

Safety Data Sheet

File version: 1

Potassium fluoride, 1M

SDS Date: 02 Dec 2016

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** 1M Potassium fluoride  
**PRODUCT CODES:** 1008198  
1008199  
**MANUFACTURER:** Rigaku Reagents  
**ADDRESS:** 9009 New Trails Drive  
The Woodlands, TX 77381  
USA  
**PHONE:** +1 (281) 362-2300  
**EMAIL:** ReagentOrders@Rigaku.com

**CHEMICAL NAME:** Potassium fluoride  
**CHEMICAL FORMULA:** KF

**PREPARED BY:** Rigaku Reagents

**SECTION 1 NOTES:****SECTION 2: HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW:**

**OSHA HAZARDS:** Target organ effect, toxic by inhalation., toxic by ingestion

**TARGET ORGANS:** Kidney, heart, bone, nerves, gastro-intestinal system, teeth

**GHS CLASSIFICATION:**

Acute toxicity, Oral (Category 3)

Acute toxicity, Inhalation (Category 3)

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS****Signal word:** Danger**Hazard statement(s):**

H301 + H331 Toxic if swallowed or if inhaled

**Precautionary statement(s):**

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

P311 Call a POISON CENTER or doctor/ physician.

**POTENTIAL HEALTH EFFECTS:**

**EYES:** May cause eye irritation.

**SKIN:** May be harmful if absorbed through skin. May cause skin irritation.

**INGESTION:** Toxic if swallowed.

**INHALATION:** Toxic if inhaled. May cause respiratory tract irritation.

**SECTION 2 NOTES:****SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**INGREDIENTS:** Potassium fluoride, De-ionized water

**POTASSIUM FLUORIDE:**

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>
7789-23-3	4-6	

Safety Data Sheet

File version: 1

Potassium fluoride, 1M

SDS Date: 02 Dec 2016

	<u>ppm</u>	<u>mg/m3</u>
OSHA PEL-TWA:		2.5
OSHA PEL STEL :		
ACGIH TLV-TWA:		2.5
ACGIH TLV STEL:		

**SECTION 3 NOTES:**

---

**SECTION 4: FIRST AID MEASURES**

---

**EYES:** Flush eyes with water as a precaution.**SKIN:** Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.**INGESTION:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.**INHALATION:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.**SECTION 4 NOTES:**

---

**SECTION 5: FIRE-FIGHTING MEASURES**

---

**FLASH POINT:**

F: No data available

C: No data available

**AUTOIGNITION TEMPERATURE:**

F: No data available

C: No data available

**NFPA HAZARD CLASSIFICATION**

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 0

**HMIS HAZARD CLASSIFICATION**

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 0

**EXTINGUISHING MEDIA:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.**HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous decomposition products formed under fire conditions. - Hydrogen fluoride, Potassium oxides**SECTION 5 NOTES:** Not flammable or combustible.

---

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

---

**PERSONAL PRECAUTIONS:** Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.**ENVIRONMENTAL PRECAUTIONS:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Keep in suitable, closed containers for disposal.**SECTION 6 NOTES:**

---

**SECTION 7: HANDLING AND STORAGE**

---

Safety Data Sheet

File version: 1

Potassium fluoride, 1M

SDS Date: 02 Dec 2016

**HANDLING AND STORAGE:** Avoid contact with skin and eyes. Provide appropriate exhaust ventilation. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic. Store under inert gas.

**SECTION 7 NOTES:**

---

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

---

**RESPIRATORY PROTECTION:** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**EYE PROTECTION:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**SKIN PROTECTION:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**WORK HYGIENIC PRACTICES:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**SECTION 8 NOTES:**

---

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

---

**APPEARANCE:** clear, colorless

**PHYSICAL STATE:** clear, liquid

**pH AS SUPPLIED:** No data available

**pH (Other):** No data available

**BOILING POINT:**

**F:** No data available

**C:** No data available

**FREEZING POINT:**

**F:** No data available

**C:** No data available

**VAPOR PRESSURE (mmHg):** No data available

@

**F:** No data available

**C:** No data available

**VAPOR DENSITY (AIR = 1):** No data available

**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** No data available

**EVAPORATION RATE:** No data available

**SOLUBILITY IN WATER:** No data available

@

**F:** No data available

**C:** No data available

**VISCOSITY:** No data available

@

**F:** No data available

**C:** No data available

Safety Data Sheet

File version: 1

Potassium fluoride, 1M

SDS Date: 02 Dec 2016

**SECTION 9 NOTES:**

---

**SECTION 10: STABILITY AND REACTIVITY**

---

**STABILITY:** Stable under recommended storage conditions.**CONDITIONS TO AVOID (STABILITY):** No data available**INCOMPATIBILITY (MATERIAL TO AVOID):** Strong acids**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Hazardous decomposition products formed under fire conditions. - Hydrogen fluoride, Potassium oxides. Other decomposition products - no data available**SECTION 10 NOTES:**

