

1. Product and Company Identification

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Product Name [Potassium Hydroxide](#)
Part Number [RXSOL-19-1613-025](#)

Chemical Formula: KOH

Synonyms : caustic potash / caustic potash dry / caustic potash, dry solid, flake, bead or granular / caustic potash, solid / caustic potash solid / hydrate of potash / hydrate of potassium / hydroxide of potash / hydroxide of potassium / lye (potassium hydroxide) / potash / potash hydrate / potash lye / potassium hydrate / potassium hydroxide (K(OH)) / potassium hydroxide dry / potassium hydroxide pellets / potassium hydroxide, dry solid, flake, bead or granular / potassium hydroxide, electrolytical, solid / potassium hydroxide, solid / Potassium hydroxide, solid / potassium lye

Company Details:

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2. Composition / Information on ingredients

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Chemical Name	Concentration	CAS Number	EC Number	R Phrases*	Sym Xn.
Potassium Hydroxide	99-100%	1310-58-3	215-181-3	22 / 35	Xn.

*See Section 16

3. Hazards Identification

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Physical hazards	Causes severe skin burns and eye damage
Health hazards	Harmful if swallowed
Environmental Hazards	Aquatic Chronic 2 - H411
Potential Acute Health Effects	Very hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant, corrosive), of ingestion, of inhalation. The severity of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can result in inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening and blistering.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. REPRODUCTIVE EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to upper respiratory tract. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the substance to the eyes of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated exposure to the substance can produce varying degree of respiratory irritation or lung damage.

4. First Aid Measures

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

Inhalation	waistband. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
General	Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or stockings. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: Do not become hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or flammable. Seek immediate medical attention.

5. Fire-fighting Measures

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Flammability of the Product	:	Non-flammable
Auto-Ignition Temperature	:	Not applicable.
Flash Points	:	Not applicable.
Flammable Limits	:	Not applicable.
Products of Combustion	:	Not applicable.
Fire Hazards in Presence of Various Substances	:	Metal, Acid
Explosion Hazards in Presence of Various Substances	:	Risks of explosion of the product in the presence of static discharge. Impact: Not available. Risk of explosion in the presence of static discharge.
Fire Fighting Media and Instructions	:	Not applicable.
Special Remarks on Fire Hazards	:	Violent reaction or ignition with strong oxidizing agents, acids, alcohols, p-hydroquinone, cyclopentadiene, germanium tetrachloride, anhydride, nitroalkanes, peroxodisulfate, sugars, 2,2,4,4-tetrahydroxy-2,4-dimethyl-3-pentanone, dicarbide. Molten ortho -phthalic anhydride reacts with potassium hydroxide. With tetrachloroethane are heated, phosgene, carbon tetrachloride, chloroacetylene, is formed. Aqueous solution of potassium hydroxide reacts with which is spontaneously flammable. Potassium hydroxide reacts with which is spontaneously flammable. Potassium hydroxide reacts with little Potassium hydroxide reacts with attacks metals such as aluminum, zinc, iron, etc. flammable hydrogen gas.
Special Remarks on Explosion Hazards	:	Potentially explosive reaction with chlorine dioxide, nitrobenzene, trichloride, peroxidized tetrahydrofuran. Reaction with ammonium hydroxide is heat sensitive explosive product. cause explosive decomposition will occur when potassium hydroxide reacts with nitroso urea and methylene chloride. explodes on contact with potassium hydroxide.

6. Accidental Release Measures

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Personal Precautions	Wear protective clothing as per section 8.
Environmental Precautions	Avoid discharge into drains or watercourses or onto the ground. Contain spillage with sand, earth or other suitable material. The product contains substances which are water-soluble and may spread in water systems. The product contains substances which may spread in the atmosphere.
Immediate Actions	Shut off source of leak if safe to do so.
Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary: Neutralize the residue with a solution of acetic acid.
Large Spill	Corrosive solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water to wash vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a solution of acetic acid.

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

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Handling

Keep container dry. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. A skin and eyes. Keep away from incompatibles such as organic materials, metals, acids, moisture.

Storage

Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 23°C (73.4°F)

8. Exposure controls and personal protection

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Engineering Control

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below recommended limits.

Personal Protection

Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent.

