin Contact:	Wash affected area with water for 15 minutes. Get medical attention.
Ingestion [swallowing]:	Drink large quantities of water. DO NOT give vinegar or other acids. DO NOT induce vomiting. Get prompt medical attention.

FEDERAL/STATE LISTS/REGISTRATION/S/REPORTING REQUIREMENTS

CERCLA Hazardous Substance [Section 1010 [4], P.L. 96-510]:	RQ=100 lbs [80 gallons for 12.5% solution]
Extremely Hazardous Substance [40 CFR 355, Appendix A]:	Not listed.
Pesticide Product 7 U.S.C. 136 et seq.:	Registered as a pesticide product by Federal EPA.
Toxic Substance under TSCA:	Not reported.
Pesticide Product [various State Laws]:	Registered as pesticide product in states where marked.

MATERIAL CLASSIFICATION

OSHA Hazard Communication Standard, Department of Labor, Occupational Safety and Health Division, 29 CFR 1910.1200:	Irritant
Hazardous Materials Transportation Regulations, Department of Transportation (Federal) 49 CFR 172.101	
Proper Shipping Description [1 gallon or less]:	Consumer Commodity, ORM-D
Proper Shipping Description [greater than 1 gallon]:	Hypochlorite Solutions, 8, UN1791, P.G. III
National Fire Protection Association NFPA 704 [1990]:	2-0-0
BOCA National Fire Prevention Code/National Building Code [1999 editions]:	Irritant
Standard Fire Prevention Code/Standard Building Code [1997 editions]:	Irritant
Uniform Fire Code/Uniform Building Code [1997 editions]:	Irritant

Uniform Fire Code Standards 79-3, Uniform Fire Code, V. II [1997 edition]:	2-0-0
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NOTE:

Above "Material Safety Data Sheet" is for information only. GRASIM INDUSTRIES LIMITED, Chemical Division does not take any guarantee or legal liability under any circumstances for the same. The Physical data presented herein does not purport to be the specifications.