ASTRO PRODUCT CODE # 15048

OxyChem®

Responsible Care® A Public Commitment

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS NUMBER : M32413 **ISSUE DATE :** 10-15-96

PRODUCT NAME : CAUSTIC SODA ANHYDROUS (ALL GRADES)

Manufacturer's Name and Address : Occidental Chemical Corporation, Occidental Tower
5005 LBJ Freeway, P.O. Box 809050
Dallas, TX 75380 (972) 404-3800

24 HOUR EMERGENCY TELEPHONE : 1-800-733-3665 OR 972-404-3228

TO REQUEST AN MSDS : 1-800-699-4970

CUSTOMER SERVICE : 1-800-752-5151

PRODUCT USE : Metal Finishing, Industrial Cleaners, Drum Cleaners, Petroelum Industry, Chemical Processing

CHEMICAL NAME : Sodium hydroxide

CHEMICAL FORMULA : NaOH

SYNONYMS/COMMON NAMES : Sodium hydroxide-dry

2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS NUMBER / NAME
1310-73-2 Sodium hydroxide (Na(OH))

EXPOSURE LIMITS
PEL:2 mg/m3, Ceiling
TLV:2 mg/m3, Ceiling

PERCENTAGE
VOL ND
WT 97-98.20

COMMON NAMES:
CAUSTIC SODA

Listed On(List Legend Below):
00 13 18 21 22 50 51

2. COMPOSITION/INFORMATION ON INGREDIENTS (Continued)

7647-14-5 Sodium chloride (NaCl)

EXPOSURE LIMITS	PERCENTAGE	
PEL:None established	VOL	ND
TLV:None established	WT	0-1.20

COMMON NAMES:
SALT

Listed On(List Legend Below):
00 22 23 50 51

- -

497-19-8 Carbonic acid disodium salt

EXPOSURE LIMITS	PERCENTAGE	
PEL:Not Established	VOL	ND
TLV:Not Established	WT	0.40-1

COMMON NAMES:
SODA ASH
SODIUM CARBONATE

Listed On(List Legend Below):
00 22 23 50 51

- -

LIST LEGEND

00 TSCA INVENTORY	13 PA ENVIROMENTAL HAZ SUBSTANCE
18 NY HAZARDOUS SUBSTANCES	21 NJ SPECIAL HEALTH HAZ SUB
22 CANADIAN DOMESTIC SUB LIST	23 NJ REQUIREMENT- 1% OR GREATER
50 PHILIPPINES INVENTORY (PICCS)	51 EINECS

3. HAZARDS IDENTIFICATION

********** EMERGENCY OVERVIEW **********

MAY CAUSE BURNS TO THE EYES, SKIN, AND MUCOUS MEMBRANES. MAY CAUSE PERMANENT EYE DAMAGE. INHALATION OF DUST, MIST, OR SPRAY CAN CAUSE SEVERE LUNG DAMAGE. CAN REACT VIOLENTLY WITH WATER, ACIDS AND OTHER SUBSTANCES.

Clear white solid with no distinct odor

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY:

Inhalation, Ingestion.

TARGET ORGANS:

Eyes, Skin, Respiratory Tract, Gastrointestinal Tract.

3. HAZARDS IDENTIFICATION (Continued)

IRRITANCY:

Liquid, vapors or mist may be irritating to eyes, skin and respiratory tract.

SENSITIZING CAPABILITY:

None known.

REPRODUCTIVE EFFECTS:

None known.

CANCER INFORMATION:

None known.

SHORT-TERM EXPOSURE (ACUTE)

INHALATION:

Exposure to vapor, mist or liquid can produce burns of the respiratory tract.

Severe exposures could result in chemical pneumonia.

EYES:

Contact can cause severe damage including burns and blindness.

The severity of the effects depend on concentration and how soon after exposure the eyes are washed.

SKIN:

Corrosive.

Contact may cause burns and tissue destruction.

Note that irritation may follow an initial latency (delay between the time that the exposure occurs and when the sense of irritation starts). The latent period can vary as much as hours for a dilute solution (0.04%) to minutes with more concentrated solutions (25-50%).

Prolonged or repeated contact, even to dilute concentrations, can cause a high degree of tissue destruction.

INGESTION:

Corrosive.

Severe burns and complete tissue perforation of mucous membranes of mouth, throat and stomach.

REPEATED EXPOSURE (CHRONIC)

No known chronic effects.

SYNERGISTIC MATERIALS:

None known.

