



LTS Research Laboratories, Inc.
Safety Data Sheet
Potassium Fluoride

1. Product and Company Identification

Trade Name:	Potassium fluoride
Chemical Formula:	KF
Recommended Use:	Scientific research and development
Manufacturer/Supplier:	LTS Research Laboratories, Inc.
Street:	2001 Oaks Pkwy
City:	Belmont
State:	North Carolina
Zip Code:	28012
Country:	USA
Tel #:	+1 (704) 899 2840
24-Hour Emergency Contact:	800-424-9300 (US & Canada) +1-703-527-3887 (International)

2. Hazards Identification

Signal Word:

Danger



Hazard Statements:

H301 + H311 + H331: Toxic if swallowed, in contact with skin or if inhaled.
H318: Causes serious eye damage

Precautionary Statements:

P261: Avoid breathing dust/ fume/ mist/ gas/ spray/ vapor.
P264: Wash face, hands, and any exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 + P330: IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.
P302 + P352 + P312: IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.
P304 + P340 + P311: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P362: Take off contaminated clothing and wash before reuse.
P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/ container in accordance with local/ regional/ national/ international regulations.

HMIS Health Ratings (0-4):

Health:	3
Flammability:	0
Physical:	1

3. Composition

Chemical Family:	Salt
Additional Names:	None
Potassium fluoride (KF):	
Percentage:	0-100 wt. %
CAS #:	7789-23-3
EC #:	232-151-5

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist. Hydrofluoric acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/ absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel repeated until burning ceases. More serious skin exposures may require subcutaneous calcium gluconate except for digital areas unless the physician is experienced in this technique, due to the potential for tissue injury from increased pressure. Absorption can readily occur through the subungual areas and should be considered when undergoing decontamination. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or Milk of Magnesia to conscious victims. Conditions such as hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored for, since they can occur after exposure. First, aiders need to protect themselves.
Special Treatment:	Treat symptomatically
Important Symptoms:	Causes eye burns. Causes severe eye damage.
Inhalation:	Remove victim to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. Supply oxygen if breathing is difficult.
Ingestion:	Give water to drink (two glasses at most). Do NOT induce vomiting. Seek immediate medical attention. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 – 40 g in a 10% slurry) and consult a doctor as quickly as possible.
Skin:	First treatment with calcium gluconate paste. Wash affected area with mild soap and water for at least 15 minutes. Remove any contaminated clothing. Seek medical attention.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.

5. Firefighting Measures	
Flammability:	Non-flammable
Extinguishing Media:	No special restrictions – use suitable extinguishing agent for surrounding material and type of fire
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.
6. Accidental Release Measures	
If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.
7. Handling and Storage	
Handling Conditions:	Use only under a chemical fume hood. Wear personal protective equipment/ face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed, then seek immediate medical assistance. Keep locked up or in an area accessible only to qualified or authorized persons.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store under inert gas. Do not store in glass. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air. Remove and wash any contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.
8. Exposure Controls and Personal Protection	
Permissible Exposure Limits:	2.5 mg/m ³ as KF, long-term value
Threshold Limit Value:	2.5 mg/m ³ as KF, long-term value
Special Equipment:	None
Respiratory Protection:	Dust Respirator. Filter type P3
Protective Gloves:	Nitrile rubber gloves, 0.11 mm thick
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	White
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	920 g/L at 18 °C
Boiling Point:	1505 °C
Melting Point:	858 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	2.48 g/cc
Molecular weight:	58.10 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions. Hygroscopic.
Reacts With:	Water, Strong oxidizing agents, Glass, Strong acids.
Incompatible Conditions:	Water/ moisture, glass. Excess heat. Avoid dust formation.
Hazardous Decomposition Products:	Hydrogen fluoride, Potassium oxides.

11. Toxicological Information

Potential Health Effects:	
Eyes:	Causes serious eye damage.
Skin:	Toxic, danger through skin absorption
Ingestion:	Toxic if swallowed
Inhalation:	Toxic if inhaled
Chronic:	N/A
Signs & Symptoms:	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 following symptoms: spasm, inflammation and edema of the bronchi, spasm, inflammation and edema of the larynx. Symptoms after absorption include convulsions, unconsciousness, cardiac irregularities, respiratory arrest, shock. After long-term exposure to the chemical: Damage to bone marrow.
Aggravated Medical Conditions:	May cause irritations to burns in contact with eyes, skin, mucous membranes. Systemic effects include drop in blood, calcium level, agitation, spasms, cardiovascular disorders, CNS disorders.
Median Lethal Dose:	148.5 mg/kg for rat by mouth
Carcinogen:	N/A

12. Ecological Information

Aquatic Toxicity:	Low
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
Notes:	Do not empty into drains Forms toxic and corrosive mixtures with water even if diluted

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous: Hazardous for transportation



Hazard Class: 6.1 Toxic substances
Packing Group: III
UN Number: UN1812
Proper Shipping Name: Potassium fluoride, solid

15. Regulatory Information

Sec 302 Extremely Hazardous: No
Sec 304 Reportable Quantities: No
Sec 313 Toxic Chemicals: No

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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