

<a href="#">Potassium Bifluoride</a>		<a href="#">Pricing &gt;</a>
<a href="#">Potassium Hydrogen Fluoride</a>		<a href="#">Pricing &gt;</a>
<b>Linear Formula</b>	KF·HF	
<b>Pubchem CID</b>	11829350	
<b>MDL Number</b>	MFCD00011403	
<b>EC No.</b>	232-156-2	
<b>IUPAC Name</b>	potassium fluoride hydrofluoride	
<b>Beilstein/Reaxys No.</b>	N/A	
<b>SMILES</b>	[K+].[F-].F	
<b>Inchl Identifier</b>	InChI=1S/2FH.K/h2*1H;/q;;+1/p-1	
<b>Inchl Key</b>	VBKNTGMWIPUCRF-UHFFFAOYSA-M	
<b>Signal Word</b>	Danger	
<b>Hazard Statements</b>	H301-H314	
<b>Hazard Codes</b>	T,C	
<b>Precautionary Statements</b>	P260-P280-P303 + P361 + P353-P304 + P340 + P310-P305 + P351 + P338	
<b>Flash Point</b>	Not applicable	
<b>Risk Codes</b>	25-34	
<b>Safety Statements</b>	22-26-37-45	
<b>RTECS Number</b>	TS6650000	
<b>Transport Information</b>	UN 1811 8(6.1) / PGII	
<b>WGK Germany</b>	1	

GHS Pictograms

GHS05  
Corrosive



GHS06 Skull  
and  
Crossbones



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## SAFETY DATA SHEET

Date Accessed: 05/01/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #7789-29-9

**Relevant identified uses of the substance:**  
Scientific research and development

Supplier details:  
American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351

Emergency telephone number:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

### SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture  
Classification according to Regulation (EC) No 1272/2008  
GHS06 Skull and crossbones  
Acute Tox. 3 H301 Toxic if swallowed.  
GHS05 Corrosion  
Skin Corr. 1B H314 Causes severe skin burns and eye damage.  
Classification according to Directive 67/548/EEC or Directive 1999/45/EC  
T; Toxic  
R25: Toxic if swallowed.

C; Corrosive

R34: Causes burns.

Information concerning particular hazards for human and environment:

N/A

Hazards not otherwise classified

No data available

Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labeled according to the CLP regulation.

Hazard pictograms



GHS05

GHS06

Signal word

Danger

Hazard statements

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe

dust/fume/gas/mist/vapors/spray.

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

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

D1A - Very toxic material causing immediate and serious toxic effects

D2B - Toxic material causing other toxic effects

E - Corrosive material

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH

FIRE

REACTIVITY

3

0

1

Health (acute effects) = 3

Flammability = 0

Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT:

N/A

vPvB:

N/A

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances

CAS No. / Substance Name:

7789-29-9 Potassium hydrogen fluoride

Identification number(s):

EC number:

232-156-2

Index number:

009-008-00-9

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### **SECTION 4. FIRST AID MEASURES**

Description of first aid measures

General information

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

If inhaled:

Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

In case of skin contact:

Immediately wash with soap and water; rinse thoroughly.

Seek immediate medical advice.

In case of eye contact:

Rinse opened eye for several minutes under running water. Consult a physician.

If swallowed:

Do not induce vomiting; immediately call for medical help.

Information for doctor

Most important symptoms and effects, both acute and delayed

Causes severe skin burns.

Causes serious eye damage.

Indication of any immediate medical attention and special treatment needed

No data available

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing agents

Product is not flammable. Use fire-fighting measures that suit the surrounding fire.

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Hydrogen fluoride (HF)

Potassium oxide

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions:

Do not allow material to be released to the environment without official permits.

Do not allow product to enter drains, sewage systems, or other water courses.

Do not allow material to penetrate the ground or soil.

Methods and materials for containment and cleanup:

Use neutralizing agent.

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

Prevention of secondary hazards:

No special measures required.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## **SECTION 7. HANDLING AND STORAGE**

Handling

Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Prevent formation of dust.

Information about protection against explosions and

fires:

The product is not flammable

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Store away from strong bases.

Store away from water/moisture.

Further information about storage conditions:

This product is hygroscopic.

Store under dry inert gas.

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

Protect from humidity and water.

Specific end use(s)

No data available

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

Fluorides (as F)

mg/m<sup>3</sup>

ACGIH TLV 2.5

Austria MAK 2.5

Belgium TWA 2.5

Finland TWA 2.5

France TWA 2.5

Germany MAK 2.5

Hungary TWA 1; 2-STEL

Netherlands MAC-K 3.5

Norway TWA 0.6

Poland TWA 1; 3-STEL

Sweden NGV 2

Switzerland MAK-W 1.5; 3-KZG-W

United Kingdom TWA 2.5

Russia TWA 2

Denmark TWA 2.5

USA PEL 2.5

7789-29-9 Potassium hydrogen fluoride (100.0%)

PEL (USA) Long-term value: 2.5 mg/m<sup>3</sup>  
as F

REL (USA) Long-term value: 2.5 mg/m<sup>3</sup>  
as F

TLV (USA) Long-term value: 2.5 mg/m<sup>3</sup>  
as F, BEI

EL (Canada) Long-term value: 2.5 mg/m<sup>3</sup>  
as F

Ingredients with biological limit values:  
7789-29-9 Potassium hydrogen fluoride (100.0%)

BEI (USA) 2 mg/L

Medium: urine

Time: prior to shift

Parameter: Fluoride (background, nonspecific)  
3 mg/L

Medium: urine

Time: end of shift

Parameter: Fluoride (background, nonspecific)

Additional information: No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for  
handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing  
immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working  
environment.