Personal Protection in case of Large Spill

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

Exposure Limits

CEIL: 2 (mg/m³) from OSHA (PEL) [United States] CEIL: 2 (mg/m³) from ACGIH (TLV) [United States] Consult local authorities for acceptable exposure limits.

9. Physical and chemical properties

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Odour	:	Odourless
Taste	:	Sweetish, astringent.
Appereance	:	White
Molecular Weight	:	56.11 g/mole
pH (1% soln/water)	:	13
Boiling Point	:	Decomposition temperature
Melting Point	:	380°C (716°F)
Critical Temperature	:	Not available.
Specific Gravity	:	2.044 (Water = 1)
Vapor Pressure	:	Not available.
Vapor Density	:	Not available.
Volatility	:	Not available.
Odor Threshold	:	Not available.
Water/Oil Coeff	:	Not available.
Ionicity (in Water):	:	Not available.
Solubility	:	Easily soluble in cold water and ether.

10. Stability and reactivity

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Stability	:	The product is stable.
Instability Temperature	:	Not available
Conditions of Instability	:	Incompatible materials, dust or water.
Incompatibility with various substances	:	Highly reactive with acids. R metals, moisture.
Corrosivity	:	Extremely corrosive in presence of acids. Slightly corrosive in presence of alkalis. Non-corrosive in presence of organic solvents.
Special Remarks on Reactivity	:	Hygroscopic (absorbs moisture from water or alcohol or when the heat is generated. Reacts with halogenated hydrocarbons, anhydrides, isocyanates, aldehydes, alcohols, glycols, etc. Also incompatible with (nitrobenzene, nitromethane, peroxide materials, acid anhydrides, acid chlorides, magnesium, peroxide, maleic dicarbide, such as aluminum, tin, lead, etc.)
Polymerization	:	Will not occur.

11. Toxicological information

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Routes of Entry	Absorbed through skin. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 273 mg/kg [Rat].
Chronic Effects on Humans	MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. May cause damage to the following organs: upper respiratory tract, skin, eyes.
Other Toxic Effects on Humans	Extremely hazardous in case of inhalation (lung corrosive). Very hazardous in case of skin contact (corrosive, irritant), of ingestion, .
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Acute Potential Health Effects: Skin: Causes severe skin irritation and burns. Eyes: Causes severe eye irritation and irreversible eye injury. Inhalation: Causes severe irritation and burns of the respiratory tract and mucous membranes. Inhalation can produce chronic productive cough, and shortness of breath. Ingestion: Harmful if swallowed. May cause severe and permanent damage to the digestive tract with abdominal pain, vomiting and possible death. May cause irritation and burns of the gastrointestinal (digestive) tract with abdominal pain, vomiting and possible death. May cause irritation and burns of the digestive tract. Chronic Potential Health Effects: Chronic contact with dilute solutions of potassium hydroxide can cause severe skin irritation and burns. Inhalation can produce chronic productive cough, and shortness of breath.

12. Ecological information

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Ecotoxicity	Ecotoxicity in water (LC50): 80 mg/l 24 hours [Mosquito Fish].
Mobility	Completely soluble in water
BOD5 and COD	Not available
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Special Remarks on the Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

13. Disposal considerations

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Disposal considerations

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

14. Transport information

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- **DOT Classification:** Class 8: Corrosive material

- **Identification:** Potassium hydroxide, solid UNNA: 1813 PG: II

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

15. Regulatory information

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Federal and State Regulations

USA release reporting list: Potassium hydroxide Pennsylvania RTK: Potassium hydroxide Florida: Potassium hydroxide Massachusetts RTK: Potassium hydroxide New Jersey: Potassium hydroxide California I
Hazardous Substances: Potassium hydroxide TSCA 8(b) inventory: Potassium hydroxide CERCLA:
Hazardous substances.: Potassium hydroxide: 453.6 kg

Other Regulations

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product i
Inventory of Existing Commercial Chemical Substances.
Other Classifications:
WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS E: Corrosive solid.

HMIS (U.S.A.):

Health Hazard: 3
Fire Hazard: 0
Reactivity: 2
Personal Protection: j

National Fire Protection Association

Health: 3
Flammability: 0
Reactivity: 1
Specific hazard: NA

Protective Equipment:

Gloves. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent.
respirator when ventilation is inadequate. Splash goggles.

16. Other information

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