



LABORATORY CHEMICALS AND CONSUMABLES

# MATERIAL SAFETY DATA SHEET

## POTASSIUM HYDROXIDE 0.1 N

### 1. Chemical Product and Company information.

**Product name:** Potassium Hydroxide. 0.1N

**Contact Information:**

Radchem cc  
PO Box 166982  
Brackendowns  
Alberton 1454  
Telephone : **011 867 3726 / 2864**

### 2. Hazard Identification

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion. Slightly hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung sensitizer). Non corrosive for lungs. 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.

### 3. Composition / information on ingredients

**CAS #:** Mixture

**Synonym:** Potassium Hydroxide, 0.1 N solution

**Chemical Name:** Not applicable

**Chemical Formula:** Not applicable

### 4. First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.



**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**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. Seek medical attention.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion:** Not available

## **5. Fire-fighting measures**

**Flammability of the Product:** Non-flammable

**Fire Hazards in Presence of Various Substances:** metals, acids

**Explosion Hazards in Presence of Various Substances:** Non-explosive in presence of open flames and sparks, of shocks.

**Fire Fighting Media and Instructions:** Not applicable

**Special Remarks on Fire Hazards:** Violent reaction or ignition under appropriate conditions with acids, alcohols, p-bis(1,3-dibromoethyl) benzene, cyclopentadiene, germanium, hyponitrous acid, maleic anhydride, nitroalkanes, 2-nitrophenol, potassium peroxodisulfate, sugars, 2,2,3,3-tetrafluoropropanol, thorium dicarbide. Molten ortho -nitrophenol reacts violently with potassium hydroxide. When potassium hydroxide and tetrachloroethane are heated, a spontaneously flammable gas, chloroacetylene, is formed. When phosphorus is boiled in a solution of potassium hydroxide, phosphine gas is evolved which is spontaneously flammable. 1,2-Dichloroethylene and Potassium hydroxide reaction produces chloroacetylene which is spontaneously flammable in air. Potassium Persulfate and a little Potassium hydroxide and water will ignite. When wet, attacks metals such as aluminium, tin, lead, and zinc, producing flammable hydrogen gas. (Potassium Hydroxide)

**Special Remarks on Explosion Hazards:** Potentially explosive reaction with bromoform + crown ethers, chlorine dioxide, nitrobenzene, nitromethane, nitrogen trichloride, peroxidized tetrahydrofuran, 2,4,6 trinitrotoluene. Reaction with ammonium hexachloroplatiate(2-) + heat forms heat sensitive explosive product. Potassium hydroxide will cause explosive decomposition of maleic anhydride. Detonation will occur when potassium hydroxide is mixed with n-methyl-nitroso urea and methylene chloride. Nitrogen trichloride explodes on contact with potassium hydroxide. (Potassium hydroxide)

## **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:** Corrosive liquid. 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 vapour drift. Prevent entry into sewers, basements or confined areas; dike if needed. 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.

## **7. Handling and storage**

**Precautions:** Keep locked up.. Keep container dry. Do not breathe gas/fumes/ vapour/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Do not mix with acids

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.



## **8. Exposure controls/personal protection**

**Engineering Controls:** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value.

**Personal Protection:** Face shield. Full suit. Vapour 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. Vapour 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.

## **9. Physical and chemical properties**

**Physical state and appearance:** Liquid

**Odour:** Not available

**Taste:** Not available

**Colour:** Colourless. Clear

**Boiling Point:** The lowest known value is 100°C (Water)

**Melting Point:** Not available

**Critical Temperature:** Not available

**Specific Gravity:** The only known value is 1 (Water = 1) (Water)

**Vapour Density:** The highest known value is 0.62 (Air = 1) (Water)

**Volatility:** Not available

**Odour Threshold:** Not available

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

**Dispersion Properties:** See solubility in water

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

## **10. Stability and reactivity**

**Stability:** Unstable

**Instability Temperature:** Not available.

**Conditions of Instability:** Incompatible materials

**Incompatibility with various substances:** Slightly reactive to reactive with metals, acids

**Corrosivity:** Corrosive in presence of aluminium, of zinc. Non-corrosive in presence of glass, of stainless steel (316).

**Special Remarks on Reactivity:** Hygroscopic (absorbs moisture from air). When dissolved in water or alcohol or when the solution is treated with acid, much heat is generated. Reacts violently with acids, halogens, halogenated hydrocarbons, maleic anhydride, organic anhydrides, isocyanates, alkylene oxides, epichlorhydrin, aldehydes, alcohols, glycols, phenols, cresols, caprolactum solution. Also incompatible with nitro compounds (nitrobenzene, nitromethane, nitrogen trichloride), organic materials, acid anhydrides, acid chlorides, magnesium, peroxidized tetrahydrofuran, chlorine dioxide, maleic dicarbide, sugars. When wet attacks metals such as aluminium, tin, lead, and zinc. (Potassium hydroxide)

**Special Remarks on Corrosivity:** Not available

**Polymerization:** Will not occur.



## **11. Toxicological information**

**Routes of Entry:** Absorbed through skin. Eye contact

**Toxicity to Animals:** LD50: Not available. LC50: Not available

**Chronic Effects on Humans:** MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Potassium hydroxide]. Contains material which may cause damage to the following organs: upper respiratory tract, skin.

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, . Slightly hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung sensitizer, lung corrosive).

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

**Special Remarks on Chronic Effects on Humans:** May affect genetic material based on animal data. (Potassium hydroxide)

**Special Remarks on other Toxic Effects on Humans:** Acute Potential Health Effects: Skin: Causes skin irritation with possible mild burns Eyes: Causes eye irritation with possible mild burns. Inhalation: May cause irritation of the respiratory tract and mucous membranes. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting, diarrhoea, abdominal pain, general gastrointestinal upset, and possible mild burns of the mouth, throat and stomach. Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may cause dermatitis.

## **12. Ecological information**

**Ecotoxicity:** Not available

**BOD5 and COD:** Not available

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic

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

## **13. Disposal considerations**

**Waste Disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## **14. Transport information**

**DOT Classification:** Not a DOT controlled material

**Identification:** : Not Applicable

**Special Provisions for Transport:** Not available

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