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**Section III: Hazards Identification**

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**EMERGENCY OVERVIEW**

Light amber colored corrosive liquid with a slight detergent smell. Causes serious burns to eyes and skin. Mist may cause injury to respiratory tract. Harmful or fatal if swallowed. For large spills, emergency responders should wear impervious coveralls, boots, gloves, goggles, and respiratory protection in confined or poorly ventilated areas. See sections 3, 6 and 10.

**Potential Health Effects and Primary Routes of Entry:**

**Eyes: Corrosive to eyes.** Eye contact may cause irritation, pain, tearing, redness, swelling, burns, and severe or permanent eye damage including possible blindness.

**Inhalation:** Corrosive and irritating to upper respiratory tract and mucous membranes. Inhalation could produce pulmonary edema and chemical pneumonia, depending on severity of exposure.

**Skin:** Corrosive to skin. Can cause irritation, redness, or severe burns. A latent period may exist between exposure and a sense of irritation.

**Ingestion:** Corrosive to the gastrointestinal tract. Can be toxic and cause severe burns if ingested. May be fatal if swallowed.

**Chronic Effects/ Carcinogenicity:** None of the components in this product at concentrations of 0.1% or greater are listed by the NTP, IARC or OSHA as carcinogens.

Exposure above the TLV for potassium hydroxide could cause increased susceptibility to respiratory illness. Prolonged skin contact could cause irritation. The effects of long term low level exposure to this product have not been determined. Inhalation of mist may result in varying degrees of irritation or damage to the respiratory tract and an increased susceptibility of respiratory illness.

For complete discussion of the toxicology data from which this evaluation was made, please refer to Section 11.

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**Section IV: First Aid**

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**Eyes:** Immediately flush eyes with water for at least 20 minutes and seek immediate medical attention. Eyelids should be held away from the eyeballs to ensure thorough rinsing.

**Skin:** Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Seek medical attention if irritation develops and persists. Launder clothing before reuse.

**Inhalation:** Move victim to fresh air, administer artificial respiration if not breathing. Give oxygen if breathing is difficult. Trained person should give oxygen if breathing is difficult. Get medical attention.

**Ingestion:** Do not induce vomiting. Get medical attention immediately. If victim is fully conscious, give plenty of water. Never give anything by mouth to an unconscious person. Contact Carolina Medical Poison Control Center at 1-800-848-6946 (24 hr.) for advice.

**Medical Conditions Generally Aggravated By Exposure:** Individuals with pre-existing skin or eye disorders may be susceptible to effects of excessive exposure to this product.

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**Section V: Fire and Explosion Data**

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**Flash Point:** > 200 deg F. Non-combustible.

**Flammable Limits:** Not determined.

**Extinguishing Media:** If this product is involved in a fire, use extinguishing media that is appropriate for combustibles in the area. Keep containers cool with water spray to prevent container rupturing.

**Fire and Explosion Hazards:** During a fire, hydrogen gas, carbon monoxide, carbon dioxide, and toxic oxides of nitrogen, sodium, potassium, phosphorous, and sulfur may be evolved.

**Fire-Fighting Equipment:** Exposed firefighters should wear NIOSH/MSHA approved self-contained breathing apparatuses under positive pressure and chemical-resistant protective equipment. Refer to section 8 for further information.

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**Section VI: Accidental Release Measures**

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Cleanup personnel should wear appropriate equipment (See Section 8). Untrained persons and those not wearing proper protective equipment should be excluded from the spill area until cleanup is complete. Stop and control leak. Respiratory protection could be required for controlling spills in confined or poorly ventilated areas. Stop the release and keep material out of sewers and watercourses by diking or impounding with sand or absorbent materials. Small spills up to one gallon can be diluted with plenty of water and mopped up. Use caution; floor may be slippery. Flush area with plenty of water. Cleanup residues should be placed in a nonmetallic container for reuse or disposal.

Contact CHEMTREC (800-424-9300) for technical advice and assistance relating to chemical emergencies involving this product.

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**Section VII: Handling and Storage**

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**Handling:** Do not get in eyes, on skin, or on clothing. Avoid breathing mist or vapor. Use with adequate ventilation. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse. Do not wear contact lenses while using this product or touch eyes or face with hands or gloves that may be contaminated. Do not mix product

with any other chemicals or cleaning agents. Do not use product on metal surfaces. Empty containers may contain residue, which is hazardous.

**Storage:** Keep containers in a dry, well ventilated area and closed when not in use. Keep from contact with oxidizing materials and strong acids. Keep product in original container. Do not use aluminum for storage or handling. For institutional use only. Keep this and all chemicals out of reach of children.

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### **Section VIII: Exposure Control/Personal Protection**

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**Respiratory Protection:** Not normally required in well-ventilated area. Use NIOSH approved air-purifying respirator with an organic vapor cartridge if there is a reasonable possibility for harmful exposure to vapors or mists. Protection by air purifying respirators is limited. Use NIOSH approved self-contained apparatus made for emergencies or entry into unknown concentrations or immediately dangerous to life or health conditions. All personal respiratory protection equipment should be used in accordance with OSHA 29 CFR 1910.134.

**Ventilation:** Provide sufficient mechanical (general and/or local exhaust ventilation) to maintain vapor mist concentrations below exposure limits.

**Protective Gloves:** Avoid skin contact. Use chemical-resistant rubber gloves to prevent skin contact.

**Eye Protection:** Avoid eye contact. Chemical splash goggles are recommended whenever eye contact may occur. Provide an ANSI-approved eye wash station in the work area.

