

MULTI-CHLOR

Material Safety Data Sheet

12.5% Sodium Hypochlorite

Emergency 24 Hour Telephone: CHEMTREC 800.424.9300

Corporate Headquarter: Hasa Inc.

23119 Drayton Street
Saugus, California 91350
Telephone • 661.259.5848
Fax • 661.259.1538

	SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION			
1.1	Produ	ct Identification:		
	1.1.1	Product Name:	MULTI-CHLOR	
	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:	NaOCI	
1.2	Recoi	mmended Uses:	Dairy, food and beverage industries: Sanitizing processing equipment. Water treatment: Sanitizing agent.	
1.3	Company Identification:		Hasa Inc. 23119 Drayton Street Saugus, California 91350	
1.4	Emergency Telephone Number:		CHEMTREC 1-800-424-9300 (24 hour)	
1.5	Non-Emergency Assistance:		661-259-5848 (8 AM – 5 PM PST / PDT)	

	SECTION 2: EMERGENCY OVERVIEW and HAZARD IDENTIFICATION			
2.1			DANGER. CORROSIVE. Causes eye damage. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin, or on clothing. Wear safety glasses or goggles or face shield, protective clothing, and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Avoid breathing vapors. Vacate poorly ventilated areas as soon as	
			possible. Do not return until strong odors have dissipated.	
2.2		es of Entry:	Eyes, skin absorption, inhalation, ingestion.	
2.3	Short	Term Exposure:		
	2.3.1	Eyes:	Causes serious eye irritation. Blurred vision. May cause impairment of vision and corneal damage.	
	2.3.2	Skin:	May cause skin irritation and/or dermatitis. Prolonged skin exposure may cause destruction of the dermis with impairment of the skin to regenerate at site of contact.	
	2.3.3	Inhalation:	Accidental mixing with other chemicals or decomposition of sodium hypochlorite vapor is irritating to the respiratory system.	
	2.3.4	Ingestion:	Ingestion of high concentrations may cause injuries to gastrointestinal tract, liver, kidneys and central nervous system. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.	
	2.3.5	Aggravated Medical Conditions:	Asthma, heart disease, respiratory disorders.	
2.4 Long Term Exposure:		Term Exposure:	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 this pesticide are minimal and without consequence to human health.	

	SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS			
	Ingredient	Synonyms	CAS No.	Approx. Wt.%
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			

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	Flamn	nability:	Nonflammable and noncombustible.
5.3	Auto-	Ignition Temperature:	Not applicable.
5.4	Produ	cts of Combustion:	Not pertinent.
5.5	Fire H	azards:	May decompose, generating irritating chlorine gas.
5.6	Explo	sion Hazards:	Not explosive.
5.7	Fire F	ighting Media and Instructions:	
	5.7.1	Extinguishing Media:	Use extinguishing measures appropriate to local circumstances and the surrounding environment.
	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	Speci	al 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:	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 Hasa Inc. for guidance.			
6.2	Large Spill:	If possible without personal risk, stop leak. Try to prevent the materials from entering drains, waterways, or sewers. Absorb with sand, diatomaceous earth or similar products and dispose of in accordance with local regulations. Call Hasa Inc. for advice.			

		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).

	SE	ECTION 8: EXPOSURE CONT	「ROLS / PERSONAL PR	ROTECTION	
8.1		neering Controls:	Local exhaust ventilation to maintain levels below STEL (Short Term Exposure Limit) of 1 ppm as chlorine.		
8.2	Perso	onal Protection:			
	8.2.1	Eye / Face Protection:	Wear safety glasses, goggle prevent eye contact.	es, or face shield to	
	8.2.2 Skin Protection: 8.2.3 Respiratory 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. 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 emerg be in close proximity.	ency shower should	
8.3	Expo	sure 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	
		orine is unlikely to be present as a dec ents of accidental mixing with other ch		be present in	

	SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES		
9.1	Physical State and Appearance:	Liquid with pale yellow color.	
9.2	Odor:	Bleach	
9.3	Odor Threshold:	Not applicable.	
9.4	pH (1% solution):	11.2 – 11.4	
9.5	Boiling Point:	Not applicable. Decomposes @ 110 °C (230 °F)	
9.6	Melting Point:	Not applicable.	
9.7	Freezing Point:	-23.3℃ (-10℉)	
9.8	Evaporation Rate (BuAc=1):	Not available.	
9.9	Flammable Limits:	Not applicable.	
9.10	Vapor Pressure:	12.1 mm Hg @ 20 °C (68 °F)	
9.11	Vapor Density: (Air=1)	2.61	
9.12	Relative Density or Specific Gravity (H ₂ O=1):	1.2 g/mL or 10 lb/gallon @ 20 °C (68 °F)	
9.13	Solubility in Water:	Mixes infinitely with water.	
9.14	Partition Coefficient: n-octanol / water:	Not applicable.	
9.15	Viscosity:	1.75 - 2.50 centipoises (varies with temperature)	
9.16	Volatility:	Not applicable.	
9.17	Molecular Weight:	74.5 g/mole	
9.18	Water / Oil Distribution	Not applicable.	
9.19	Coefficient: Dispersion Properties:	Not applicable.	

	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 hypo-chlorite 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 eyes and skin.		
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):	>10 g/kg (rabbit)	
	11.2.3 Primary Eye Irritation:	Corrosive	
	11.2.4 Primary Skin Irritation:	Corrosive	
	11.2.5 Acute Inhalation	No data available.	
	Toxicity (LC ₅₀)		
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	Ecoto	xicity:	Sodium hypochlorite is low in toxicity to avian wildlife, but it is highly toxic to freshwater fish and invertebrates.
	12.1.1	Freshwater	Atlantic Herring (clupea harengus)
		Fish	$LC_{50} = 0.033 - 0.097 \text{ mg//l/96 hr}$, flow through bioassay (pH: 8)
		Toxicity:	Shiner Perch (cymatogaster aggregata)
			$LC_{50} = 0.045 - 0.098 \text{ mg/l/96 hr}$, flow through bioassay (pH: 8)
			Three Spine Stickleback (gasterosteus aculeatus)
			$LC_{50} = 0.141 - 0.193 \text{ mg/l/96 hr}$, flow through bioassay (pH: 8)
			Pink Salmon (oncorhynchus gorbuscha)
			$LC_{50} = 0.023 - 0.052 \text{ mg/l/96 hr}$, flow through bioassay (pH: 8)
			Coho Salmon (oncorhynchus kisutch)
			$LC_{50} = 0.026 - 0.038 \text{ mg/l/96 hr}$, flow through bioassay (pH: 8)
			English Sole (parophrys vetulus)
			$LC_{50} = 0.044 - 0.144 \text{ mg/l/96 hr}$, flow through bioassay (pH: 8)
			Fat Head Minnow (pimephales promelas)
			$LC_{50} = 0.22 - 0.62 \text{ mg/l/96 hr, flow through bioassay (pH: 7)}$
	12.1.2	Invertebrate	Water Flea (ceriodaphnia sp. 0)
		Toxicity:	$LC_{50} = 0.006 \text{ mg/l/24 hr}$
			Water Flea (daphnia magna)
			$LC_{50} = 0.07 - 0.7 \text{ mg/l/24 hr}$
			Water Flea (daphnia magna)
			LC ₅₀ = 2.1 mg/l/96 hr Fresh Water Shrimp (gammarus fasciatus)
			$LC_{50} = 0.4 \text{ mg/l/96 hr}$
			No common name (nitocra spinipes)
			$LC_{50} = 0.40 \text{ mg/l/96 hr}$
			Grass Shrimp (palaemonetes pugio)
			$LC_{50} = 0.52 \text{ mg/l/96 hr}$
12.2	Persis	stence:	No data available.
12.3			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
10.4	Diaaa		System (NPDES) permit requirements.
12.4		ncentration:	This material is not expected to bioconcentrate in organisms.
12.5	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						
14.1	Inside containers 1.3 gallons or less.					
	14.1.1	DOT Classification:	Consumer Commodity.			
	14.1.2	DOT Hazard Class:	ORM-D.			
14.1.3 Marking:		Marking:	Consumer Commodity, ORM-D.			
	14.1.4	Marine Pollutant:	Not listed in Appendix B of the Hazardous Material Table.			
	14.1.5	Deposit Container Returns:	RESIDUE: LAST CONTAINED CONSUMER COMMODITY ORM-D, PGIII.			
14.2	Inside containers or single containers exceeding 1.3 gallons.					
	14.2.1 DOT Classification:		Hypochlorite Solutions.			
	14.2.2	DOT Hazard Class:	8, UN1791, P.G. III.			
	14.2.3	Label:	Corrosive 8.			
	14.2.4	Deposit Container Returns:	RESIDUE: LAST CONTAINED, UN 1791, HYPOCHLORITE SOLUTIONS, 8, PGIII,			
14.3			100 lb (45.4 kg) or 80 gallons (based on 12.5% active ingredient)			

14.4 **Materials of Trade (MOT) Exceptions.** Under certain conditions, spa and pool maintenance chemicals may be loaded into pool service and builders trucks and shipped as a MOT, not subject to DOT regulations. A MOT means a hazardous material, other than a hazardous waste, that is carried on a motor vehicle – by a private motor carrier in direct support of his/her principal business that is other than transportation by motor vehicle.