---

**SECTION 11: TOXICOLOGICAL INFORMATION**

---

**ACUTE TOXICITY:**

<b>ORAL LD50:</b>	Rat - 245 mg/kg
<b>INHALATION LC50:</b>	No data available
<b>DERMAL LD50:</b>	No data available
<b>OTHER:</b>	LD50 Intraperitoneal - rat - 64 mg/kg LD50 Intraperitoneal - mouse - 40,030 mg/kg

**SKIN CORROSION/IRRITATION:** No data available**SERIOUS EYE DAMAGE/EYE IRRITATION:** No data available**RESPIRATORY OR SKIN SENSITIZATION:** No data available**GERM CELL MUTAGENICITY:** No data available**CARCINOGENICITY:****IARC:** 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Potassium fluoride)**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.**REPRODUCTIVE TOXICITY:** No data available.**SECTION 11 NOTES:** Symptoms of exposure: salivation, nausea, vomiting, abdominal pain, fever, irregular breathing. Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia, perforation of the nasal septum, calcium deposits in the ligaments. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may provoke the following symptoms: spasm, inflammation and edema of the bronchi, spasm, inflammation and edema of the larynx.

---

**SECTION 12: ECOLOGICAL INFORMATION**

---

**TOXICITY**

No data available.

**PERSISTENCE AND DEGRADABILITY**

No data available.

**BIOACCUMULATIVE POTENTIAL**

No data available.

**MOBILITY IN SOIL**

No data available.

Safety Data Sheet

File version: 1

## Potassium fluoride, 1M

SDS Date: 02 Dec 2016

**PBT AND vPvB ASSESSMENT**

No data available

**SECTION 12 NOTES:****SECTION 13: DISPOSAL CONSIDERATIONS**

**PRODUCT:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**CONTAMINATED PACKAGING:** Dispose of as unused product.

**SECTION 14: TRANSPORT INFORMATION****U.S. DEPARTMENT OF TRANSPORTATION**

<b>PROPER SHIPPING NAME:</b>	Potassium fluoride, solution
<b>HAZARD CLASS:</b>	6.1
<b>ID NUMBER:</b>	1812
<b>PACKING GROUP:</b>	III
<b>MARINE POLLUTANT:</b>	No
<b>POISON INHALATION HAZARD:</b>	No

**WATER TRANSPORTATION**

<b>PROPER SHIPPING NAME:</b>	POTASSIUM FLUORIDE, SOLUTION
<b>HAZARD CLASS:</b>	6.1
<b>ID NUMBER:</b>	1812
<b>PACKING GROUP:</b>	III EMS-No: F-A, S-A
<b>MARINE POLLUTANT:</b>	No

**AIR TRANSPORTATION**

<b>PROPER SHIPPING NAME:</b>	Potassium fluoride, solution
<b>HAZARD CLASS:</b>	6.1
<b>ID NUMBER:</b>	1812
<b>PACKING GROUP:</b>	III

**SECTION 14 NOTES:****SECTION 15: REGULATORY INFORMATION**

**OSHA HAZARDS:** Target organ effect, toxic by inhalation, toxic by ingestion

**SARA 302 COMPONENTS:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 COMPONENTS:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 HAZARDS:** Acute health hazard, chronic health hazard

**MASSACHUSETTS RIGHT TO KNOW COMPONENTS:**

No components are subject to the Massachusetts Right to Know Act.

**PENNSYLVANIA RIGHT TO KNOW COMPONENTS:**

	<u>CAS-No.</u>
Potassium fluoride	7789-23-3
Water	7732-18-5

**NEW JERSEY RIGHT TO KNOW COMPONENTS:**

	<u>CAS-No.</u>
Potassium fluoride	7789-23-3

Safety Data Sheet

File version: 1

Potassium fluoride, 1M

SDS Date: 02 Dec 2016

Water

7732-18-5

**CALIFORNIA PROP. 65 COMPONENTS:** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**SECTION 15 NOTES:**

---

**SECTION 16: OTHER INFORMATION**

---

**DISCLAIMER:** The above information is believed to be correct but does not necessarily include all information and should be used only as a guide. The information in this document is based on our current knowledge and applies to the product with regard to appropriate safety precautions. This document does not represent any guarantee of the properties of the product. Rigaku Reagents will not be held liable for any damage resulting from handling or contact with the above product.