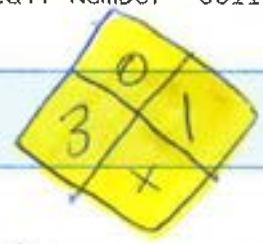


PRODUCT NAME : CAUSTIC SODA LIQ 50% RAYON GR Date: 7-MAR-1995 13:33:20.07  
 PRODUCT CODE : 00019

CAS #: 001310732 MSDS No. 000318 Revision No./Date 02 921118  
 Detail Number 00112/02

FORMULA: Na O H

CHEM. FAMILY: inorganic bases



CHEMICAL NAME AND SYNONYMS:  
 Caustic Soda; Liquid Caustic Soda; Caustic Soda Solution;  
 Sodium Hydroxide; Sodium Hydroxide Solution;  
 Lye Solution; Soda Lye;  
 Liquid Alkali #4;  
 Liquid Alkali #4A;

Caustic Soda Liq 50% Purified;  
 MSDS 000318 DETAIL 00112

HEALTH: 3  
 FLAMMABILITY: 0  
 REACTIVITY: 11

SUPPLIERS NAME : Harcros Chemicals Inc.  
 5200 Speaker Road  
 Kansas City KS 66106-1095

SUPPLIERS PHONE NUMBER : 913-321-3131  
 TRANSPORTATION EMERGENCY PHONE NUMBER : 1-800-424-9300

S.A.R.A. INFORMATION

HAZARDS : Acute Reactivity Chronic  
 PHYSICAL DATA : Mixture Liquid

SECTION I HAZARDOUS INGREDIENTS

Ingredient Cas Number	MAX %	SARA APPLIES			AIR CONTAMINENT LEVELS			SKIN AGENT
		W/W	312	313	372	TWA/TLV (ppm)	STEL (ppm)	
Caustic Soda	50.0	Y	Y	Y	As Sodium Hydroxide			
Sodium Hydroxide (CAS # 1310-73-2 )					TWA/TLV 2 mg/m3 (Ceiling) OSHA/ACGIH			

SECTION II HEALTH HAZARDS

POTENTIAL EFFECTS OF EXPOSURE

EYES  
 Eye contact with product may cause burns tissue destruction eye damage blindness

SKIN  
 Skin contact may cause burns tissue ulceration skin damage Effects may be delayed.

INHALATION  
 Inhalation may cause irritation, nausea headache dizziness pain decreased breathing capacity

Continued On Page 2

PRODUCT NAME : CAUSTIC SOA LIQ 50% RAYON GR  
 PRODUCT CODE : 08019

Date: 7-MAR-1995 13:33:20.68

SECTION II HEALTH HAZARDS

(CONTINUED)

tissue destruction, internal bleeding lung damage, damage to respiratory system chemical pneumonia Aspiration (breathing) of liquid, mist, or vomitus (vomit) into lungs can cause aspiration (chemical) pneumonia, hemorrhaging (bleeding), lung damage, and even death. Symptoms of aspiration pneumonia include coughing, labored breathing and bluish skin.

INGESTION

Ingestion may cause diarrhea vomiting burns tissue ulceration internal bleeding even death

TARGET ORGANS

OVEREXPOSURE MAY CAUSE DAMAGE TO,

DISORDERS OF, OR ADVERSELY AFFECT THE FOLLOWING SYSTEMS, FUNCTIONS, ORGANS: destruction of all body tissues

FIRST AID

FIRST AID EYES

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

FIRST AID SKIN

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly clean clothing before reuse. Discard contaminated shoes and contaminated leather articles. Call a physician.

FIRST AID INHALATION

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician.

FIRST AID INGESTION

Do not induce vomiting. Rinse mouth with water. Dilute stomach contents by drinking water. If vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. Call physician immediately.

OTHER INFORMATION

ROUTES OF ENTRY

eye contact skin contact

OVEREXPOSURE MAY AGGRAVATE DISORDERS OF THE

skin lungs respiratory system

CARCINOGEN STATUS

No components, present in excess of 0.1% by weight are listed as carcinogens by IARC, NTP, or OSHA.

SECTION III SPECIAL PROTECTION

PROTECTIVE EQUIPMENT

PROTECTIVE EQUIPMENT EYES

chemical goggles faceshield

PROTECTIVE EQUIPMENT SKIN

impervious gloves clean body covering clothing

PROTECTIVE EQUIPMENT INHALATION

If exposure limits are exceeded, or if exposure may occur, use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical hazards, or consult your safety equipment supplier. Respiratory protection programs must be in

Continued On Page 3

PRODUCT NAME : CAUSTIC SODA LIQ 50% RAYON GR  
PRODUCT CODE : 08019

Date: 7-MAR-1995 13:33:21.35

SECTION III SPECIAL PROTECTION

(CONTINUED)

compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.

