

## 1. Product and Company Identification

[www.rxmarine.com](http://www.rxmarine.com)

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:

RX MARINE INTERNATIONAL  
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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	

\*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. Tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can result in irritation, redness, blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by nausea, vomiting, diarrhea, abdominal pain, coughing, shortness of breath, chest pain, headache, dizziness, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of mucous membranes can result in irritation, 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. 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 eyes to dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust 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 and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean skin with soap and water. 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. 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 belt.

Inhalation	waistband. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
General	Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt, and waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It is hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or irritant. 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 presence of impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	:	Not applicable.
Special Remarks on Fire Hazards	:	Violent reaction or ignition with acids, alcohols, phenols, cyclopentadiene, germanium hydride, nitroalkanes, peroxodisulfate, sugars, 2,2-dicarbide. Molten ortho - para - potassium hydroxide. When tetrachloroethane are heated, chloroacetylene, is formed. A solution of potassium hydroxide which is spontaneously flammable. Potassium hydroxide reacts with little Potassium hydroxide attacks metals such as aluminum. Potassium hydroxide is spontaneously flammable and attacks metals such as aluminum. Potassium hydroxide is 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 reaction. It can cause explosive decomposition. It will occur when potassium nitroso urea and methyl ester 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 dilute. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize 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

### 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

### Exposure Limits

inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling

CEIL: 2 (mg/m<sup>3</sup>) from OSHA (PEL) [United States] CEIL: 2 (mg/m<sup>3</sup>) from ACGIH (TLV) [United States] Consult I

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 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. Reacts with metals, moisture.
Corrosivity	:	Extremely corrosive in presence of water. Slightly corrosive in presence of water. Non-corrosive in presence of water.
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, and water. Also incompatible with (nitrobenzene, nitromethane, and other materials, acid anhydrides, acid chlorides, magnesium, peroxides, dioxide, maleic dicarbide, and other such as aluminum, tin, lead, and other metals).
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 burns. Inhalation: Causes severe irritation and burns of the respiratory tract and mucous membranes. Inhalation can cause chemical pneumonitis. Ingestion: Harmful if swallowed. May cause severe and permanent damage to the digestive tract. Causes severe irritation and burns of the gastrointestinal (digestive) tract with abdominal pain, vomiting and possible death. May cause chronic effects in the digestive tract. Chronic contact with dilute solutions of potassium hydroxide can cause chronic irritation and burns of the skin and mucous membranes. 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 1 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 is 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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