**CAUSTIC POTASH SOLUTION**

**CAUTIONARY RESPONSE INFORMATION**

<table>
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<tr>
<th>Common Synonyms</th>
<th>Thick liquid</th>
<th>Colorless</th>
<th>Odorless</th>
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<tbody>
<tr>
<td>Lye</td>
<td>Potassium hydroxide solution</td>
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</table>

Keep people away. **AVOID CONTACT WITH LIQUID.**

Wear rubber overclothing (including gloves).

Notify local health and pollution control agencies. Protect water intakes.

**Fire**

Not flammable.

**Exposure**

CALL FOR MEDICAL AID.

**Liquid**

Will burn skin and eyes. Harmful if swallowed.

Remove contaminated clothing and shoes.

Flush affected areas with plenty of water.

IF IN EYES, hold eyelids open and flush with plenty of water.

IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.

DO NOT INDUCE VOMITING.

**Water Pollution**

HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes.

Notify local health and wildlife officials. Notify operators of nearby water intakes.

**1. CORRECTIVE RESPONSE ACTIONS**

- Dilute and disperse
- Stop discharge

**2. CHEMICAL DESIGNATIONS**

- CS Compatibility Group: S, Cautious
- Formula: KOH, HO
- IMO UN Designation: 8.01814
- DOT No.: 1814
- CAS Registry No.: 1310-58-3
- NAERG Guide No.: 154
- Standard Industrial Trade Classification: 52264

**3. HEALTH HAZARDS**

- **Personal Protective Equipment:** Wide-brimmed hat and close-fitting safety goggles equipped with rubber side shields. Long-sleeved cotton shirt or jacket with buttoned collar and buttoned sleeves; rubber or rubber-coated canvas gloves. (Gloves should be buttoned over the gloves so that any spilled material will run down the outside.) Rubber safety-toe-shoes or boots and cotton coveralls. (Trouser cuffs should be worn outside of boots.) Rubber apron.

- **Symptoms Following Exposure:** Causes severe burns of eyes, skin, and mucous membranes.

- **Treatment of Exposure:** (Act quickly) **EYES:** flush with water for at least 15 min. **SKIN:** flush with water; then rinse with dilute vinegar (acetic acid). **INGESTION:** give water and milk. **DO NOT induce vomiting.** Call physician at once, even when injury seems to be slight.

- **TLV-TWA:** Not listed.
- **TLV-STEL:** Not listed.
- **3.6 TLV-Ceiling:** 2 mg/m³
- **3.7 Toxicity by Ingestion:** Grade 2; oral rat LD₅₀ = 365 mg/kg
- **3.8 Toxicity by Inhalation:** Currently not available.
- **3.9 Chronic Toxicity:** None
- **3.10 Vapor (Gas) Irritant Characteristics:** Not pertinent
- **3.11 Liquid or Solid Characteristics:** Severe skin irritant. Causes second- and third-degree burns on short contact and is very irritating to the eyes.
- **3.12 Odor Thresholds:** Odorless
- **3.13 OEL Value:** Not listed.
- **3.14 OSHA PEL-TWA:** Not listed.
- **3.15 OSHA PEL-STEL:** Not listed.
- **3.16 OSHA PC-Ceiling:** Not listed.
- **3.17 EPA AEGL:** Not listed

**4. FIRE HAZARDS**

- **4.1 Flash Point:** Not flammable
- **4.2 Flammable Limits in Air:** Not flammable
- **4.3 Fire Extinguishing Agents:** Not pertinent
- **4.4 Fire Extinguishing Agents Not to Be Used:** Not pertinent
- **4.5 Special Hazards of Combustion Products:** Not pertinent
- **4.6 Behavior in Fire:** Not flammable
- **4.7 Auto-Ignition Temperature:** Not flammable
- **4.8 Electrical Hazards:** Not pertinent
- **4.9 Burning Rate:** Not flammable
- **4.10 Adiabatic Flame Temperature:** Currently not available
- **4.11 Stoichiometric Air to Fuel Ratio:** Currently not available
- **4.12 Flame Temperature:** Currently not available
- **4.13 Combustion Molar Ratio (Reactant to Product):** Not pertinent
- **4.14 Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

**5. CHEMICAL REACTIVITY**

- **5.1 Reactivity with Water:** None
- **5.2 Reactivity with Common Materials:** Attacks wool, leather and some metals such as aluminum, tin, lead and zinc to produce flammable hydrogen gas. Separate from easily ignitable materials. (These figures are for 100% potassium hydroxide.)

**6. WATER POLLUTION**

- **6.1 Aquatic Toxicity:** 80 ppm/24 h for aquatic fish/TL/flush water
- **6.2 Waterfowl Toxicity:** Currently not available
- **6.3 Biological Oxygen Demand (BOD):** None
- **6.4 Food Chain Concentration Potential:** None
- **6.5 GESAMP Hazard Profile:** Not listed

**7. SHIPPING INFORMATION**

- **7.1 Grades of Purity: 45-50%**
- **7.2 Storage Temperature:** Ambient or elevated
- **7.3 Inert Atmosphere:** No requirement
- **7.4 Venting:** Open
- **7.5 IMO Pollution Category:** C
- **7.6 Ship Type:** 3
- **7.7 Barge Hull Type:** 3

**8. HAZARD CLASSIFICATIONS**

- **8.1 GB CF Class:** Corrosive material
- **8.2 GB CF Class:** I
- **8.3 GB CF Class:** No
- **8.4 Marine Pollutant:** No
- **8.5 NFPA Hazard Classification:**
  - **Category:** Classification
  - **Health Hazard (Blue):** 3
  - **Flammability (Red):** 0
  - **Instability (Yellow):** 1
- **8.6 EPA Reportable Quantity:** 1000 pounds
- **8.7 EPA Pollution Category:** C
- **8.8 RORA Waste Number:** Not listed
- **8.9 EPA WPCA List:** Yes

**9. PHYSICAL & CHEMICAL PROPERTIES**

- **9.1 Physical State at 15°C and 1 atm:** Liquid
- **9.2 Molecular Weight:** Not pertinent
- **9.3 Boiling Point at 1 atm:** >266°F = >130°C = 542°F
- **9.4 Freezing Point:** Not pertinent
- **9.5 Critical Temperature:** Not pertinent
- **9.6 Critical Pressure:** Not pertinent
- **9.7 Specific Gravity:** 1.45-1.50 at 20°C (liquid)
- **9.8 Liquid Surface Tension:** Not pertinent
- **9.9 Liquid Water Interfacial Tension:** Not pertinent
- **9.10 Vapor (Gas) Specific Gravity:** Not pertinent
- **9.11 Ratio of Specific Heats of Vapor (Gas):** Not pertinent
- **9.12 Latent Heat of Vaporization:** Not pertinent
- **9.13 Heat of Combustion:** Not pertinent
- **9.14 Heat of Decomposition:** Not pertinent
- **9.15 Heat of Solution:** Not pertinent
- **9.16 Heat of Polymerization:** Not pertinent
- **9.17 Heat of Fusion:** 35.3 cal/g
- **9.18 Limiting Values:** Currently not available
- **9.19 Reid Vapor Pressure:** Currently not available

**NOTES**

JUNE 1999
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<th>Temperature (degrees F)</th>
<th>Pounds per cubic foot</th>
<th>Temperature (degrees F)</th>
<th>British thermal unit per pound-F</th>
<th>Temperature (degrees F)</th>
<th>British thermal unit inch per hour-square foot-F</th>
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