3. HAZARDS IDENTIFICATION (Continued)

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

None known.

4. FIRST AID MEASURES

EYES:

IMMEDIATELY FLUSH EYES WITH A DIRECTED STREAM OF WATER for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN:

Flush thoroughly with cool water under shower while removing contaminated clothing and shoes. Discard non-rubber shoes. Wash clothing before reuse. GET MEDICAL ATTENTION AS SOON AS POSSIBLE.

INHALATION:

Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If respiration stops, give mouth-to-mouth resuscitation. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. (If available, give several glasses of milk.) If vomiting occurs spontaneously, keep airway clear and give more water. GET MEDICAL ATTENTION IMMEDIATELY.

NOTES TO PHYSICIAN:

No specialized procedures. Treat for clinical symptoms.

5. FIRE FIGHTING MEASURES

Flash Point: Non-flammable

Method: Not applicable

Autoignition Temperature: Nonflammable

FLAMMABLE LIMITS IN AIR, BY % VOLUME

Upper: Not applicable
Lower: Not applicable

EXTINGUISHING MEDIA:

Non-flammable / Non-combustible.

5. FIRE FIGHTING MEASURES (Continued)

Use water spray to keep fire-exposed containers cool.

FIRE FIGHTING PROCEDURES:

Use water to cool containers but avoid getting water into containers. Wear NIOSH/MSHA approved positive-pressure self-contained breathing apparatus and full protective clothing.

FIRE AND EXPLOSION HAZARD:

Direct contact with water can cause a violent exothermic reaction.

SENSITIVITY TO MECHANICAL IMPACT:

Not sensitive.

SENSITIVITY TO STATIC DISCHARGE:

Not sensitive.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Evacuate unnecessary personnel.

Follow protective measures provided under Personal Protection in Section 8.

ENVIRONMENTAL PRECAUTIONS:

Contain material and prevent accumulation of dust.

CAUTION: This product may react strongly with acids and water.

NEVER FLUSH TO SEWER.

According to 40 CFR 302 Table 302.4 (CERCLA), environmental releases that exceed the RQ must be reported to the National Response Center by calling 800-424-8802 (202-426-2675) and the State Emergency Response Commission and the Local Emergency Planning Committee (40 CFR 355.40) as appropriate.

METHODS FOR CLEANING UP:

Dry material can be shoveled up, liquid material can be removed with a vacuum truck. Neutralize remaining traces with any dilute inorganic acid (hydrochloric, sulfuric or acetic acid). Flush spill area with water followed by a liberal covering of sodium carbonate. All clean-up material should be removed for proper treatment or disposal. Spills on other than pavement (eg. dirt or sand) may be handled by removing the affected soil and placing in approved containers.

7. HANDLING AND STORAGE

HANDLING:

Avoid breathing dust.

Hazardous carbon monoxide gas can form upon contact with food and beverage products in enclosed spaces and can cause death. Follow appropriate tank entry procedures (ANSI Z117.1).

Containers, even those that have been emptied, will retain product residue and vapor and should be handled as if they were full.

Do not get in eyes, on skin or clothing.

Do not take internally

Keep away from acids, to avoid possible violent reaction.

Wash contaminated clothing before reuse.

Wash thoroughly after handling; exposure can cause burns which are not immediately painful or visible.

Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the MSDS.

If product is added too rapidly, or without stirring, and becomes concentrated at bottom of mixing vessel, excessive heat may be generated, resulting in DANGEROUS boiling and spattering, and a possible IMMEDIATE AND VIOLENT ERUPTION of highly caustic solution.

SPECIAL MIXING AND HANDLING INSTRUCTIONS:

Considerable heat is generated when product is mixed with water. Therefore, when making solutions always carefully follow these steps:

ALWAYS wear ALL protective clothing described above. NEVER add water to product. ALWAYS add product, with constant stirring, slowly to surface of lukewarm (80-100°F) water, to assure product is being completely dissolved as it is added.

Product can react EXPLOSIVELY with acids, aldehydes, and many other organic chemicals, add product VERY gradually, while stirring constantly. If product is added too rapidly, or without stirring, and becomes concentrated at bottom of mixing vessel, excessive heat may be generated, resulting in DANGEROUS boiling and spattering, and a possible IMMEDIATE AND VIOLENT ERUPTION of highly caustic solution.

ALWAYS empty and clean containers of all residues before adding product, to avoid possible EXPLOSIVE reaction between product and unknown residue.

