HASA 12.5% SODIUM HYPOCHLORITE SOLUTION

Safety Data Sheet

12.5% Sodium Hypochlorite

Emergency 24 Hour Telephone: **CHEMTREC 800.424.9300**

Corporate Headquarters: Hasa Inc.
P.O. Box 802736
Santa Clarita, CA 91355
Telephone • 661.259.5848
Fax • 661.259.1538

SECTION 1: IDENTIFICATION			
1.1	**Product Identification:**		
	1.1.1	**Product Name:**	HASA 12.5% SODIUM HYPOCHLORITE SOLUTION
	1.1.2	**CAS #** (Chemical Abstracts Service)**:**	7681-52-9
	1.1.3	**RTECS** (Registry of Toxic Effects of Chemical Substances)**:**	NH3486300
	1.1.4	**EINECS** (European Inventory of Existing Commercial Substances)**:**	231-668-3
	1.1.5	**EC Number:**	231-668-3
	1.1.6	**Synonym:**	Bleach, Hypo, Hypochlorite, Liquid Chlorine Solution
	1.1.7	**Chemical Name:**	Sodium Hypochlorite
	1.1.8	**Chemical Formula:**	NaOCl
1.2	**Recommended Uses:**		Manufacturing Use Only Product (MUP). Industrial repackaging. Chemical intermediate or formulation.
1.3	**Company Identification:**		Hasa Inc. P. O. Box 802736 Santa Clarita, CA 91355
1.4	**Emergency Telephone Number:**		**CHEMTREC** 1-800-424-9300 (24 hour Emergency Telephone)
1.5	**Non-Emergency Assistance:**		661-259-5848 (8 AM – 5 PM PST / PDT)

SECTION 2: HAZARD(S) IDENTIFICATION

HEALTH HAZARD	Skin corrosion / irritation:	Category 1C
	Serious Eye damage / Eye Irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 (respiratory tract irritation)
ENVIRONMENTAL HAZARD	Hazardous to the aquatic environment, acute hazard	Category 1
PHYSICAL HAZARD	Corrosive to metals.	Category 1
SYMBOLS	  	
SIGNAL WORD	**DANGER**	
HAZARD STATEMENT	May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation. Very toxic to aquatic life.	
PRECAUTIONARY STATEMENT	**Prevention**	
	Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe mist or vapor. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Keep only in original container. Avoid release to the environment.	
	Response	
	If swallowed: Rinse mouth. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Collect spillage.	
	Storage and Disposal	
	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container. Dispose of container/contents in accordance with local, regional, national, international regulations as specified.	

SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS

	Ingredient	Synonyms	CAS No.	Weight %
3.1	Sodium Hypochlorite	Bleach	7681-52-9	12.5%
3.2	Sodium Hydroxide	Caustic Soda	1310-73-2	0.2%

SECTION 4: FIRST AID MEASURES

4.1	**IF IN EYES**	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
4.2	**IF ON SKIN OR CLOTHING**	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
4.3	**IF INHALED**	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
4.4	**IF SWALLOWED**	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5: FIRE FIGHTING MEASURES

5.1	**Flash Point:**		Not applicable.
5.2	**Flammability:**		Nonflammable and noncombustible.
5.3	**Auto-Ignition Temperature:**		Not applicable.
5.4	**Products of Combustion:**		Not pertinent.
5.5	**Fire Hazards:**		May decompose, generating irritating chlorine gas.
5.6	**Explosion Hazards:**		Not explosive.
5.7	**Fire Fighting Media and Instructions:**		
	5.7.1	**Extinguishing Media:**	Water fog. Foam. Dry chemical powder. Carbon dioxide.
	5.7.2	**Small Fires:**	Use carbon dioxide, or water spray.
	5.7.3	**Large Fires:**	Use flooding quantities of water as fog.
5.8	**Special Remarks on Fire Hazards:**		Do not use Mono Ammonium Phosphate (MAP) fire extinguishers. Such use may cause explosion with release of toxic gases.

SECTION 6: ACCIDENTAL RELEASE MEASURES		
6.1	**Small Spill:**	Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
6.2	**Large Spill:**	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS.
6.3	**Personal Precautions, Protective Equipment & Emergency Procedures:**	Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Absorb spillage to prevent material damage. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see Section 8 of the SDS.
6.4	**Environmental Precautions:**	Do not discharge into drains, water courses or onto the ground. Environmental manager must be informed of all major releases.

