

Kuehne Chemical

MATERIAL SAFETY DATA SHEET

MSDS NUMBER : M7745
MSDS DATE : 01-19-90
PRODUCT NAME : SODIUM HYPOCHLORITE

AMREX CHEMICAL CO., INC.
117 E. Frederick St.
P. O. Box 642
Binghamton, NY 13902

24 HOUR EMERGENCY PHONE: (201) 589-0700

I. PRODUCT IDENTIFICATION

HMIS HAZARD RATINGS

HEALTH HAZARD 3 FIRE HAZARD 0 REACTIVITY 2
Based on the National Paint & Coatings Association HMIS rating system.

SARA/TITLE III HAZARD CATEGORIES (See Section X)

Immediate (ACUTE) Health: YES Reactive Hazard: YES
Delayed (Chronic) Health: NO Sudden Release of Pressure: NO
Fire Hazard: YES

MANUFACTURER'S NAME AND ADDRESS : Kuehne Chemical Co. Inc.
86 Hackensack Avenue Telephone
South Kearny, New Jersey 07032 (201) 589-0700

CHEMICAL NAME: Hypochlorous Acid, Sodium Salt CAS NUMBER: 007681-52-9

SYNONYMS/Common Names: Chlorine Bleach;
Soda Bleach

CHEMICAL FORMULA: NaOCl

DOT PROPER SHIPPING NAME: Hypochlorite Solution

DOT HAZARD CLASS: Corrosive Material

DOT I.D. NUMBER: UN1791

DOT HAZARDOUS SUBSTANCE: Sodium Hypochlorate RO 100#

II. HEALTH HAZARD INFORMATION

EMERGENCY AND FIRST AID PROCEDURES

EYES:

OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY AND THEN SEEK MEDICAL ATTENTION. IMMEDIATELY flush eyes with a directed stream of water for at least 15 minutes while forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes within one (1) minute is essential to achieve maximum effectiveness. SEEK MEDICAL ATTENTION IMMEDIATELY.

SKIN:

SEEK MEDICAL ATTENTION IMMEDIATELY. Flush thoroughly with cool water under shower while removing contaminated clothing and shoes. CONTINUE TO FLUSH UNTIL MEDICAL ATTENTION ARRIVES. Discard non-rubber shoes. Wash clothing before reuse.

CAS = Chemical Abstract Service Number NA = No relevant information found or not available
PEL = OSHA Permissible Exposure Limit CERP = Corporate Exposure Limit
TLV = ACGIH Threshold Limit Value, Current NA = Not applicable
See Chronic Effects Information
IMPORTANT: The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY, EXPRESS OR IMPLIED IS MADE REGARDING PERFORMANCE, STABILITY, OR OTHERWISE. This information is not intended to be all-inclusive as to the manner and conditions of use, handling and storage. Other factors may involve other or additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the customer. NA = Not applicable

II. HEALTH HAZARD INFORMATION (Continued)

INHALATION:

Remove to fresh air. If breathing is difficult have trained 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 or gelatin solution, if these are not available, give large quantities of water. If vomiting occurs spontaneously, keep airway clear and give more milk, gelatin solution or water. GET MEDICAL ATTENTION IMMEDIATELY. Avoid vomiting, lavage or acidic antidotes.

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.

ROUTES OF EXPOSURE

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.

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.

Pentahydrate; 45% Concentration:

Acute Oral Toxicity: LD50 (Rat) 8910 mg/kg
Acute Dermal Toxicity: LD50 (Rabbit) 10,000 mg/kg

Primary Skin Irritation: Severely Irritating.
Primary Eye Irritation: Severely Irritating.

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III. IMPORTANT COMPONENTS

CAS NUMBER / NAME
1310732 Sodium hydroxide (Na(OH))

EXPOSURE LIMITS	PERCENTAGE
PEL=2 mg/m3, Ceiling	
TLV=2 mg/m3, Ceiling	WT. % 0.2

COMMON NAMES:
CAUSTIC SODA

Listed On(List Legend Below):
13 18 21

7681529 Hypochlorous acid, sodium salt

EXPOSURE LIMITS	PERCENTAGE
PEL=Not Established	
TLV=Not Established	WT. % 10.0 - 16.5

COMMON NAMES:
SODIUM HYPOCHLORITE

Listed On(List Legend Below):
13 16 18

7732185 Water

EXPOSURE LIMITS	PERCENTAGE
PEL=Not Established	
TLV=Not Established	Wt.% 81.6 - 70.0

COMMON NAMES:

Listed On(List Legend Below):
19

See Section II

All components of this product that are required to be on the TSCA Inventory are listed on the inventory.
Not listed as carcinogen - IARC, NTP, OSHA