Returnable containers should be shipped in accordance with supplier's recommendations. Return shipments should comply with all federal, state, and DOT regulations. All residue should be removed from containers prior to disposal.

Avoid contact with aluminum, tin, zinc, and alloys containing these metals. Avoid contact with leather, wool, acids, organic halogen compounds and organic nitro compounds.

7. HANDLING AND STORAGE (Continued)

STORAGE:

Keep container tightly closed and properly labeled.

Keep container closed except when transferring material.

Store in a cool, ventilated area away from incompatible materials (see Section 10)

Hazardous carbon monoxide gas can form upon contact with reducing sugars and food and beverage products in enclosed spaces and can cause death. Follow appropriate tank entry procedures (ANSI Z117.1).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

No special ventilation required under normal use.

NOTE: Where carbon monoxide may be generated, special ventilation may be required.

Where engineering controls are not feasible use adequate local exhaust ventilation wherever mist, spray or vapor may be generated.

PERSONAL PROTECTION

RESPIRATORY:

Respiratory protection is not required under normal use.

Wear a NIOSH/MSHA approved respirator following manufacturer's recommendations, where airborne contaminants may occur.

EYE/FACE:

Wear chemical safety goggles. (ANSI Z87.1)

SKIN:

Wear chemical resistant gloves such as rubber, neoprene or vinyl.

Wash contaminated clothing and dry before reuse.

Wear protective clothing to minimize skin contact.

OTHER:

Standard work clothing closed at the neck and wrists.

Discard shoes that cannot be decontaminated.

Emergency shower and eyewash facility should be in close proximity (ANSI Z358.1).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear white solid with no distinct odor

Odor Threshold: Not applicable

Specific Gravity (Water=1): 2.13 @ 20°C

Vapor Pressure: 42mm Hg @ 1000°C

Vapor Density (Air=1): Not Applicable

Density: Not available

Evaporation Rate: Not applicable

% Volatiles by Wt: 0

Boiling Point: 1388°C @ 760 mm Hg

Freezing Point: 318°C

Melting Point: Not available

Solubility in Water (% by wt.): Completely soluble

pH: 0.01 moles/liter has pH 12.0

Octanol/Water Partition Coefficient: Not available

Thermal Decomposition Temperature: Not available

Other: COEFFICIENT WATER/OIL DISTRIBUTION: Not determined

VOC (g/l. by wt.): 0

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:

X	STABLE		UNSTABLE

REACTS WITH:

X	AIR		OXIDIZERS	X	METALS
X	WATER	X	ACIDS	X	OTHER
	HEAT		ALKALIS		NONE

HAZARDOUS POLYMERIZATION:

	OCCURS	X	WILL NOT OCCUR

COMMENTS:

Avoid direct contact with water.

10. STABILITY AND REACTIVITY (Continued)

Product is corrosive to tin, aluminum, zinc and alloys containing these metals and will react with these metals in powder form. Avoid contact with leather, wool, acids, organic halogen compounds, or organic nitro compounds. Hazardous carbon monoxide gas can form upon contact with reducing sugars, food and beverage products in enclosed spaces and can cause death. Follow appropriate tank entry procedures.

See Handling and Storage (Section 7).

HAZARDOUS DECOMPOSITION PRODUCTS:

None.

11. TOXICOLOGICAL INFORMATION

1310-73-2 Sodium hydroxide (Na(OH))

ACUTE DERMAL LD50 :	(rabbit)	1350 mg/kg
PRIMARY SKIN IRRITATION :	(rabbit)	severe
PRIMARY EYE IRRITATION :	(rabbit)	severe

497-19-8 Carbonic acid disodium salt

ACUTE ORAL LD50 :	(rat)	4090 mg/kg
ACUTE INHALATION LC50 :	(rat, 2hr)	2300 mg/m3
PRIMARY SKIN IRRITATION :	(rabbit, 24hr)	mild
PRIMARY EYE IRRITATION :	(rabbit, 24hr)	moderate

7647-14-5 Sodium chloride (NaCl)

ACUTE ORAL LD50 :	(rat)	3000 mg/kg
PRIMARY SKIN IRRITATION :	(rabbit)	mild
PRIMARY EYE IRRITATION :	(rabbit)	moderate

12. ECOLOGICAL INFORMATION

1310-73-2 Sodium hydroxide (Na(OH))

AQUATIC ECOTOX DATA
Fish:

