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## Material Safety Data Sheet

### Potassium Hydroxide. 0.5N (alcoholic) MSDS

#### Section 1: Chemical Product and Company Identification

**Product Name:** Potassium Hydroxide. 0.5N (alcoholic)

**Catalog Codes:** SLP4246

**CAS#:** Mixture.

**RTECS:** Not applicable.

**TSCA:** TSCA 8(b) inventory: Potassium hydroxide; Water; Methyl alcohol

**CI#:** Not applicable.

**Synonym:**

**Chemical Name:** Not applicable.

**Chemical Formula:** Not applicable.

**Contact Information:**

**Sciencelab.com, Inc.**

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: [ScienceLab.com](http://ScienceLab.com)

**CHEMTREC (24HR Emergency Telephone), call:**

1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Potassium hydroxide	1310-58-3	3.3
Water	7732-18-5	0.4
Methyl alcohol	67-56-1	97.3

**Toxicological Data on Ingredients:** Potassium hydroxide: ORAL (LD50): Acute: 273 mg/kg [Rat]. 365 mg/kg [Rat]. 388 mg/kg [Rat]. Methyl alcohol: ORAL (LD50): Acute: 5628 mg/kg [Rat.]. DERMAL (LD50): Acute: 15800 mg/kg [Rabbit.]. VAPOR (LC50): Acute: 64000 ppm 4 hour(s) [Rat.].

#### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Very hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion, of inhalation. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**Potential Chronic Health Effects:**

Very hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion, of inhalation. Non-sensitizer for skin. Non-permeator by skin. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: PROVEN [Methyl alcohol] The substance is toxic to lungs, mucous membranes, the nervous system, the reproductive system. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation.

## Section 4: First Aid Measures

### Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

### Skin Contact:

If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical got on the victim's exposed skin, such as the hands : Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

### Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

### Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

### Ingestion:

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** Flammable.

**Auto-Ignition Temperature:** The lowest known value is 463.89°C (867°F) (Methyl alcohol).

**Flash Points:** The lowest known value is CLOSED CUP: 12°C (53.6°F). (Methyl alcohol)

**Flammable Limits:** The greatest known range is LOWER: 6% UPPER: 36.5% (Methyl alcohol)

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>). Some metallic oxides.

**Fire Hazards in Presence of Various Substances:** Highly flammable in presence of open flames and sparks, of heat, of combustible materials.

### Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

### Fire Fighting Media and Instructions:

Flammable liquid, soluble or dispersed in water. **SMALL FIRE:** Use DRY chemical powder. **LARGE FIRE:** Use alcohol foam, water spray or fog.

### Special Remarks on Fire Hazards:

Explosive in the form of vapor when exposed to heat or flame. Vapor may travel considerable distance to source of ignition and flash back. When heated to decomposition, it emits acrid smoke and irritating fumes. CAUTION: MAY BURN WITH NEAR INVISIBLE FLAME (Methyl alcohol)

**Special Remarks on Explosion Hazards:** Not available.

## Section 6: Accidental Release Measures

### Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid.

### Large Spill:

Flammable liquid. Corrosive liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Neutralize the residue with a dilute solution of acetic acid. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## Section 7: Handling and Storage

### Precautions:

Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. Never add water to this product In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes Keep away from incompatibles such as oxidizing agents, acids.

### Storage:

May corrode metallic surfaces. Store in a metallic or coated fiberboard drum using a strong polyethylene inner package. Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

## Section 8: Exposure Controls/Personal Protection

### Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

### Personal Protection:

Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### Exposure Limits:

Potassium hydroxide CEIL: 2 (mg/m<sup>3</sup>) from ACGIH Methyl alcohol TWA: 200 STEL: 250 (ppm) from ACGIH (TLV) [1995] TWA: 262 STEL: 328 (mg/m<sup>3</sup>) from ACGIH [1995] Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.

**Odor:** Not available.

**Taste:** Not available.

**Molecular Weight:** Not applicable.

**Color:** Not available.

**pH (1% soln/water):** Basic.

**Boiling Point:** The lowest known value is 64.5°C (148.1°F) (Methyl alcohol).

**Melting Point:** May start to solidify at -97.8°C (-144°F) based on data for: Methyl alcohol.

**Critical Temperature:** Not available.

**Specific Gravity:** Weighted average: 0.81 (Water = 1)

**Vapor Pressure:** The highest known value is 97.68 mm of Hg (@ 20°C) (Methyl alcohol).

**Vapor Density:** The highest known value is 1.11 (Air = 1) (Methyl alcohol).

**Volatility:** Not available.

**Odor Threshold:** The highest known value is 160 ppm (Methyl alcohol)

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:**

Is not dispersed in methanol, diethyl ether. See solubility in water, methanol, diethyl ether.

**Solubility:** Easily soluble in cold water, hot water, methanol, diethyl ether.

## Section 10: Stability and Reactivity Data

**Stability:** Unstable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:**

Highly reactive with oxidizing agents. Reactive with acids. Slightly reactive to reactive with moisture.

**Corrosivity:**

Highly corrosive in presence of aluminum. Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** No.

## Section 11: Toxicological Information

**Routes of Entry:** Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:**

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 273 mg/kg [Rat]. (Potassium hydroxide). Acute dermal toxicity (LD50): 15800 mg/kg [Rabbit.]. (Methyl alcohol). Acute toxicity of the vapor (LC50): 64000 ppm 4 hour(s) [Rat.]. (Methyl alcohol).

**Chronic Effects on Humans:**

DEVELOPMENTAL TOXICITY: PROVEN [Methyl alcohol] The substance is toxic to lungs, mucous membranes, the nervous system, the reproductive system.

**Other Toxic Effects on Humans:** Very hazardous in case of skin contact (corrosive, irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:**

0040 Passes through the placental barrier. May be fatal or cause blindness if swallowed. (Methyl alcohol)

**Special Remarks on other Toxic Effects on Humans:** Narcotic. (Methyl alcohol)

### Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:** Possibly hazardous short/long term degradation products are to be expected.

**Toxicity of the Products of Biodegradation:** The products of degradation are more toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

### Section 13: Disposal Considerations

**Waste Disposal:**

### Section 14: Transport Information

**DOT Classification:** Class 3: Flammable liquid.

**Identification:**

: Flammable liquid, corrosive, n.o.s. (Methanol; Potassium hydroxide, solution) (Methyl alcohol) : UN2924 PG: II

**Special Provisions for Transport:** Not available.

### Section 15: Other Regulatory Information

**Federal and State Regulations:**

Pennsylvania RTK: Potassium hydroxide; Methyl alcohol Massachusetts RTK: Potassium hydroxide; Methyl alcohol TSCA 8(b) inventory: Potassium hydroxide; Water; Methyl alcohol SARA 313 toxic chemical notification and release reporting: Methyl alcohol CERCLA: Hazardous substances.: Potassium hydroxide; Methyl alcohol;

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):**

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC). CLASS E: Corrosive liquid.

**DSCL (EEC):**

R11- Highly flammable. R36/38- Irritating to eyes and skin.

**HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 4

**Reactivity:** 0

**Personal Protection:**

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 3

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**

Gloves. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Face shield.

**Section 16: Other Information**

**References:** Not available.

**Other Special Considerations:** Not available.

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