SECTION 7: HANDLING AND STORAGE		
7.1	**Handling:**	• Avoid contact with skin or eyes. • Do not ingest. • Avoid inhalation of vapor or mist. • Wear protective equipment if necessary. • Mix only with water in accordance with label directions. • Mixing this product with ammonia, acids, detergents, etc or with organic materials, e.g. feces, urine, etc. will release chlorine gas, which is irritating to eyes, lungs, and mucous membranes.
7.2	**Hygiene Measures:**	• Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. • While handling this product, avoid eating, drinking or smoking.
7.3	**Storage:**	• Do not freeze. • Store in a cool, shaded outdoor area. • Inside storage should be in a cool, dry, well-ventilated area. • To maintain hypochlorite strength, do not store in direct or heated indoor areas. • Keep in original vented container. • Keep container closed when not in use. • Do not store adjacent to chemicals that may react if spillage occurs. • If closed containers become heated, vent to release decomposition products (mainly oxygen under normal decomposition).

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1	**Engineering Controls:**		Local exhaust ventilation to maintain levels below STEL (Short Term Exposure Limit) of 1 ppm as chlorine.	
8.2	**Personal Protection:**			
	8.2.1	**Eye / Face Protection:**	Wear safety glasses, goggles or face shield to prevent eye contact.	
	8.2.2	**Skin Protection:**	Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Butyl rubber, Neoprene, or Nitrile Gloves should be worn when handling this material. Wear chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Remove contaminated clothing promptly and wash before reuse. Clean protective equipment before reuse.	
	8.2.3	**Respiratory Protection:**	Avoid breathing vapor or mist. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and chemical goggles. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus.	
	8.2.4	**Other Safety Equipment:**	Eye wash facility and emergency shower should be in close proximity.	
8.3	**Exposure Limits:**		**Sodium Hypochlorite**	**Chlorine***
	8.3.1	**AIHA** (American Industrial Hygiene Association) / **WEEL** (Workplace Environmental Exposure Level guides) 2010	2 mg/m^3: 15 minute. (Short-term time weighted average)	Not established
	8.3.2	**ACGIH** (American Conference of Governmental Industrial Hygienists) **TWA** (Time Weighted Average)	Not established.	0.5 ppm
	8.3.3	**ACGIH STEL** (Short Term Exposure Limit)	Not established.	1 ppm
	8.3.4	**OSHA PEL** (Permisible Exposure Limit)	Not established.	0.5 ppm
	8.3.5	**ACGIH** Ceiling	Not established.	Not established
	8.3.6	**NIOSH** (National Institute for Occupational Safety & Health) **IDLH** (Immediate Danger to Life & Health)	Not established.	10 ppm
	8.3.7	**OSHA STEL** (Short Term Exposure Limit)	Not established.	1 ppm as Cl_2
	8.3.8	**NIOSH** (15 min. ceiling)	Not established.	0.5 ppm
	** Chlorine is unlikely to be present as a decomposition product, but may be present in incidents of accidental mixing with other chemicals.*			

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES		
9.1	**Appearance:**	Greenish yellow liquid.
9.2	**Odor:**	Pungent.
9.3	**Odor Threshold:**	0.9 mg/m^3.
9.4	**pH:**	11.2 – 11.4 (1% solution)
9.5	**Melting Point:**	Not pertinent.
9.6	**Freezing point:**	-23.3°C (-10°F)
9.7	**Boiling Point & Boiling Range:**	Decomposes @ 110°C (230°F)
9.8	**Flash Point:**	No information available.
9.9	**Evaporation Rate:**	No information available.
9.10	**Flammability (solid, gas):**	Not flammable.
9.11	**Upper / Lower Flammability or Explosive Limits:**	No information available.
9.12	**Vapor Pressure:**	12.1 mm Hg @ 20°C (68°F)
9.13	**Vapor Density:**	2.61 (air=1)
9.14	**Relative Density (Specific Gravity):**	1.2 g/mL or 10 lb/gallon @ 20°C (68°F)
9.15	**Solubility in Water:**	Mixes infinitely with water.
9.16	**Partition Coefficient: (n-octanol / water):**	No information available.
9.17	**Auto-ignition Temperature:**	No information available.
9.18	**Decomposition Temperature:**	Decomposes @ 110°C (230°F)
9.19	**Molecular Weight:**	74.5 g/mole
9.20	**Viscosity:**	1.75 - 2.50 centipoises (varies with temperature)