LC50 (24 hr.)	(Goldfish)	160	mg/L
LC50 (48 hr.)	(Bluegill sunfish)	99	mg/L
LC50 (96 hr.)	(Mosquito fish)	125	mg/L
LC100(24 hr.)	(Carp)	180	mg/L
NOEC (168 hr.)	(Goldfish, Bass)	50	mg/L

Invertebrates:

Lethal(48 hr.)	(Water flea)	100	mg/L
Lethal(48 hr.)	(Midge)	700	mg/L

Amphibians:
No data available

Plants:
No data available

TERRESTRIAL ECOTOX DATA
Wildlife:

LD50(interperitoneal)	(Mouse as surrogate)	40	mg/Kg
LDLo (Oral)	(Rabbit as surrogate)	500	mg/Kg

Plants:
No data available

ENVIRONMENTAL FATE DATA
Biotic:
BOD NaOH has no biological oxygen demand
Abiotic:
No data available

There is limited information available on the environmental fate and effects of sodium hydroxide (NaOH). Laboratory toxicity data indicate that NaOH is moderately toxic to aquatic and terrestrial organisms. The primary mode of action is due the corrosive nature of this chemical and its tendency to increase pH in poorly buffered environments. Aquatic organisms become increasingly stressed as pH exceeds 9, with many aquatic species being intolerant of pH levels in excess of 10. Increased pH due to the introduction of NaOH into aquatic environments may lead to the precipitation of essential micronutrients. Exposed terrestrial species would be subject to skin irritation and burns due to the corrosive nature of this material. Due caution should be exercised to prevent the accidental release of this material to aquatic or terrestrial environments.

7647-14-5 Sodium chloride (NaCl)

AQUATIC ECOTOX DATA
Fish:

LC50 (96 hr.)	(Fathead minnow)	7,650	mg/L
LC50 (96 hr.)	(Bluegill sunfish)	12,946	mg/L

12. ECOLOGICAL INFORMATION (Continued)

Invertebrates:

LC50 (48 hr.)	(Water flea)	3,310	mg/L
LC50 (48 hr.)	(Mosquito larva)	10,200	mg/L
EC50 (48 hr.)	(Pond snail)	3,388	mg/L
LC50 (7 day)	(Water flea)	1,770	mg/L*

*mean value for five laboratory tests

IC50Repro(7 day)	(Water flea)	1,340	mg/L*

*mean value for five laboratory tests

Amphibians:

Mortality(5 day)	(Frog)	46.66%@1,800	mg/L*

(* concentration as Cl)

Mortality(5 day)	(Frog)	46.66%@1,200	mg/L*

(* concentration as Na)

Plants:

EC50 (32 day)	(Water-milfoil)	5,962-8,183	mg/L

TERRESTRIAL ECOTOX DATA

Wildlife:

LD50 (oral)	(Rat as surrogate)	3,000	mg/Kg

Plants:

No data available

ENVIRONMENTAL FATE DATA

Sodium chloride (NaCl) is a naturally occurring inorganic salt in surface waters, groundwater and the earth's crust. Biological systems typically maintain a necessary osmotic balance of critical salts including sodium chloride. The tolerance of aquatic species to NaCl is variable depending upon whether the organism is freshwater or marine, or if the organism is capable of moving between freshwater and marine environments. In general NaCl has low to moderate toxicity to aquatic or terrestrial species. Continuous discharge of salt to freshwater environments can lead to increased salinity over time. Bulk releases could impact salt intolerant aquatic species and sessile terrestrial lifeforms. Due care should be taken to avoid the accidental release of this material to aquatic or terrestrial environments.

497-19-8 Carbonic acid disodium salt

AQUATIC ECOTOX DATA

Fish:

LC50 (96 hr.)	(Bluegill sunfish)	140-180	mg/L
LC50 (96 hr.)	(Mosquitofish)	320-420	mg/L

BCF No data available

Invertebrates:

LC50 (48 hr.)	(Water flea)	115-320	mg/L
LC50 (96 hr.)	(Scud)	28-38	mg/L
LC50 (96 hr.)	(Tubellarian flatworm)	148-193	mg/L

12. ECOLOGICAL INFORMATION (Continued)

Amphibians:
No data available

Plants:

LC50 (5 day)	(Diatom)	105-137	mg/L

TERRESTRIAL ECOTOX DATA
Wildlife:

LD50 (oral)	(Rat as surrogate)	2.88	g/Kg

Plants:
No data available

ENVIRONMENTAL FATE DATA

There is limited information available on the environmental fate and effects of sodium carbonate (carbonic acid, disodium salt). Limited laboratory toxicity test data indicate that it is moderately toxic to aquatic and terrestrial organisms. Sodium carbonate (Na_2CO_3) is a contributor to water hardness, and is a component of the buffering capacity of aquatic systems. This material will readily dissociate in water, where the equilibrium distribution of inorganic carbon (CO_2, HCO_3, and CO_3) is based on pH. Due caution should be exercised to avoid the accidental release of this material to aquatic or terrestrial environments.

