

MATERIAL SAFETY DATA SHEET
CENTRAZ INDUSTRIES, INC.
4051 BINGHAM AVENUE
ST. LOUIS, MISSOURI 63116-3506

PHONE: (314) 752-7627 (SOAP)
(800) 695-7627 (SOAP)
FAX: (314) 752-7293

.....
PRODUCT IDENTIFICATION: MSDS CODE NUMBER: 101009AB
PRODUCT NAME: LIQUID ALKALI BOOSTER ORIGINAL DATE: 04/01/93
TRADE NAME: CENTRAZ PH PLUS REVISION DATE: 12/26/00
CHEMICAL FAMILY: Alkaline FORMULA: Proprietary
.....

.....
24 HOUR EMERGENCY RESPONSE NUMBER: CHEMTREC (800) 424-9300
MSDS CODE NUMBER: 101009AB EMERGENCY RESPONSE GUIDE: 154
PROPER SHIPPING NAME: COMPOUND CLEANING, LIQUID HAZARD CLASS: 8
ID NUMBER: NA 1760 PACKING GROUP II LABEL: CORROSIVE
TECHNICAL NAME: CONTAINS SODIUM AND POTASSIUM HYDROXIDE
This number is to be used only in the case of emergencies involving a
spill, leak, fire, exposure or accident involving chemicals.
.....

S.A.R.A. INFORMATION:

HAZARDS: Fire: N Pressure: N Reactivity: N Acute: Y Chronic: N
Vapors: N

PHYSICAL DATA: Mixture: Y Pure: N Solids: N Liquids: Y Gas: N
.....

SECTION I: HAZARDOUS INGREDIENTS

| MATERIAL | % BY WEIGHT | CAS # | OSHA PEL - ACGIH TLV |
|------------------|-------------|-------------|--|
| Sodium Hydroxide | > 50% | 001310-73-2 | TWA\TLV 8 HR 2 mg/m3 Ceiling - OSHA\ACGIH |
| Caustic Potash | 10 - 20 % | 001310-58-3 | TWA\TLV 8 HR 2 mg/m3 Ceiling - OSHA\ACGIH |

.....

SECTION II: HEALTH HAZARDS TLV (Threshold Limit Value): See section I

EYES: Destructive to eye tissue on contact. Will cause severe burns that result in damage to the eyes and even blindness.

SKIN: Destructive to tissue contacted, producing severe burns and possible temporary loss of hair. Dilute solution (4%) may not cause irritation and burning for several hours, while 25-50% solution can cause these effects in less than 3 minutes. CHRONIC: Chronic overexposure may consist of multiple areas of superficial destruction of the skin or dermatitis.

INHALATION: Airborne concentrations of mist or spray may cause damage to the upper respiratory tract and even to the lung tissue proper producing chemical pneumonia depending upon severity of exposure. CHRONIC: Chronic overexposure to spray or mist may result in irritation or tissue damage.

INGESTION: Can cause burns, severe pain and complete tissue perforation in the mouth, throat, esophagus and stomach. If swallowed can prove fatal.

Carcinogen or suspect carcinogen: NTP, IARC, OSHA - NO Principal Route of Exposure: Dermal - Inhalation. Chronic Exposure: See Skin and Inhalation.
.....

SECTION III: FIRST AID

EYES: Immediately flush eyes with large quantities of running water, lifting upper and lower lids to ensure complete flushing of the eye surface. Seek prompt medical attention.

SKIN: Immediately wash affected skin area with plenty of water. Remove contaminated clothing and wash before reuse. Seek medical attention.

INHALATION: Remove to fresh air. If breathing has stopped, give artificial respiration. Seek medical attention immediately.

INGESTION: DO NOT INDUCE VOMITING! Give large quantities of water, or several glasses of milk if available. Get Medical Attention, Immediately.
.....