To qualify as a MOT, the hazardous material must fit into any one of the following classes or divisions (but not limited to) Corrosive Materials (Class 8) or Consumer Commodities (ORM-D).

Quantity Limit for MOT:

- For Corrosive Materials (Class 8) that belongs to Packing Group II or III, or is a consumer commodity (ORM-D) the maximum amount of material in each package is 30 kg (66 lbs) for solids, or 30 L (8 gal) for liquids.
- The aggregate gross weight of all MOTs on a motor vehicle may not exceed 200 kg (440 pounds). **Packaging requirement:**
- Packagings must be leak tight for liquids and gases, sift proof for solids, and be securely closed, secured against shifting, and protected against damage.
- Each material must be packaged in the manufacturer's original packaging, or a packaging of equal or greater strength and integrity.
- Outer packagings are not required for receptacles (e.g., cans and bottles) that are secured against shifting in cages, carts, bins, boxes or compartments.

Hazard communication:

- A non-bulk packaging other than a cylinder (including a receptacle transported without an outer packaging) must be marked with a common name or proper shipping name to identify the material it contains, including the letters "RQ" if it contains a reportable quantity of a hazardous substance.
- The operator of a motor vehicle that contains a material of trade must be informed of the presence of the hazardous material (including whether the package contains a reportable quantity) and must be informed of the requirements of 49 CFR §173.6.

Other exceptions: A MOT may be transported on a motor vehicle under the provisions of 49 CFR §173.6 (e) with other hazardous materials without affecting its eligibility for these exceptions. The MOTs regulations do not require:

- shipping papers:
- emergency response information;
- placarding; or
- formal training or retention of training records.

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. R	legulations:						
	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 regulat	ted under l	d under PSM Standard (29 CFR 1910.119)			
	15.1.3	EPA FIFRA (Federal Insecticide, Fungicide and Rodenticide Act)		No. :10897-26 d pesticide under 40 CFR 152.10)				
	15.1.4	EPA TSCA (Toxic Substance Control Act)		ents are listed or exempted.): This product is not subject to export .				
	15.1.5	EPA CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)			Quantity (RQ): 45.4 kg (100 lbs) or 80 gallons 2.5% active ingredient).			
	15.1.6		Not listed. (40 CFR 68.130)					
15.2	State	e of California Regulations:						
	15.2.1 15.2.2 15.2.3	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, 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.						
15.3	Canac	Program) la Regulations:						
. 3.3	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. All components of this product are on the DSL. 					
15.4		ational Inventory:						
	15.4.1	•	mical	On inventory or in compliance with inventory.				
	15.4.2	·	n Existing Chemicals Inventory)		On inventory or in compliance with inventory.			
	15.4.3	· •		On inventory or in compliance with inventory.				
	15.4.4		nical	On inventory or in compliance with inventory.				
	15.4.5	·		On inventory or in compliance with inventory.				

SECTION 16: OTHER INFORMATION										
16.1	6.1 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	NFPA 704 (National Fire Protection Association):								
	16.2.1	HEALTH	2							
	16.2.2	FLAMMABILITY	0							
	16.2.3	INSTABILITY	0	270						
	16.2.4	SPECIAL	None							
				<u> </u>						
16.3										
16.4		Building Code: ANSI (American National Standards Institute):								
10.1	16.4.1	,								
		MSDS-Preparation:	20011							
	16.4.2 Hazardous Industrial Chemicals -		Complies with ANSI Z129.1 – 2006.							
10.5	0110	Precautionary Labeling:								
16.5	GHS (Globally Harmonized System):									
	16.5.1		Skin Corrosion / Irritation (Category 1). Serious Eye damage / Eye Irritation (Category 1)							
	16.5.2									
	16.5.3		Danger.							
	16.5.4	Hazard Statement:	Causes severe skin burns and eye damage.							

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 Material Data Safety Sheet has been prepared by HASA, Inc. staff from test reports and other information available in the public domain.