LIST LEGEND

13 PA ENVIRONMENTAL HAZ SUBSTANCE	16 NJ WORKPLACE HAZ SUBSTANCE LST
18 NY HAZARDOUS SUBSTANCES	19 PA REQUIREMENT- 3% OR GREATER
21 NJ SPECIAL HEALTH HAZ SUB	

IV. FIRE AND EXPLOSION DATA

FLASH POINT: NA AUTOIGNITION TEMPERATURE: NA

FLAMMABLE LIMITS IN AIR, % BY VOLUME- UPPER: NA
LOWER: NA

EXTINGUISHING MEDIA:

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

SPECIAL FIRE FIGHTING PROCEDURES:

Use self-contained breathing apparatus and full protective equipment. Acid contamination will produce very irritating fumes similar to chlorine.

UNUSUAL FIRE AND EXPLOSION HAZARD:

Sodium Hypochlorite solutions decompose when heated. Decomposition products may cause containers to rupture or explode. Vigorous reaction possible with organic materials or oxidizing agents and may result in fire.

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V. 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 rubber safety shoes. Eye wash facility and emergency should be in close proximity.

VI. PHYSICAL DATA

BOILING POINT @ 760 mm Hg: Decomposes above 110°C (230°F)

FREEZING POINT: ND

VAPOR PRESSURE: NA

SPECIFIC GRAVITY (H₂O=1): 1.15 - 1.27 depending on concentration

SOLUBILITY IN H₂O % BY WT: 100

VAPOR DENSITY (A_{ir}=1): NA

APPEARANCE AND ODOR: Colorless to light yellow-green liquid with chlorine like odor.

pH: 12 @ 100 GM/L

VII. 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, organics, ether, ammonia, and acids.

HAZARDOUS DECOMPOSITION PRODUCTS:

Acid fumes.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:

Material is not known to polymerize.

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VIII. 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, alcohols 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. container.

IX. 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 hypochlorite. Aquatic toxicity not established, but bleach, if not diluted, may seriously affect aquatic life.

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 amounts of water. Main end-product is salt water. Comply with all applicable governmental regulations.

X. ADDITIONAL INFORMATION

Sec 311 of The Clean Water Act lists 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 lbs or more must be reported to the National Response Center 1-800-424-8802.

Shipment regulated by US DOT. Material assaying 14.7% (more than 7% available chlorine) is classified corrosive and requires a corrosive label and is assigned UN # 1791 as an international identification number (49 CFR Sec 172.101).

Material assaying less than 14.7% is classified ORM-B with the identifying number NA 1791.

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

Sodium Hypochlorite is regulated by the EPA under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), if used as a pesticide.

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X. ADDITIONAL INFORMATION (Continued)

OSHA Standard 29CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to your employees.

To aid our customers in complying with regulatory requirements, SARA Title III hazard categories for this product are indicated in Section I. If the word "YES" appears next to any category, this product may be reportable by you under the requirements of 40 CFR Part 370. Please consult those regulations for details.

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WARNING LABEL INFORMATION

SODIUM HYPOCHLORITE

ACTIVE INGREDIENT:
SODIUM HYPOCHLORITE..... 12.5%
INERT INGREDIENTS:..... 87.5%

DANGER POISON

STATEMENT OF PRACTICAL TREATMENT (FIRST AID)

IF CONTACT WITH EYES OCCURS. Flush with water for at least 15 minutes. Get prompt medical attention.

IF CONTACT WITH SKIN OCCURS. Wash with plenty of soap and water.

IF SWALLOWED. Drink large quantities of milk or gelatin solution, if these are not available, drink large quantities of water. DO NOT give vinegar or other acids. DO NOT induce vomiting. Get prompt medical attention.

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

DANGER: Corrosive, may cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Wear safety glasses or goggles and rubber gloves when handling this product. Wash after handling. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until strong odors have dissipated.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not discharge into lakes, streams, ponds or public waterways unless in accordance with a NPDES permit. For guidance, contact the regional office of the U.S. Environmental Protection Agency.

PHYSICAL OR CHEMICAL HAZARDS

STRONG OXIDIZING AGENT: Mix only with water according to label directions. Mixing this product with chemicals (e.g. ammonia, acids, detergents, etc.) or organic matter (e.g. urine, feces, etc.) will release chlorine gas which is irritating to eyes, lungs and mucous membranes.

