



**SECTION 6 ACCIDENTAL RELEASE MEASURES**

**Personal precaution, protective equipment and emergency procedures:** Put on appropriate personal protective equipment (see section 8).

**Methods and materials for containment and cleaning-up:** Soak up with inert, absorbent material. Sweep up and shovel into suitable containers for proper disposal. Use a water rinse for final cleanup.

**SECTION 7 HANDLING AND STORAGE**

**Precautions for safe handling:** Wear appropriate personal protective equipment (PPE) to prevent contact with product. Mix only with water. Do not mix with any other product or chemical. Avoid breathing vapors, mist, and spray. Use only with adequate ventilation, equivalent to outdoors. Immediately wash with water any contact or suspected contact with this product. Wash hands, face, and any exposed skin thoroughly after handling. Launder contaminated clothing before reuse. For commercial and industrial use only by professionals trained in the field of HVACR. Do not spray on electrical connections. Empty container may contain product residue which may exhibit hazards of product. Triple rinse container before proper disposal. Use rinsate to dilute product for use.

**Conditions for safe storage, including any incompatibilities:** KEEP OUT OF REACH OF CHILDREN. Store locked up. Keep tightly closed in original container. Do not store near potential sources of ignition. Store in a cool, dry, ventilated area. Protect container against physical damage. Tip: For storage on service truck, place container inside of plastic pail and immobilize pail. See section 10 for incompatible materials.

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

Chemical name	CAS	OSHA PEL	ACGIH TLV	NIOSH REL
Potassium hydroxide	1310-58-3	TWA: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>
Sodium hydroxide	1310-73-2	TWA: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>
Sodium silicate	1344-09-8	Not established	Not established	Not established
Monoethanolamine	141-43-5	TWA: 6 mg/m <sup>3</sup>	STEL: 15 mg/m <sup>3</sup>	Not available

**Appropriate engineering controls:** Good general ventilation should be sufficient to control airborne levels. Respiratory protection is not required if good ventilation is maintained.

**Individual protection measures (PPE):**

**Eye protection:** Chemical splash goggles or face shield

**Hand protection:** Chemical-resistant gloves. Nitrile, neoprene, or other suitable material.

**Skin and body protection:** If major exposure is possible, wear suitable protective clothing and footwear.

**Respiratory Protection:** In case of insufficient ventilation, wear suitable respiratory equipment. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be implemented whenever workplace conditions warrant use of a respirator.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	Amber liquid	U/L flammability or explosive limits	Not determined
Odor	Caustic/bland	Vapor pressure	Not determined
Odor threshold	Not determined	Vapor density	Not determined
pH	14	Relative density (specific gravity)	1.42
Melting point/freezing point	Not determined	Solubility(ies)	100% in water
Initial boiling point and boiling range	Approximately 100°C / 212°F	Partition coefficient: n-octanol/water	Not determined
Flash point	Not flammable	Auto-ignition temperature	Not determined
Evaporation rate	Not determined	Decomposition temperature	Not determined
Flammability (solid, gas)	Not determined	Viscosity	Not determined

**SECTION 10 STABILITY AND REACTIVITY**

**Reactivity:** Not reactive under normal conditions.

**Chemical stability:** Stable.

**Possibility of hazardous reactions:** Will react with some metals, such as aluminum, tin, or zinc, to form flammable hydrogen gas.

**Conditions to Avoid:** Incompatible materials, excessive heat and fire.

**Incompatible materials:** Will react with some metals, such as aluminum, tin, or zinc, to form flammable hydrogen gas. Reactive with oxidizing agents, acids, chlorinated solvents.

**Hazardous decomposition products:** When exposed to fire, produces normal products of combustion.

**SECTION 11 TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure:**

**Eye Irritation:** Causes severe eye damage.

**Skin Irritation:** Causes severe skin burns.

**Inhalation:** May cause irritation and corrosive effects to nose, throat, and respiratory tract. Symptoms may include coughing and difficulty breathing.

**Ingestion:** Causes burns / serious damage to mouth, throat, and stomach.

**Sensitization:** No known effects.

**Numerical measure of toxicity, component information:**

Chemical name	CAS	Oral LD <sub>50</sub>	Dermal LD <sub>50</sub>	Inhalation LC <sub>50</sub>
Potassium hydroxide	1310-58-3	333 mg/kg (rat)	–	–
Sodium hydroxide	1310-73-2	–	1350 mg/kg (rabbit)	–
Sodium silicate	1344-09-8	1153 mg/kg (rat)	> 4640 mg/kg (rabbit)	–
Monoethanolamine	141-43-5	1089 mg/kg (rat)	2504 mg/kg (rabbit)	–

**CHRONIC:**

**Carcinogenicity:** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Mutagenicity:** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Reproductive Toxicity:** No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.

**Teratogenicity:** No data available to indicate product or any components contained at greater than 0.1% may cause birth defects.

**SECTION 12 ECOLOGICAL INFORMATION**

**Ecotoxicity:** No information available.

**Persistence and degradability:** No information available.

**Bioaccumulation potential:** No information available.

**Mobility in soil:** No information available.

**Other adverse effects:** No known significant effects or critical hazards.

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Unused product:** This product, as sold, if discarded or disposed, is a hazardous waste according to federal regulations. Dispose of container and contents in accordance with local, regional, national and international regulations.

**Contaminated containers or packaging:** Do not reuse empty containers. Triple rinse containers and offer for recycle where available. Dispose of packaging or containers in accordance with local, regional, national and international regulations.

**RCRA Hazard Class:** D002 Corrosive.

**SECTION 14 TRANSPORT INFORMATION**

Agency	Proper Shipping Name	UN Number	Packing Group	Hazard Class
DOT (ground), IMDG	Limited Quantity NOTE: For inner packagings not over 1.0 L (0.3 gallon) and packages not exceeding 30 kg (66 pounds) gross weight.			
DOT (ground), IMDG	Corrosive liquid, basic, inorganic, n.o.s. (containing potassium hydroxide and sodium hydroxide) NOTE: For containers over 1.0 L (0.3 gallons)	UN3266	II	8
IATA	Not suitable for air shipment as packaged from the factory.			

**SECTION 15 REGULATORY INFORMATION**

**TSCA:** All components of this product are on the U.S. Toxic Substances Control Act (TSCA) Chemical Substances Inventory or are exempt.

**CERCLA:** Potassium hydroxide (1310-58-3); RQ 1000 lbs.  
Sodium hydroxide (1310-73-2); RQ 1000 lbs.

**SARA TITLE III:**

**Section 311/312 Hazard Category:** Acute: Yes Chronic: No Fire: No Reactive Hazard: No

**Section 313 Reportable Ingredients:** No reportable ingredients.

**CALIFORNIA (Proposition 65):** No reportable ingredients.

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**SECTION 16 OTHER INFORMATION**

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