**Other Protective Clothing or Equipment:** Use chemical-resistant apron or other impervious clothing, and rubber boots if necessary, to avoid contaminating regular clothing and shoes and to prevent skin contact.

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### **Section IX: Physical/Chemical Properties**

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**APPEARANCE**

Light amber liquid

**ODOR**

Slight detergent smell

**BOILING RANGE**

> 212 deg F at normal pressure

**VAPOR PRESSURE**

Not determined for product.

**SPECIFIC GRAVITY**

1.2 - 1.3

**VAPOR DENSITY (Air = 1)**

> 1

**pH**

12.5 - 14

**PERCENT VOLATILE BY VOLUME**

73-75% (Water)

**MELTING POINT**

Not applicable

**EVAPORATION RATE****(N-BUTYL ACETATE =1)**

&lt; 1

**VISCOSITY**

0 - 10 Centipoise

**SOLUBILITY IN WATER**

complete

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**Section X: Reactivity Information**


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**Stability:** Product is stable.**Incompatibility:** The product is incompatible with acids, ammonia, other cleaning supplies, and strong oxidizing agents.**Hazardous Reaction/Decomposition or by Product:** Contact with metals (zinc, aluminum, tin, and alloys) may produce flammable hydrogen gas. The product is incompatible with strong acids, organic halogen compounds, organic nitro compounds, aldehydes, and many organics. Material can react with water to produce energy (heat and pressure). Decomposition may include hydrogen gas, carbon dioxide, carbon monoxide, and oxides of potassium.**Hazardous Polymerization:** Will not occur.

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**Section XI: Toxicological Information**


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InVitro Corrositex testing indicates that product is corrosive.

Ingredients used in this product have the following toxicological data:

**ANIMAL DATA: Potassium Hydroxide****Contact:** A severe eye and skin irritant.

Skin-Rabbit, adult: 50 mg/24H – Severe irritation effects

Skin-Rabbit, 24H – Severe irritation

Eye effects-Rabbit, adult: 1 mg/24H rns – Moderate irritation effects

(Eyes were rinsed after installation of chemical)

Eye effects-Rabbit, 24H – Severe irritation

**Ingestion:** Toxic by ingestion.

Oral-Rat LD50: 273 mg/kg

Oral-Rat LD50: 365 mg/kg

Mutation data reported. Cytogenic Analysis-Rat/ast: 1,800 mg/kg

**Tetrapotassium Pyrophosphate****Contact:** Eye irritation: moderately irritating (rabbit)

Dermal LD50: practically nontoxic (rabbit > 7,940 mg/kg)

Skin irritation: practically nonirritating (rabbit)

**Ingestion:** Slightly toxic if ingested.

Oral LD50: slightly toxic (rat Ld50: 2,980 mg/kg)

#### **HUMAN DATA: Potassium Hydroxide**

**Contact:** Skin-Human: 50 mg/24H – Severe irritation effects

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#### **Section XII: Ecological Information**

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**Ecotoxicological information:** Not available for product. Organic ingredients in product have high biological and chemical oxygen demand. Potassium Hydroxide is toxic to aquatic organisms:

Potassium Hydroxide: 96 hour LC50, Mosquitofish: 80 mg/L

**Chemical Fate Information:** Not available for product. Product could slightly raise the pH of surface water, depending on size of spill. Once the product is diluted with plenty of water or neutralized, its impact should be slight. The primary environmental concern during a release is the impact of the high pH on aquatic and terrestrial species. Aquatic organisms become increasingly stressed as pH exceeds 9, with many aquatic species being intolerant of pH in excess of 10. Spills of the product could cause a corrosive burn risk to terrestrial wildlife.

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#### **Section XIII: Disposal Consideration**

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**Waste Disposal:** Unused product is not expected to be hazardous waste under RCRA. Used material may be subject to regulation, depending on the contaminants added during use. Any disposal must be in accordance with federal, state, and local regulations. If approved by local regulatory authorities, this product may be neutralized with a dilute acid and flushed to a wastewater treatment system. Do not discharge product to storm sewers or waterways. As with any wastewater, consultation with local treatment plant staff is recommended before disposal. Concentrated product should be recovered for reuse.

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#### **Section XIV: Transport Information**

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**DOT Proper Shipping Description:** Compounds, cleaning, liquid, (Potassium Hydroxide), 8, UN 1760, PG II.

**Dot Hazard Class / Division Label:** Corrosive.

**Shipping Containers:** 5-gallon Pail, (4 ½ gallons of product)

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**Section XV: Regulatory Information**

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**OSHA Hazard Communication Standard:** OSHA hazardous chemicals as defined under 29 CFR 1910.1200 are listed in Section II.

**Toxic Substances Control Act (TSCA):** The intentional ingredients of this product are listed.

**SARA Title III:**

**Section 302 Extremely Hazardous Substances:** None

**Section 311 /312 Hazard Categories:** Immediate health hazard, reactive hazard

**Section 313 Toxic Chemicals\*:** None present

**CERLA Hazardous Substances:** Components present in this product that could require reporting under the statute are:

Potassium Hydroxide RQ = 1,000 lbs

If an amount larger than or equal to the reportable quantity is released into the environment, immediate notification of the National Response Center (800-424-8802), and state and local authorities is required.

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**Section XVI: Other Information**

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This product is for institutional use only and is not for resale.