PRO-SAN BLEACH

MATERIAL SAFETY DATA SHEET
SODIUM HYPOCHLORITE SOLUTION

Date Prepared July 7, 2000

1 - Chemical Product and Company Identification

MANUFACTURER'S NAME: **MANLEY-REGAN CHEMICALS**
DIVISION OF E+E (US) INC.

EMERGENCY TELEPHONE NUMBER: **800-424-9300 (Chemtrec)**
24 hours a day, 7 days a week

ADDRESS: **532 EAST EMAUS STREET**
P.O. BOX 280
MIDDLETOWN, PA 17057
800-283-0326

DATE OF REVISION: **July 7, 2000**

2 - Composition/Information on Ingredients

TRADE NAME: **SODIUM HYPOCHLORITE 15% CL/VOL**

Component:
Sodium Hypochlorite Solution ***CAS Number: 7681-52-9***

CONTAINS:	CAS NUMBER:	PERCENTAGE:	PEL/TLV -SOURCE
Sodium Hydroxide	1310-73-2	0.8 to 2.4	PEL 8hr 2mg/m(3) OSHA TLV 8hr 2mg/m(3) Ceiling ACGIH
Chlorine (Available)	7782-50-5	Approx. 10	OSHA (PEL) TWA - 0.5 ppm STEL - 1 ppm ACGIH (TLV) TWA - 0.5 ppm STEL - 1 ppm
Water	7732-18-5	Approx. 89.0	

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Synonyms/Common Names:	Chlorine Bleach, Soda Bleach, Liquid Chlorine
Chemical Formula:	NaOCl
DOT Proper Shipping Name:	Hypochlorite Solutions
DOT Hazard Class:	8
DOT ID Number:	UN1791
DOT Packing Group:	III
DOT Hazardous Substance:	RQ 100# (Sodium Hypochlorite)
DOT Marine Pollutant:	N/A
Additional Description Requirement:	N/A

3 - Physical Data

Boiling Point:	(@760 mm Hg)	Decomposes above 110 Deg C (230 Deg F)	
Freezing Point:	Weight %	Freezing Point Deg F	
	10	7	
	12	- 3	
Vapor Pressure:	Temperature Deg F	mm Hg	PSIA
	48.2	3.7	0.071
	60.8	8.0	0.15
	68.0	12.1	0.23
	89.6	31.1	0.60
	118.4	100.00	1.93
Specific Gravity:	(H_2O) = 1)	Approximately 1.19	
Solubility in H_2O	(By Weight)	100%	
pH	9 - 12		
Appearance/Odor:	Colorless to light yellow-green liquid with chlorine like odor.		

4 - Emergency and First Aid Procedures

EYES: Immediately flush eyes with flowing water for at least 15 minutes. Washing eyes within one (1) minute is essential to achieve maximum effectiveness. ***SEEK MEDICAL ATTENTION IMMEDIATELY.***

SKIN: Skin contact may cause severe irritation. Flush thoroughly with cool water under shower while removing contaminated clothing and shoes. Discard non-rubber shoes. Wash clothing before reuse. Continue to flush until medical attention arrives. ***SEEK MEDICAL ATTENTION IMMEDIATELY.***

INHALATION: Remove to fresh air. If breathing is difficult, have a qualified person administer oxygen. If respiration stops, give mouth-to-mouth resuscitation. ***GET IMMEDIATE MEDICAL ATTENTION.***

INGESTION: Never give anything by mouth to an unconscious person. If swallowed, ***DO NOT INDUCE VOMITING.*** Give large quantities of milk. If these are not available, give large quantities of water. If vomiting occurs spontaneously keep airway clear and give more milk or water. Avoid vomiting, lavage or acidic antidotes. ***GET MEDICAL ATTENTION IMMEDIATELY.***

NOTE TO PHYSICIAN: Sodium Hypochlorite is an alkaline corrosive. For exposure by ingestion do not use emesis, lavage or acidic antidotes. Dilute immediately by giving milk, melted ice cream, beaten egg white, starch paste or antacids such as milk of magnesia, aluminum hydroxide gel or magnesium trisilicate gel. Avoid sodium bicarbonate because of carbon dioxide release. Sodium thiosulfate solution may prove beneficial by reducing unreacted material.

5- First Aid Measures and Effects of Overexposure

INHALATION: Inhalation of hypochlorous acid fumes may cause severe respiratory tract irritation and pulmonary edema.

SKIN: Skin contact may cause severe irritation and burns.

EYE CONTACT: Eye contact may cause severe irritation, burns and/or corrosion.

INGESTION: Ingestion may cause pain and inflammation of the mouth and digestive system, burns and perforation of the esophagus or stomach, vomiting, circulatory collapse, confusion, delirium and coma.

EFFECTS OF OVEREXPOSURE:

ACUTE: Corrosive and strongly irritating to the eyes, skin, and respiratory tract. Inhalation of fumes may cause pulmonary edema. Ingestion may cause burns to the mouth and digestive tract and abdominal distress.

CHRONIC: No Data.

