

Common Name: **POTASSIUM HYDROGEN FLUORIDE**

Synonyms: Potassium Bifluoride

CAS No: 7789-29-9

Molecular Formula: F<sub>2</sub>HK

RTK Substance No: 1568

Description: Colorless to white, crystalline substance

**HAZARD DATA**

Hazard Rating	Firefighting	Reactivity
<p><b>3 - Health</b></p> <p><b>0 - Fire</b></p> <p><b>0 - Reactivity</b></p> <p>DOT#: UN 1811</p> <p>ERG Guide #: 154</p> <p>Hazard Class: 8 (Corrosive)</p>	<p>Extinguish fire using an agent suitable for type of surrounding fire. <b>Potassium Hydrogen Fluoride</b> itself does not burn.</p> <p>Use WATER with care as heat will be released. POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Hydrogen Fluoride</i>, <i>Potassium Hydroxide</i> and <i>Potassium Fluoride</i>.</p> <p>Use water spray to keep fire-exposed containers cool. DO NOT get water inside containers.</p> <p><b>Potassium Hydrogen Fluoride</b> may ignite combustibles (wood, paper and oil).</p>	<p><b>Potassium Hydrogen Fluoride</b> may be corrosive to METALS in the presence of WATER, MOISTURE or HIGH HUMIDITY and may release flammable and explosive <i>Hydrogen gas</i>.</p> <p><b>Potassium Hydrogen Fluoride</b> is not compatible with STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC) and STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE).</p> <p>Do not allow <b>Potassium Hydrogen Fluoride</b> to contact SILICA-CONTAINING MATERIALS (such as GLASS, CEMENT and PORCELAIN).</p>

<b>SPILL/LEAKS</b>
<p><b>Isolation Distance:</b></p> <p>Spills: 25 meters (75 feet)</p> <p>Fire: 800 meters (1/2 mile)</p> <p>Collect powdered material in the most convenient and safe manner and deposit in sealed containers. DO NOT wash into sewer.</p> <p>May affect aquatic life.</p>

<b>PHYSICAL PROPERTIES</b>
<p><b>Odor Threshold:</b> Slightly pungent</p> <p><b>Flash Point:</b> Nonflammable</p> <p><b>Vapor Pressure:</b> 1 mm Hg at 1,625°F (885°C)</p> <p><b>Specific Gravity:</b> 2.37 (water = 1)</p> <p><b>Water Solubility:</b> Soluble</p> <p><b>Boiling Point:</b> Decomposes</p> <p><b>Melting Point:</b> 437°F (225°C)</p> <p><b>Molecular Weight:</b> 78.1</p>

<b>EXPOSURE LIMITS</b>
<p><b>OSHA:</b> 2.5 mg/m<sup>3</sup>, 8-hr TWA</p> <p><b>NIOSH:</b> 2.5 mg/m<sup>3</sup>, 10-hr TWA; 5 mg/m<sup>3</sup>, 15-min Ceiling</p> <p><b>ACGIH:</b> 0.4 mg/m<sup>3</sup>, 8-hr TWA; 1.7 mg/m<sup>3</sup>, 15-min STEL</p> <p><b>IDLH:</b> 25 mg/m<sup>3</sup> (All of the above are for <i>Hydrogen Fluoride</i>)</p>

<b>PROTECTIVE EQUIPMENT</b>
<p><b>Gloves:</b> Neoprene and Polyvinyl Chloride for <i>solid Potassium Hydroxide Fluoride</i> and Silver Shield®/4H® for <i>Hydrogen Fluoride gas</i></p> <p><b>Coveralls:</b> DuPont Tychem® Polycoat, CPF 1, QC, CPF 2 and SL, for <i>solid Potassium Hydrogen Fluoride</i>; DuPont Tychem® Responder® and TK and Saint-Gobain CHALLENGE ULTRAPRO® Vapor for <i>Hydrogen Fluoride gas</i></p> <p><b>Respirator:</b> For <i>solid Potassium Hydrogen Fluoride</i> - full facepiece APR with cartridges specific for <i>Hydrogen Fluoride</i> with High efficiency particulate pre-filters Use Supplied Air or SCBA if there is a potential for exposure to <i>Fluorine</i> or <i>Hydrogen Fluoride</i>.</p>

<b>HEALTH EFFECTS</b>
<p><b>Eyes:</b> Severe irritation and burns</p> <p><b>Skin:</b> Severe irritation and burns</p> <p><b>Inhalation:</b> Nose, throat and lung irritation with coughing and shortness of breath (pulmonary edema) Headache, nausea and vomiting</p>

<b>FIRST AID AND DECONTAMINATION</b>
<p><b>Remove</b> the person from exposure.</p> <p><b>Flush</b> eyes with large amounts of water for at least 30 minutes. Remove contact lenses if worn. Seek medical attention immediately.</p> <p><b>Immediately</b> flush with large amounts of water. Continue flushing while removing clothing. Apply 2.5% <i>Calcium Gluconate</i> gel to the affected skin. Seek medical assistance immediately.</p> <p><b>Begin</b> artificial respiration if breathing has stopped and CPR if necessary.</p> <p><b>Transfer</b> to a medical facility.</p> <p><b>Medical</b> observation is recommended as symptoms may be delayed.</p>