SECTION 10: STABILITY AND REACTIVITY		
10.1	**Stability:**	Stable under normal conditions of storage, handling, and use.
10.2	**Instability / Decomposition Temperature:**	All bleach decomposition is dependant on temperature. For any given temperature, the higher the strength, the faster it decomposes. In summary, for every 10°C increase in storage temperature, the sodium hypochlorite will decompose at an increased rate factor of approximately 3.5.
10.3	**Conditions of Instability:**	High heat, ultraviolet light.
10.4	**Incompatibility with Various Substances:**	Oxidizing agents, acids, nitrogen containing organics, metals, iron, copper, nickel, cobalt, organic materials, and ammonia.
10.5	**Corrosivity:**	Corrosive to metals.
10.6	**Special Remarks on Reactivity:**	Rate of decomposition increases with heat. May develop chlorine if mixed with acidic solutions.
10.7	**Special Remarks on Corrosivity:**	None.
10.8	**Hazardous Polymerization:**	Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1	**Routes of Entry:**		Eyes, skin, ingestion, dermal absorption.
11.2	**Acute Toxicity:**		
	11.2.1	**Oral Toxicity** (LD_{50})**:**	3-5 g/kg (rat)
	11.2.2	**Dermal Toxicity** (LD_{50})**:**	>2 g/kg (rabbit)
	11.2.3	**Primary Eye Irritation:**	Corrosive
	11.2.4	**Primary Skin Irritation:**	Corrosive
	11.2.5	**Inhalation Toxicity** (LC_{50}):	No data available.
11.3	**Chronic Effects (Human Risk Assessment):**		Based on the toxicity profile and exposure scenarios for sodium hypochlorite, EPA concludes that the risks from chronic and subchronic exposure to low levels of these pesticides are minimal and without consequence to human health.
11.4	**Tolerance Requirement:**		Exempt (EPA document "Index to Pesticide Chemical Names, Part 180 Tolerance Information, and Food and Feed Commodities (by Commodity)" July 2010

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Ecotoxicity:**		Sodium hypochlorite is low in toxicity to avian wildlife, but it is highly toxic to freshwater fish and invertebrates.
	12.1.1	**Freshwater Fish Toxicity:**	Atlantic Herring (clupea harengus) LC_{50} = 0.033 - 0.097 mg//l/96 hr, flow through bioassay (pH: 8) Shiner Perch (cymatogaster aggregata) LC_{50} = 0.045 - 0.098 mg/l/96 hr, flow through bioassay (pH: 8) Three Spine Stickleback (gasterosteus aculeatus) LC_{50} = 0.141 - 0.193 mg/l/96 hr, flow through bioassay (pH: 8) Pink Salmon (oncorhynchus gorbuscha) LC_{50} = 0.023 - 0.052 mg/l/96 hr, flow through bioassay (pH: 8) Coho Salmon (oncorhynchus kisutch) LC_{50} = 0.026 - 0.038 mg/l/96 hr, flow through bioassay (pH: 8) English Sole (parophrys vetulus) LC_{50} = 0.044 - 0.144 mg/l/96 hr, flow through bioassay (pH: 8) Fat Head Minnow (pimephales promelas) LC_{50} = 0.22 - 0.62 mg/l/96 hr, flow through bioassay (pH: 7)
	12.1.2	**Invertebrate Toxicity:**	Water Flea (ceriodaphnia sp. 0) LC_{50} = 0.006 mg/l/24 hr Water Flea (daphnia magna) LC_{50} = 0.07 - 0.7 mg/l/24 hr Water Flea (daphnia magna) LC_{50} = 2.1 mg/l/96 hr Fresh Water Shrimp (gammarus fasciatus) LC_{50} = 0.4 mg/l/96 hr No common name (nitocra spinipes) LC_{50} = 0.40 mg/l/96 hr Grass Shrimp (palaemonetes pugio) LC_{50} = 0.52 mg/l/96 hr
12.2	**Persistence:**		No data available.
12.3	**Environmental Fate:**		In fresh water, sodium hypochlorite breaks down rapidly into non-toxic compounds when exposed to sunlight. In seawater, chlorine levels decline rapidly; however, hypobromite (which is acutely toxic to aquatic organisms) is formed. EPA believes that the risk of acute exposure to aquatic organisms is sufficiently mitigated by precautionary labeling and National Pollutant Discharge Elimination System (NPDES) permit requirements.
12.4	**Bioconcentration:**		This material is not expected to bioconcentrate in organisms.
12.5	**Biodegradation:**		This material is inorganic and not subject to biodegradation.

SECTION 13: DISPOSAL CONSIDERATIONS

Do not contaminate food or feed by storage, disposal, or cleaning of equipment. Product or rinsates that cannot be used should be diluted with water before disposal in a sanitary sewer. This product can be neutralized with sodium bisulfite, sodium thiosulfate, sodium sulfite. Do not confuse these products with sulfates or bisulfates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination system (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not contaminate water containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA. Dispose of in accordance with all applicable local, County, State, and Federal regulations.

