

MATERIAL SAFETY DATA SHEET

<p>Manufacturer: Ulrich Chemical, Inc. Address: 3111 North Post Road Indianapolis, IN 46226</p> <p style="text-align: center;">Phone: 317-898-8632</p> <p>Emergency No: CHEMTREC 1-800-424-9300</p>	<p>Ulrich Code No: 694300,694600,694900,695200, 695500,695800,696050,696100,696101, 696110,696250,696300,696400,696500, 696505,696510,697300</p> <p style="text-align: center;">Date: August 5, 1996</p> <p style="text-align: center;">Prepared by: Shawn P. Wiram</p>
---	--

SECTION - I - IDENTITY

Chemical/Synonym: Bleach	Trade Name/Synonym: Sodium Hypochlorite 12.5%
Chemical Family: Oxidizing Agent (hypochlorite)	Formula: NaOCl

SECTION - II - INGREDIENTS AND HAZARDS

Components	% by weight	Hazard Data	Data Compiled (MSDS Language Consists of Direct Excerpts From The Following MSDS'S And Possibly Other Information.)
Sodium Hypochlorite CAS No: 7681-52-9	12.5%	None Established	Chlorine Institute MSDS 5-82

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: 100 C for 15 % NaOCl	Vapor Pressure (mm Hg.): Vapor Pressure of water plus decomposition product vapor pressure.
Vapor Density (Air=1):	Solubility in Water: Complete
Appearance and Odor: Light yellow-green, pungent odor like chlorine.	Specific Gravity (H ₂ O=1): >1.0
Volatiles, % by Weight: Not Applicable	Evaporation Rate: Not Applicable

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Flammable Limits	LEL	NA
None	Not Applicable	UEL	NA

Extinguishing Media: Suitable for 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. Acid contamination will produce very irritating fumes similar to chlorine gas.

Unusual Fire and Explosion Data - Bleach decomposes when heated; decomposition products may cause containers to rupture or explode. Vigorous reaction possible with organic materials or oxidizing agents; may result in a fire.

SECTION V - REACTIVITY DATA

Stability: Unstable:	Stable:	X	Conditions to Avoid: Solutions of Sodium Hypochlorite are fairly stable in concentrations below 1%. Stability decreases with concentration, heat, light exposure, decrease in pH, and contamination with heavy metals, such as, nickel, cobalt, copper, and iron.
----------------------	---------	---	---

Incompatibility (Materials to Avoid): Avoid contamination with heavy metals (act as catalysts), reducing agents, organics, ether, ammonia, acids.

Hazardous Decomposition Products - Hypochlorous acid (HOCl), chlorine, hydrochloric acid. Composition depends upon temperature and decrease in pH. Additional decomposition products, which depend upon pH, temperature and time, are sodium chloride, sodium chlorate and oxygen.

Hazardous Polymerization:	May Occur:	May Not Occur:	X
---------------------------	------------	----------------	---

Conditions to Avoid: None Known

SECTION VI - HEALTH HAZARD DATA

Probable Route(s) of Entry: Eye Contact, Skin Contact, Inhalation, Ingestion

Effects of Overexposure (Acute and Chronic):

Eye: Severe irritation.

Inhalation - Fumes from spills are very irritating to mucous membranes. Very little hazard for properly stored solution.

Skin - Irritant, reddening of skin, skin damage.

Ingestion - Causes irritation of membranes of the mouth, throat, and stomach pain and possible ulceration. LD50 (oral, rat) for 5.25% NaOCl is approximately 13 g/kg body weight and for 12.5% NaOCl is approximately 5 g/kg body weight.

Carcinogenicity:

NTP?	Not Listed. See other health data.
IARC Monograph?	Not Listed. See other health data.
OSHA Regulated?	Not Listed. See other health data.

Other Health Data

Acute: irritating effects increase with strength of solution and time of exposure.
Chronic: Constant irritant to eyes and throat.

Medical Conditions Generally Aggravated by Exposure: None Identified.

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with large amounts of water for at least 15 minutes. Consult an eye specialist immediately.

Skin Contact: Remove contaminated clothing and launder before reuse. Flush affected areas with large amounts of flowing water. If irritation develops, contact a physician.

Inhalation: Remove victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen, if qualified. Get medical attention.

Ingestion: If accidentally swallowed, drink water, milk, and obtain immediate medical attention. Do not use baking soda or acidic antidotes.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled - Use appropriate protective equipment, including respiratory protection. Collect all free liquid or flush with water to dilute as much as possible. Reduce with bisulfites or ferrous salt solutions. Note: This will produce some heat. Do not allow material to enter waterways or sewers without permission from regulatory authority. Avoid heat and contamination with acid materials. Do not use combustible materials such as sawdust to absorb hypochlorite.

Waste Disposal Method - Observe all local, state, and federal regulations. Contact local EPA representative agency for additional information.

SECTION VIII- CONTROL MEASURES

Respiratory Protection - When fumes are present use NIOSH approved respirator with acid type canister or self-contained breathing apparatus. Situation and concentration will dictate required equipment.

Ventilation - No special ventilation required unless bleach is exposed to decomposition conditions; ie. spills or acidic conditions.

Local Exhaust - To maintain exposure below PEL or TLV.

Special - Not Applicable.

Mechanical (General) - To maintain exposure below PEL or TLV.

Other - Not Applicable.

Protective Gloves - Use rubber or plastic gloves.

Eye Protection - Use chemical resistant goggles. Use in vicinity of emergency eyewash/safety shower.

Other Protective Clothing or Equipment - Use rubber apron or other appropriate equipment to protect body from splashing conditions. Use rubber protective shoes if spills occur.

Hygienic Work Practices - Wash thoroughly after handling.

SECTION IX - SPECIAL PRECAUTIONS AND COMMENTS

Storage and Handling Information - Store in vented, closed, clean, non-corrosive containers in a cool, dry location, away from direct sunlight and not adjacent to chemicals which may react with bleach if spillage occurs. If shipped, must comply with DOT, etc. shipping regulations. If closed containers becomes heated, the containers should be vented to release decomposition products (mainly oxygen under normal decomposition). Do not mix or contaminate with ammonia, hydrocarbons, acids, alcohol, ethers.

Other Precautions - Read and follow all label instructions. Use in vicinity of emergency eyewash/safety shower.

NSF Standard 60 - Drinking Water Treatment Chemicals: Sodium Hypochlorite has been certified for use in potable water by the NSF if repackaged at Ulrich Chemical, Inc.'s Indianapolis, Evansville, Terre Haute, or Fort Wayne facilities. The maximum use level for this product is not to exceed 250 mg/L.

SARA Notification: The following is a list of toxic chemicals found in this blend which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.

<u>Chemical Name</u>	<u>Chemical Abstract Service Registry Number</u>	<u>Percentage By Weight in Product</u>
None	N/A	N/A


DOT CLASS: HYPOCHLORITE SOLUTION (12.5%) / 8 / UN1791 / PG III / RQ (100 LBS.)

DOT ERG Guide #60
NAERG Guide #154

Hazard Identity:

Health:	2	Flammability:	0
Contact:	2	Reactivity:	0

Judgments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, Ulrich Chemical, Inc. extends no warranties, makes no representations and assumes no responsibility as to accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.


_____, Director of Environmental Services
Mr. Shawn P. Wiram