VENTILATION REQUIRED:

Adequate ventilation is required to minimize exposure or to maintain exposure levels below OSHA/ACGIH requirements. Local mechanical ventilation may be required.

ADDITIONAL PROTECTIVE MEASURES

Safety shower, eye wash fountain, and washing facilities should be readily available. In case of emergency or when dusting, misting, or splashing may occur, wear respiratory protection, eye protection, gloves, helmet, boots, and complete protective body covering.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Flash Point (METHOD): N/A

Flammable Limits (% Volume in Air) UPPER: N/D Lower: N/D

HMS Info

Health : 3  
Fire : 0  
React : 1  
Special : X

EXTINGUISHING MEDIA

water fog foam carbon dioxide dry chemical media appropriate for surrounding fire

FIRE FIGHTING PROCEDURES

Not considered a fire hazard. Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing. Do not use a direct stream of water.

UNUSUAL FIRE & EXPLOSION HAZARDS

none currently known

SECTION V PHYSICAL DATA

Boiling Point: > OR = 289 deg. F  
Freezing Point: 55 deg. F  
Specific Gravity (H<sub>2</sub>O=1): > OR = 1.5400 @ 60 deg. F  
Vapor Pressure (MM HG.): > OR = 6.300 @ 104 deg. F  
Vapor Density (AIR=1) : N/D  
Evaporation Rate (NA =1): N/D  
Solubility in Water: COMPLETE  
Percent Volatile by Volume: > OR = 50.00  
pH: aqueous approx. > OR = 13.000

Appearance:

COLORLESS TO LIGHTLY COLORED LIQUID

Odor :  
NIL

PRODUCT NAME : CAUSTIC SOQA LIQ 50% RAYON GR  
PRODUCT CODE : 08019

Date: 7-MAR-1995 13:33:22.28

## SECTION V PHYSICAL DATA

(CONTINUED)

## SECTION VI REACTIVITY DATA

## STABILITY

Stable

## INCOMPATIBILITY

amphoteric metals halogenated hydrocarbons inorganic acids organic acids Avoid contact with amphoteric metals which include aluminum, copper, and zinc. Contact with water will generate heat, cause violent splashing and spattering.

Contact with some metals can generate explosive hydrogen gas.

## HAZARDOUS POLYMERIZATION

Will not occur

## SECTION VII SPILL AND LEAK PROCEDURES

## STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Evacuate non essential personnel, eliminate ignition sources, and wear protective equipment (See Section III). Shut off source of leak only if safe to do so. Contain spill. Recover free product. To clean up residue, flush sparingly with water or use an absorbent. Avoid runoff to ground water, surface waters, and sewers. It may be necessary to remove contaminated soil. If product is flammable or combustible, use non sparking tools. If acidity (low pH) is a problem, neutralize with hydrated lime, soda ash, or sodium bicarbonate. If alkalinity (high pH) is a problem neutralize with dilute acetic acid or dilute hydrochloric (muriatic) acid. If required, notify state and local authorities.

## DISPOSAL METHOD

Solids must be disposed of in a permitted hazardous waste management facility. Recovered liquids may be reprocessed or incinerated. Incineration must be handled in a permitted hazardous waste management facility. Dispose of material in accordance with all Federal, State and local regulations. Local regulations may be more stringent than Federal or State.

## SECTION VIII

Proper Shipping Name: SODIUM HYDROXIDE SOLUTION  
Hazard Class: 8. UN1824 PGII  
Label Requirements: CORROSIVE  
Reportable Quantity: None

## SECTION IX ADDITIONAL INFORMATION

## LABEL SIGNAL WORD

DANGER

## PRECAUTIONS

Wear protective equipment when handling. Use only with adequate ventilation. Wash thoroughly after handling. Do Not breathe dust. Do Not breathe vapor or mist. Do Not get in eyes, on

Continued On Page 5

MATERIAL SAFETY DATA SHEET Page 5

PRODUCT NAME : CAUSTIC SODA LIQ 50% RAYON GR  
PRODUCT CCDE : 08019

Date: 7-MAR-1995 13:33:23.16

SECTION IX ADDITIONAL INFORMATION

(CONTINUED)

skin, or clothing.  
Do not swallow.

HANDLING

Keep away from water or acid. For industrial use only. When diluting, add product slowly to water with agitation. Heat is generated upon dilution with water. Addition of water can cause violent splashing. ATTENTION: This container hazardous when emptied. Since emptied container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE

Keep container closed when not in use. Store in a cool dry place. Product can cause corrosion of iron and steel at elevated temperatures. Keep out of reach of children.

SECTION X COMPLIANCE INFORMATION

NSF INFORMATION

MAXIMUM USE LEVEL:  
200 mg/L

NAME: GENE TURNER

DATE ISSUED: 921118

DATE REVISED: 921118

UNK = UNKNOWN

< = LESS THAN  
> = MORE THAN

N/A = NOT APPLICABLE  
N/D = NOT DETERMINED  
N/E = NOT ESTABLISHED

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