

Common Name: **POTASSIUM HYDROXIDE**

Synonyms: Caustic Potash; Lye; Potassium Hydrate

CAS No: 1310-58-3

Molecular Formula: KOH

RTK Substance No: 1571

Description: Odorless, white or slightly yellow, flakey or lumpy solid which is often in a water solution

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
3 - Health 0 - Fire 1 - Reactivity DOT#: UN 1813 ERG Guide #: 154 Hazard Class: 8 (Corrosive)	Extinguish fire using an agent suitable for type of surrounding fire. Potassium Hydroxide itself does not burn. POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Potassium Oxides</i> . DO NOT get water inside containers as contact with moisture or water may generate enough heat to ignite combustibles (wood, paper and oil).	Potassium Hydroxide reacts violently with STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC). Potassium Hydroxide is CORROSIVE in MOIST AIR to METALS (such as ALUMINUM, ZINC, TIN and LEAD) and forms flammable and explosive <i>Hydrogen gas</i> . Potassium Hydroxide is not compatible with REDUCING AGENTS (such as LITHIUM, SODIUM, ALUMINUM and their HYDRIDES); WATER; HALOGENATED HYDROCARBONS (such as METHYLENE CHLORIDE and TRICHLOROETHYLENE); ORGANICS; NITROCARBONS; and AMMONIUM SALTS.

SPILL/LEAKS

Isolation Distance:

Solid Spills: 25 meters (75 feet)

Liquid Spills: 50 meters (150 feet)

Fire: 800 meters (1/2 mile)

Collect powdered material in the most convenient and safe manner and place into sealed containers for disposal.

For **Potassium Hydroxide** in *solution* absorb liquids in dry sand, earth, or a similar material and place into sealed containers for disposal.

DO NOT wash into sewer.

For water spills, neutralize with dilute acid (such as Acetic Acid).

Potassium Hydroxide is harmful to aquatic life in very low concentrations.

PHYSICAL PROPERTIES

Odor Threshold:	Odorless
Flash Point:	Noncombustible
Vapor Pressure:	1 mm Hg at 1,317°F (714°C)
Specific Gravity:	2.04 (water = 1)
Water Solubility:	Soluble
Boiling Point:	2,408°F (1,320°C)
Melting Point:	761°F (405°C)
Molecular Weight:	56.1

EXPOSURE LIMITS

NIOSH: 2 mg/m³, Ceiling

ACGIH: 2 mg/m³, Ceiling

The Protective Action Criteria values are:

PAC-1 = 0.3 mg/m³

PAC-2 = 2 mg/m³

PAC-3 = 125 mg/m³

PROTECTIVE EQUIPMENT

Gloves:	Butyl, Nitrile, Neoprene, Polyvinyl Chloride, Viton and Barrier® (>8-hr breakthrough for Potassium Hydroxide in <i>solution</i>)
Coveralls:	Tychem® BR, Responder® and TK (>8-hr breakthrough for Potassium Hydroxide in <i>solution</i>)
Respirator:	>2 mg/m ³ - full facepiece APR with High efficiency filters >20 mg/m ³ - SCBA

HEALTH EFFECTS

Eyes:	Severe irritation, burns and possible eye damage
Skin:	Irritation and severe burns
Inhalation:	Nose, throat and lung irritation with coughing and severe shortness of breath (pulmonary edema) Headache, dizziness, nausea and vomiting

FIRST AID AND DECONTAMINATION

Remove the person from exposure.

Quickly brush off excess chemical from the face. Flush with large amounts of water for at least 30 minutes. Remove contact lenses, if worn. Seek medical attention immediately.

Quickly remove contaminated clothing. Immediately blot or brush off excess chemical and wash with amounts of soap and water. Seek medical attention immediately.

Begin artificial respiration if breathing has stopped and CPR if necessary.

Transfer promptly to a medical facility. Medical observation is recommended as symptoms may be delayed.