KUEHNE CHEMICAL COMPANY INC.
86 Hackensack Avenue
South Kearny, NJ 07032

EPA REG NO 35317-20001

EPA EST. NO. 35317-NJ-1

WARNING LABEL INFORMATION (Continued)

MANUFACTURING-USE ONLY

For manufacturing-use only in the formation of end-use products intended as:

- .sanitizers of surfaces (e.g. wooden butcher blocks, stainless steel tops, concrete floors, tile walls); or
 - .sanitizers of commercial and household laundry; or
 - .agents to wash or assist in lye peeling of fruits and vegetables; or
 - .agents to help control microorganisms on eggs for human consumption; or
 - .disinfectants of poultry drinking water; or
 - .disinfectants of human drinking water (emergency / public / individual), swimming pool water, hubbard/immersion tank water, spas/hot tub, hydrotherapy pools, human drinking water systems (e.g. water mains); or
 - .disinfectants of nonporous hard surfaces (e.g. tile, glass, stainless steel, fiberglass); or
 - .agents to help control microorganisms in sewage, waste-water, industrial and pulp and paper process water systems; or
 - .algicides/slimicides in cooling towers or evaporative condensers; or
 - .sanitizers of dialysis machines; or
 - .sanitizers of toilet bowls; or
 - .agents to help control algae and bacteria in fish and lobster ponds/tanks and conditioning oysters; or
 - .agents to help control slime on boat bottoms; or
 - .agents to sanitize and deodorize artificial sand beaches; or
 - .agents to kill scavenger fish in fish hatchery ponds.
- Reformulators and repackagers of this product must obtain their own registrations from the Environmental Protection Agency.

HANDLING AND STORAGE

- .Do not contaminate water, food, or feed by storage or disposal.
- .Store in a cool, dry, well-ventilated area away from heat, oxidizing agents, strong alkalies, acids and organic peroxides.
- .Dike and vent storage tanks.
- .Keep container closed except as necessary when transferring material.
- .Do not allow entry to sewers or waterways.
- .Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

IN CASE OF:

FIRE - Use self-contained breathing apparatus and full protective equipment. Use water spray, foam, dry chemical or CO₂. Fire will liberate toxic gases.

SPILL - Get protective equipment. Contain spill and pump into marked container for reclamation or disposal. Avoid discharges to sewers and streams. Spills of 100 pounds or more must be reported to the National Response Center, 1-800-424-8802.

AMREX

CHEMICAL CO., INC.

117 E. FREDERICK STREET
P.O. BOX 642
BINGHAMTON, N.Y. 13902
PHONE (607) 772-8784

January 25, 1996

Syracuse City School District
725 Harrison Street
Syracuse, NY 13210

Dear Customer:

Enclosed are Material Safety Data Sheet(s) for products you recently received from Amrex Chemical Co. Inc. Please take the time to familiarize yourself with each Material Safety Data Sheet, paying particular attention to the health and hazard information as well as the emergency and first aid procedures. This information must be distributed to all applicable employees, agents, contractor, customers, and any others who you can reasonably foresee handling these products, as required by OSHA's Hazard Communication Standard (29CFR 1910.1200).

The information contained in these Material Safety Data Sheets is based on the best information currently available to the manufacturer of the product. The statements contained in these sheets are offered for informational purposes only and are intended to be followed only by persons having related technical skills at their own discretion and risk. Since conditions and manner of use are outside of our control, we make no warranties, express or implied, and no liability in connection with any use of this information.

We at Amrex Chemical Co. Inc. are dedicated to the safe, efficient handling of all our products, and hope the enclosed information will help lead to a safe and accident-free working environment with proper and adequate precautions being taken to protect against all actual or potential health and environmental hazards.

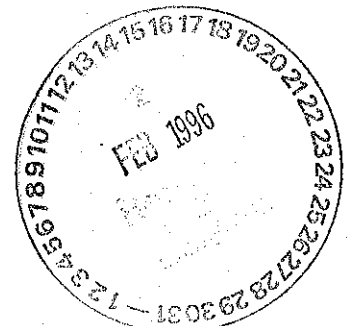
Should you require any additional information, please feel free to contact us.

Sincerely,



Pamela Rexer-Rood
Director of Safety & Regulatory Affairs

Enclosures: Material Safety Data Sheet(s) for:
Hypochlorite, Solution





117 E. FREDERICK STREET
P.O. BOX 642
BINGHAMTON, N.Y. 13902
PHONE (607) 772-8784

PLEASE SIGN AND RETURN TO US AS SOON AS POSSIBLE.

This will acknowledge receipt of Material Safety Data Sheet(s) covering the following product(s) purchased from Amrex Chemical Co. Inc.:

Hypochlorite, Solution

Date: 1/25/96

Signature: _____

Name: _____

Company Name: Syracuse City School District

Address: 725 Harrison Street

Syracuse, NY 13210

Phone: _____