13. DISPOSAL CONSIDERATIONS

Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts.

Dispose of all waste and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Ensure that all responsible federal, state, and local agencies receive proper notification of spill and disposal methods.

Shipments of waste materials may be subject to manifesting requirements per applicable regulations. Appropriate disposal will depend on the nature of each waste material and should be done by a competent and properly permitted contractor.

The materials resulting from clean-up operations may be hazardous wastes and, therefore, subject to specific regulations. Package, store, transport, and dispose of all (clean-up) materials and any contaminated equipment in accordance with all applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Sodium Hydroxide, Solid

DOT HAZARD CLASS: 8

14. TRANSPORT INFORMATION (Continued)

DOT IDENTIFICATION N0: UN1823

DOT PACKING GROUP: II

DOT HAZARDOUS SUBSTANCE: RQ 1,000 Lbs. (Sodium Hydroxide)

DOT MARINE POLLUTANT(S): Not Applicable

ADDITIONAL DESCRIPTION REQUIREMENT: Not Applicable

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

OSHA Standard 29 CFR 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 below. If the word "YES" appears next to any category, this product may be reportable by you under the requirements of 40.CFR.370. Please consult those regulations for details.

TSCA:

All components of this product that are required to be on the TSCA inventory are listed on the inventory.

SARA/TITLE III HAZARD CATEGORIES:

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

HMIS HAZARD RATINGS:

HEALTH HAZARD: 3 FIRE HAZARD: 0 REACTIVITY: 2

STATE REGULATIONS:

See Section 2. COMPOSITION/INFORMATION ON INGREDIENTS list legend for applicable state regulation.

INTERNATIONAL REGULATIONS:

Consult the regulations of the importing country.

CANADA:

WHMIS Hazard Class: D1B, E

16. OTHER INFORMATION

For additional non-emergency health, safety or environmental information telephone (716) 286-3042 or write to:

Occidental Chemical Corporation
Product Stewardship Department
360 Rainbow Boulevard South
P.O. Box 728
Niagara Falls, New York 14302-0728

MSDS LEGEND:

ACGIH = American Conference of Governmental Industrial Hygienists

CAS = Chemical Abstracts Service Registry Number

CEILING = Ceiling Limit (15 Minutes)

CEL = Corporate Exposure Limit

OSHA = Occupational Safety and Health Administration

PEL = Permissible Exposure Limit (OSHA)

STEL = Short Term Exposure Limit (15 Minutes)

TDG = Transportation of Dangerous Goods (Canada)

TLV = Threshold Limit Value (ACGIH)

TWA = Time Weighted Average (8 Hours)

WHMIS = Worker Hazardous Materials Information System (Canada)

* = See Section 3 Hazards Identification - Repeated Exposure(Chronic) 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 OF MERCHANTABILITY OR FITNESS FOR PURPOSE, OR OF ANY OTHER KIND, 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. No suggestions for use are intended as, and nothing herein shall be construed as a recommendation to infringe any existing patents or violate any federal, state or local laws, rules, regulations or ordinances.

This Material Safety Data Sheet (MSDS) covers the following materials:

- DIAPHRAGM NO. 2 FLAKE
- BEADS
- SOLID
- CAUSTIC SODA-DIAPHRAGM COMPOUNDER
- CAUSTIC SODA RAYON NO. 2 FLAKE
- CAUSTIC SODA RAYON NO. 4 FLAKE
- CAUSTIC SODA-SOLID
- CAUSTIC SODA-DIAPHRAGM NO. 2 FLAKE

16. OTHER INFORMATION (Continued)

- CAUSTIC SODA-BEADS
- CAUSTIC SODA- DIAPHRAGM NO. 4 FLAKE

17. WARNING LABEL INFORMATION

SIGNAL WORD:

DANGER

HAZARD WARNINGS:

MAY CAUSE BURNS TO THE EYES, SKIN, AND MUCOUS MEMBRANES.

MAY CAUSE PERMANENT EYE DAMAGE.

INHALATION OF DUST, MIST, OR SPRAY CAN CAUSE SEVERE LUNG DAMAGE.