SECTION IV: SPECIAL PROTECTION INFORMATION

MATERIAL SAFETY DATA SHEET

CENTRAZ INDUSTRIES, INC.
4051 BINGHAM AVENUE
ST. LOUIS, MISSOURI 63116-3506

PHONE: (314) 752-7627 (SOAP)
(800) 695-7627 (SOAP)
FAX: (314) 752-7293

RESPIRATORY PROTECTION: For exposure above TLV, a NIOSH approved respirator.
VENTILATION REQUIRED: Provide adequate ventilation to keep airborne concentration exposure below TLV. Local exhaust preferred where misting may be generated. Air concentration of carbon monoxide formed by reaction with reducing sugars should not exceed 50 ppm for 8 hr twa. Ventilation equipment should be corrosion resistant, and if hydrogen may be generated, explosion proof.

PROTECTIVE CLOTHING: EYES: Chemical splash goggles. Eye bath or abundant running water should be readily accessible. SKIN: Rubber gloves & apron. Rubber boots if necessary. Safety shower should be readily accessible.

SECTION V: FIRE & EXPLOSION HAZARD DATA

FLASH POINT\FLAMMABLE LIMITS: Not-flammable

EXTINGUISHING MEDIA: "Alcohol foam or dry chemical". If water must be applied, use spray from a distance.

SPECIAL FIRE FIGHTING PROCEDURES: Pressure demand self-contained respirator and protective clothing. Cool containers with water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Hydrogen gas can be driven off under high temperature situation. May ignite combustible materials or organic matter on contact.

SECTION VI: PHYSICAL DATA

BOILING POINT: 212 Dgr. F.

SPECIFIC GRAVITY: 1.286

POUNDS PER GALLON: 10.73

VAPOR PRESSURE (MM HG): Unknown

VAPOR DENSITY (Air=1): Heavier than air.

EVAPORATION RATE: Unknown

% VOLATILE BY VOLUME: > 50%

SOLUBILITY IN WATER: Complete

pH: 12

APPEARANCE AND ODOR: Clear colorless liquid with no odor.

SECTION VII: REACTIVITY DATA

PRODUCT IS STABLE

CONDITION TO AVOID: Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminum, tin, lead & zinc. INCOMPATIBILITY: Avoid contact with strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen gas may be released when exposed to high temperatures. HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VIII: SPILL AND LEAK PROCEDURES

DANGER: Spill area will be slippery. Wear protective clothing.

Contain spill, cover with inert material, transfer to properly label disposal container, neutralize spill area with dilute acetic acid, flush with plenty of water. Small spills may be neutralize with acetic acid solution and flush with plenty of water.

Before flushing residue and/or product into local sewer system, check pH of acceptable effluent water in accordance with local water treatment plant.

WASTE DISPOSAL METHOD: Dispose of in accordance with local, state and federal regulations.

SECTION IX: D.O.T. SHIPPING INFORMATION AS OF 10\01\95

SHIPPING PAPER INFORMATION: SEE PAGE ONE. ALL SIZES EXCEPT QUARTS.

SECTION X: ADDITIONAL INFORMATION

STORAGE AND HANDLING: KEEP OUT OF REACH OF CHILDREN. Store containers upright. Minimize skin contact. Wash thoroughly with soap & water, before eating drinking, smoking or using toilet facilities. Keep from freezing. Store at room temperature.

MATERIAL SAFETY DATA SHEET
CENTRAZ INDUSTRIES, INC.
4051 BINGHAM AVENUE
ST. LOUIS, MISSOURI 63116-3506

PHONE: (314) 752-7627 (SOAP)
(800) 695-7627 (SOAP)
FAX: (314) 752-7293

Always add to solution or water, slowly with agitation to avoid violent splattering, boiling and eruption. Water should always be lukewarm (80 - 100 deg). Empty contains contain product residue - observe all warnings.

The information provided in this Material Safety Data Sheet has been obtained from sources believed to be reliable. Centraz Industries, Inc., provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration and investigation. You should satisfy yourself that you have all current data relevant to your particular use.

DATE ISSUED: 12/26/00

PREPARED BY: Regulatory Affairs

This supersedes any and all Material Safety Data Sheet issued prior to the above date. Please update your files with this most current sheet.