SECTION 14: TRANSPORT INFORMATION

		Inside containers (< 1.3 gallons)	Container (>1.3 gallons)
14.1	**UN Number**	Limited Quantity	UN 1791
14.2	**UN Proper Shipping Name**	--	Hypochlorite Solutions (Sodium Hypochlorite)
14.3	**Transport Hazard Class**	--	8
14.4	**Packing Group**	--	PG III
14.5	**Environmental Hazard (e.g. Marine Pollutant)**	Yes	Yes
14.6	**Reportable Quantity (RQ):**	100 lb (45.4 kg) or 80 gallons (based on 12.5% active ingredient)	100 lb (45.4 kg) or 80 gallons (based on 12.5% active ingredient)
14.7	**Materials of Trade (MOT) Exceptions.** Certain hazardous materials transported in small quantities as part of a business are subject to less regulation, because of the limited hazard they pose. These materials are known as Materials of Trade. The regulations that apply to MOTs are found in 49 CFR § 173.6.		

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

15.1	**U.S. Regulations:**		
	15.1.1	**OSHA HAZCOM** (Hazard Communication)	This material is considered hazardous under the HAZCOM Standard (29 CFR 1910.1200)
	15.1.2	**OSHA PSM** (Process Safety Management)	Not regulated under PSM Standard (29 CFR 1910.119)
	15.1.3	**EPA FIFRA** (Federal Insecticide, Fungicide and Rodenticide Act)	EPA Reg. No. :10897-22 (Registered pesticide under 40 CFR 152.10)
	15.1.4	**EPA TSCA** (Toxic Substance Control Act)	All components are listed or exempted. TSCA 12(b): This product is not subject to export notification.
	15.1.5	**EPA CERCLA** (Comprehensive Environmental Response, Compensation, and Liability Act)	Reportable Quantity (RQ): 45.4 kg (100 lbs) or 80 gallons (based on 12.5% active ingredient).
	15.1.6	**EPA RMP** (Risk Management Plan)	Not listed. (40 CFR 68.130)
15.2	**State of California Regulations:**		
	15.2.1	**Safe Drinking Water and Toxic Enforcement Act of 1986 [Proposition 65, California only]:** This product is not subject to warning labeling under California Proposition 65.	
	15.2.2	**CDPR** (California Department of Pesticide Regulation)	Registration No: 10897-22-AA
	15.2.3	**CalARP** (California Accidental Release Prevention Program)	Not regulated.
15.3	**Canada Regulations:**		
	15.3.1	**WHMIS** (Workplace Hazardous Materials Information System)	• Classification: E (Corrosive Materials) • Health Effects Criteria Met by this Chemical: ▪ E - Corrosive to skin ▪ E - TDG class 8 - corrosive substance • Ingredient Disclosure List: Included for disclosure at 1% or greater.
	15.3.2	**DSL** (Domestic Substances List)	All components of this product are on the DSL.
15.4	**International Inventory:**		
	15.4.1	**AICS** (Australian Inventory of Chemical Substances)	On inventory or in compliance with inventory.
	15.4.2	**KECI** (Korean Existing Chemicals Inventory)	On inventory or in compliance with inventory.
	15.4.3	**PICCS** (Philippine Inventory of Chemicals and Chemical Substances)	On inventory or in compliance with inventory.
	15.4.4	**IECSC** (Inventory of Existing Chemical Substances in China)	On inventory or in compliance with inventory.
	15.4.5	**NZIoC** (New Zealand Inventory of Chemicals)	On inventory or in compliance with inventory.

SECTION 16: OTHER INFORMATION

16.1	**HMIS III** (Hazardous Materials Identification System):		
	16.1.1	**HEALTH**	**2**
	16.1.2	**FLAMMABILITY**	**0**
	16.1.3	**PHYSICAL HAZARD**	**1**
	16.1.4	**PERSONAL PROTECTION**	See Section 8.
16.2	**NFPA 704** (National Fire Protection Association):		
	16.2.1	**HEALTH**	**2**
	16.2.2	**FLAMMABILITY**	**0**
	16.2.3	**INSTABILITY**	**0**
	16.2.4	**SPECIAL**	**None**
16.3	**International Fire Code / International Building Code:**		Irritant.
16.4	**ANSI** (American National Standards Institute):		
	16.4.1	**Hazardous Industrial Chemicals -** SDS-Preparation:	Complies with **ANSI Z400.1 – 2004**.
	16.4.2	**Hazardous Industrial Chemicals -** Precautionary Labeling:	Complies with **ANSI Z129.1 – 2006**.

Note: The information contained herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge and belief. NO WARRANTY OR GUARANTEE, express or implied, is made regarding the product performance, product stability, or as to any other condition of use, handling, transportation, and storage. Customer use, handling, transportation, and storage may involve additional safety and/or performance considerations. Our technical personnel will be happy to respond to questions regarding safe handling, storage, transportation, and use procedures. The safe handling, storage, transportation, and use procedures remain the sole responsibility of the customer. No suggestions for handling, storage, transportation, or use are intended as or to be construed as recommendations which may infringe on any existing patents or violate any Federal, State, and/or local law and/or regulation, ordinance, standard, etc. This Safety Data Sheet has been prepared by HASA, Inc. staff from test reports and other information available in the public domain.