CAN REACT VIOLENTLY WITH WATER, ACIDS AND OTHER SUBSTANCES.

PRECAUTIONS:

Avoid contact with eyes, skin and clothing.

Avoid breathing dust, vapors or mist.

Do not swallow.

Use with adequate ventilation and wear respiratory protection when exposure to dust, mist, or spray is possible.

Wear safety glasses with side shields or chemical splash goggles, protective clothing and chemical resistant gloves.

Wash thoroughly after handling; exposure can cause burns which are not immediately painful or visible.

Keep container tightly closed and properly labeled.

Product can react violently with water, acids and other substances. See Handling and Storage (Section 7) of the MSDS for instructions before using.

Avoid contact with aluminum, tin, zinc, and alloys containing these metals. Avoid contact with leather, wool, acids, organic halogen compounds and organic nitro compounds.

Hazardous carbon monoxide gas can form upon contact with food and beverage products in enclosed spaces and can cause death. Follow appropriate tank entry procedures (ANSI Z117.1).

17. WARNING LABEL INFORMATION (Continued)

FIRST AID

EYES:

IMMEDIATELY FLUSH EYES WITH A DIRECTED STREAM OF WATER for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN:

Flush thoroughly with cool water under shower while removing contaminated clothing and shoes. Discard non-rubber shoes. Wash clothing before reuse. GET MEDICAL ATTENTION AS SOON AS POSSIBLE.

INHALATION:

Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If respiration stops, give mouth-to-mouth resuscitation. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. (If available, give several glasses of milk.) If vomiting occurs spontaneously, keep airway clear and give more water. GET MEDICAL ATTENTION IMMEDIATELY.

IN CASE OF SPILL OR LEAK:

Leaks should be stopped.

CAUTION: This product may react strongly with acids and water.

Scoop or sweep up all spilled product and other contaminated material and place in marked disposal containers

Neutralize residue with dilute acid and flush spill area with water followed by a liberal covering of sodium carbonate.

Dispose of wash water and spill by-products according to federal, state and local regulations.

Spills of 1000 pounds or more must be reported to the National Response Center, 1-800-424-8802.

State and local regulations may have additional reporting requirements, check with the proper state and local authorities.

Wear neoprene or rubber gloves.

FIRE:

Material does not burn.

Use extinguishing medium as appropriate for surrounding fire.

17. WARNING LABEL INFORMATION (Continued)

HANDLING AND STORAGE:

Considerable heat is generated when product is mixed with water. Therefore, when making solutions always carefully follow these steps:

ALWAYS wear ALL protective clothing described above. NEVER add water to product. ALWAYS add product, with constant stirring, slowly to surface of lukewarm (80-100°F) water, to assure product is being completely dissolved as it is added.

Product can react EXPLOSIVELY with acids, aldehydes, and many other organic chemicals, add product VERY gradually, while stirring constantly. If product is added too rapidly, or without stirring, and becomes concentrated at bottom of mixing vessel, excessive heat may be generated, resulting in DANGEROUS boiling and spattering, and a possible IMMEDIATE AND VIOLENT ERUPTION of highly caustic solution.

ALWAYS empty and clean containers of all residues before adding product, to avoid possible EXPLOSIVE reaction between product and unknown residue.

Returnable containers should be shipped in accordance with supplier's recommendations. Return shipments should comply with all federal, state, and DOT regulations. All residue should be removed from containers prior to disposal.

Containers that have been emptied, will retain product residue and vapor and should be handled as if they were full.

DISPOSAL:

A spill or release of this material may trigger the emergency release reporting requirements under SARA, Title III (40 CFR, Part 355) and/or CERCLA (40 CFR, Part 300). State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws.

Material that cannot be reused or chemically reprocessed should be disposed of in a manner meeting government regulations.

Always package,store, transport and dispose of all waste and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Appropriate disposal will depend on the nature of each waste material and should be done by a competent and properly permitted contractor.

INFORMATION REQUIRED BY FEDERAL, STATE OR LOCAL REGULATIONS:

This Product Contains:

CAS#	NAME
1310-73-2	Sodium hydroxide (Na(OH))
7647-14-5	Sodium chloride (NaCl)
497-19-8	Carbonic acid disodium salt

HMIS RATING: HEALTH 3 FLAMMABILITY 0 REACTIVITY 2

17. WARNING LABEL INFORMATION (Continued)

LABEL NUMBER: 1096M32413

For Industrial Use Only