6 - Fire and Explosion Hazard Data

FLASH POINT (test method) : Non-Flammable
AUTOIGNITION TEMPERATURE: None
FLAMMABILITY LIMITS IN AIR: None
LEL: N/A UEL: N/A

EXTINGUISHING MEDIA: Use water spray, fog, foam, dry chemical, or carbon dioxide or agents suitable for materials in surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES: Avoid fumes from spilled or exposed liquid, dilute copiously, ventilate and be prepared to use respiratory protection if needed. Use self-contained breathing apparatus and full protective equipment. Acid contamination will produce very irritating fumes similar to chlorine.

UNUSUAL FIRE AND EXPLOSION HAZARD: Product decomposes when heated and may cause containers to rupture or explode. Vigorous reaction is possible with organic materials or oxidizing agents and may result in fire.

7 - Reactivity Data

CONDITIONS CONTRIBUTING TO INSTABILITY: Strong oxidizer, stability decreases with concentration, heat, light, decrease in pH and contamination by metals.

INCOMPATIBILITY: Avoid contamination with heavy metals, reducing agents, ether, ammonia, and acids.

HAZARDOUS DECOMPOSITION PRODUCTS: Acid fumes.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: Material is not known to polymerize.

8- Special Protection

VENTILATION REQUIREMENTS: Provide good general room ventilation plus local exhaust at points of emission.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY: NIOSH/MSHA approved respirator, following manufacturer's recommendations, should be used as a precautionary measure where airborne contaminants may occur.

EYE: Wear chemical safety goggles plus full face shield to protect against splashing when appropriate.

GLOVES: Wear impervious gloves such as rubber, neoprene or vinyl.

OTHER CLOTHING AND EQUIPMENT: Wear impervious protective clothing including gloves, apron or rain suit and boots to avoid bodily contact. Eye wash facility and emergency shower should be in close proximity.

9- Handling and Storage

HANDLING AND STORAGE PRECAUTIONS: Do not store adjacent to chemicals that may react if spillage occurs. Comply with DOT regulations when shipped. If closed containers become heated, vent to release decomposition products (mainly oxygen under normal decomposition). Do not mix or contaminate with ammonia, hydrocarbons, acids, alcohol's or ethers.

DO NOT REUSE CONTAINERS: Product residues may remain in containers. All labeled precautions must be observed. Dispose of container in a manner meeting government regulations.

PRODUCT DISPOSAL: Product should be completely removed from containers. Material that cannot be used or chemically reprocessed should be disposed of in a manner meeting government regulations.

10 - Environmental Procedures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Do not allow spilled material to enter sewers or streams. Flush with water to dilute as much as possible and pump into polyethylene containers for disposal. Avoid heat and contamination with acid materials. Do not use combustible materials such as sawdust to absorb Sodium Hypochlorite Solution.

WASTE DISPOSAL METHOD: Reduce with agents such as bisulfites or ferrous salt solutions. Some heat will be produced. Keep on alkaline side and dilute with copious amount of water. Main end-product is salt water. Comply with all applicable governmental regulations.

11 - Toxicological Information

TOXICOLOGY DATA:

The toxicity and corrosivity of Sodium Hypochlorite is a function of concentration. Industrial grades of higher concentrations than household bleach are more toxic and corrosive.

Aquatic Toxicity Rating:	96 hr. LC50
Ceriodaphnia dubia:	1.23 ppm
Pimephales promelas:	1.19 ppm

Sodium Hypochlorite @ 12.5% (Rat, Oral LD50)	Test Result:	5.0 g/kg
Sodium Hypochlorite @ 5.25% (Rat, Oral LD50)	Test Result:	13.0 g/kg

12- Additional Information

This blend does not contain any substances subject to the Threshold Planning Quantity (TPQ) requirements of Section 313 of the act.

CONTAINER DISPOSAL: Dispose in a licensed facility. Recommend crushing or other means to prevent unauthorized reuse.

NSF LIMITS: NSF Maximum Drinking Water Use Concentration, 100 mg/L as Sodium Hypochlorite. The finished drinking water should be monitored for disinfection by-products in accordance with state and U.S. E.P.A. regulations and guidelines. Levels of chlorite ion and chlorate ion should not exceed 10 ppb.

USDA APPROVAL: This product is acceptable as a sanitizer for all surfaces not always requiring a rinse in official establishments operating under the Federal meat, poultry, shell egg, and egg products inspection programs.

Section 311 of The Clean Water Act lists this product as a hazardous substance which, if discharged to water, may require immediate response to mitigate danger to public health and welfare. Spills of 100 pounds or more must be reported to the National Response Center at the following number: 800-424-8802

Material is contained on a composite list as required under 101 (14) of CERCLA.

Sodium Hypochlorite Solution is regulated by the USEPA under the Federal Insecticide, Fungicide and Rodenticide Acid (FIFRA) as a pesticide product.

EPA Facility Number: #67279-PA.002

EPA Product Registration Number: #67279-3

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DISCLAIMER: The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer relabels this product, legal counsel should be consulted to insure proper health, safety and other necessary information is included on the container.

Manley-Regan Chemicals provides no warranties, either expressed or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein.

The above information complies with the OSHA's hazard communication standard 29CFR1910.1200. The standard must be consulted for specific requirements.