

SAFETY DATA SHEET

Version: v1

Revision Date: 2025-06-30

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Potassium fluoride
Product Number : P755684
Brand : aladdin
CAS-No. : 7789-23-3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION
Address : 14078 Meridian Parkway,
Riverside, CA. 92518
Telephone : +1 (833) 552-7181
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300
CHEMTREC®, Outside the USA :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, oral (Class 3), H301

Acute toxicity, inhalation (Class 3), H331

Acute toxicity, percutaneous (Class 3), H311

Severe eye injury/eye irritation (Category 1), H318

Acute (short-term) aquatic hazards (Category 2), H401

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

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H318	Causes serious eye damage
H401	Toxic to aquatic life
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled
Precautionary statement(s)	
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands [and ...] thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to an approved waste disposal plant.
P302+P352+P312	IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.
P301+P310+P330	IF SWALLOWED: Rinse mouth. Immediately call a POISON CENTER/doctor/.
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. If contact lenses are worn and can be easily removed, remove Contact lenses. Continue rinsing. Immediately call an emergency center/doctor.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: no data available
Formula	: KF
Molecular weight	: 58.1
CAS No.	: 7789-23-3
EC-NO.	: 232-151-5

Component	Classification	Concentration
Potassium fluoride		
	no data available	UltraBio™, ≥99.5%(F)

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Hydrofluoric (HF) 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. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

First treatment with calcium gluconate paste. In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. 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.

4.2 Most important symptoms and effects, both acute and delayed

no data available

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Hydrogen fluoride Potassium oxide Non combustible. Surrounding fire sources may cause the release of hazardous vapors

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Store at room temperature.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(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. The selected protective gloves have to satisfy the specifications of Regulation (EU)2016/425 and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (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).

Control of environmental exposure

no data available

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

a) Appearance	no data available
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	7.0-8.5 (25 °C, 1 M in H ₂ O)
e) Melting point/freezing point	858°C
f) Initial boiling point and boiling range	1505°C
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	2.48g/cm ³ at 20°C
n) Water solubility	H ₂ O: 1 M at 20 °C, clear, colorless
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available

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t) Oxidizing properties N

no data available

9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Generates dangerous gases or fumes in contact with: Strong oxidizing agents acids

10.4 Conditions to avoid

Reacts dangerously with glass.

10.5 Incompatible materials

glass

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 25 - 2.000 mg/kg

(OECD Test Guideline 401)

Symptoms: tissue damage

LC50 Inhalation - Rat - male and female - 4 h - 1 mg/l

(OECD Test Guideline 403)

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: sodium fluoride

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

(US-EPA)

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Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: sodium fluoride

Dermal: (Regulation (EC) No 1272/2008, Annex VI)

No data available

Skin corrosion/irritation

Skin - Rabbit Result: No skin irritation -4 hours Remarks: (Compared with similar products)

Serious eye damage/eye irritation

The danger of corneal opacity

Respiratory or skin sensitisation

Buehler Guinea Pig Trial - Guinea Pig Result: Negative (US EPA) Remarks: (Compared with similar products)

Corresponding values have been specified for the following substances: sodium fluoride

Germ cell mutagenicity

Test type: In vitro mammalian cell gene mutation test system: Chinese hamster lung cell metabolic activation: no metabolic activation result: negative Remarks: (compared with similar products) (ECHA) has specified corresponding values for the following substances: sodium fluoride Test type: Ames test system: Salmonella typhimurium metabolic activation: with or without metabolic activation effect Result: negative Remarks: (compared with similar products) Corresponding values have been specified for the following substances: sodium fluoride test type: mutagenicity (mammalian cell test): negative for chromosomal variation Species: Mouse Cell Type: Bone Marrow Exposure Route: Oral Method: US-EPA Result: Negative Remarks: (Compared with similar products) Corresponding values have been specified for the following substances: Sodium fluoride

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

Repeated toxicity - Rats - Male and Female - Oral -24 months - No harmful effects observed -25 mg/kg - Lowest level of harmful effects observed -4 mg/kg Remarks: (Compared with similar products)

Corresponding values have been specified for the following substances: sodium fluoride

Fluoride ions can reduce serum calcium ion concentration and may lead to fatal hypocalcemia.

Salivation, nausea, vomiting, abdominal pain, fever, irregular breathing, fluoride ions can reduce serum calcium ion concentration, which may lead to fatal hypocalcemia., Perforated nasal septum, calcium deposits in ligaments, causing significant damage to mucosal tissue, upper respiratory tract, eyes, and skin., Inhalation can cause the following symptoms: spasms, inflammation, bronchitis, spasms, inflammation, sore throat

To our knowledge, this chemical, physical, and toxic property has not been fully studied.

After absorption: spasms, loss of consciousness, arrhythmia, respiratory arrest, shock

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Long term exposure to drugs: Destruction: Bone marrow SIGALD -402931 Page 12 of 14 The life science business of Merck operations as MilliporeSigma in the US and Canada

The following data applies to general inorganic fluoride: it may cause burns to the eyes, skin, and mucous membranes due to irritation System effects: decreased calcium ion concentration in the blood, excitement, spasms, cardiovascular dysfunction

This substance requires special caution in handling

SECTION 12: Ecological information**12.1 Toxicity****12.2 Persistence and degradability**

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no data available

SECTION 13:**13.1 Disposal considerations****Product**

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur.

Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information**DOT (US)**

UN number: 1812

Packing group: III

Class: 6.1

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Proper shipping name: Potassium fluoride, solid

Reportable Quantity(RQ): no data available

Poison Inhalation Hazard: no data available

Environmental Hazards: no

IMDG

UN number: 1812

Packing group: III

EMS-No: no data available

Proper shipping name: Potassium fluoride, solid

IATA

UN number: 1812

Packing group: III

Class: 6.1

Proper shipping name: Potassium fluoride, solid

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

Prepared By

Regulatory Affairs

ALADDIN SCIENTIFIC CORPORATION

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Revision Summary

SDS sections updated v1

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