Breathing equipment:

Use suitable respirator when high concentrations are  
present.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

Suitability of gloves should be determined both by  
material and quality, the latter of which may vary by  
manufacturer.

Penetration time of glove material (in minutes)

No data available

Eye protection:

Tightly sealed goggles

Full face protection

Body protection:

Protective work clothing.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

Form: Crystalline powder or solid

Color: White

Odor: Odorless  
Odor threshold: No data available.  
pH (7.8 g/l) at 20 °C (68 °F): 1  
Melting point/Melting range: 239 °C (462 °F) (dec)  
Boiling point/Boiling range: No data available  
Sublimation temperature / start: No data available  
Flash point: N/A  
Flammability (solid, gas)  
No data available.  
Ignition temperature: No data available  
Decomposition temperature: No data available  
Autoignition: No data available.  
Danger of explosion: Product does not present an explosion hazard.  
Explosion limits:  
Lower: No data available  
Upper: No data available  
Vapor pressure: N/A  
  
Density at 20 °C (68 °F): 2.37 g/cm<sup>3</sup> (19.778 lbs/gal)  
Relative density  
No data available.  
Vapor density  
N/A  
Evaporation rate  
N/A  
Solubility in / Miscibility with Water at 20 °C (68 °F):  
392 g/l  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: N/A  
Kinematic: N/A  
Other information  
No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity  
No data available  
Chemical stability  
Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided:  
Decomposition will not occur if used and stored according to specifications.  
Possibility of hazardous reactions  
Contact with strong acids releases hydrogen fluoride  
Conditions to avoid  
No data available  
Incompatible materials:  
Oxidizing agents  
Bases  
Water/moisture  
Hazardous decomposition products:



Hydrogen fluoride  
Potassium oxide

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects

Acute toxicity:

Toxic if swallowed.

Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

LD/LC50 values that are relevant for classification:

No data

Skin irritation or corrosion:

Causes severe skin burns.

Eye irritation or corrosion:

Causes serious eye damage.

Sensitization:

No sensitizing effects known.

Germ cell mutagenicity:

No effects known.

Carcinogenicity:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity:

No effects known.

Specific target organ system toxicity - repeated exposure:

No effects known.

Specific target organ system toxicity - single exposure:

No effects known.

Aspiration hazard:

No effects known.

Subacute to chronic toxicity:

Fluorides may cause salivation, nausea, vomiting, diarrhea and abdominal pain, followed by weakness, tremors, shallow respiration, convulsions and coma. May cause brain and kidney damage.

Chronic fluoride poisoning can cause severe bone changes, loss of weight, anorexia, anemia and dental defects.

Subacute to chronic toxicity:

No effects known.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity

Aquatic toxicity:

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Additional ecological information:

Do not allow material to be released to the environment without official permits.

Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems.

Avoid transfer into the environment.

Results of PBT and vPvB assessment

PBT:

N/A

vPvB:

N/A

Other adverse effects

No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods

Recommendation

Consult official regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation:

Disposal must be made according to official regulations.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number

DOT, IMDG, IATA

UN1811

UN proper shipping name

DOT

Potassium hydrogendifluoride, solid

IMDG, IATA

POTASSIUM HYDROGENDIFLUORIDE, SOLID

Transport hazard class(es)

DOT

Class

8 Corrosive substances.

Label

8+6.1  
Class  
8 (CT2) Corrosive substances  
Label  
8+6.1  
IMDG, IATA  
Class  
8 Corrosive substances.  
Label  
8+6.1  
Packing group  
DOT, IMDG, IATA  
II  
Environmental hazards: N/A  
Special precautions for user  
Warning: Corrosive substances  
Segregation groups  
Acids  
Transport in bulk according to Annex II of  
MARPOL73/78 and the IBC Code  
N/A  
Transport/Additional information: DOT  
Marine Pollutant (DOT): No  
UN "Model Regulation":  
UN1811, Potassium hydrogendifluoride, solid, 8 (6.1),  
II

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental  
regulations/legislation specific for the substance or  
mixture  
National regulations  
All components of this product are listed in the U.S.  
Environmental Protection Agency Toxic Substances  
Control Act Chemical substance Inventory  
All components of this product are listed on the  
Canadian Domestic Substances List (DSL).  
SARA Section 313 (specific toxic chemical listings)  
Substance is not listed.  
California Proposition 65  
Prop 65 - Chemicals known to cause cancer  
Substance is not listed.  
Prop 65 - Developmental toxicity  
Substance is not listed.  
Prop 65 - Developmental toxicity, female  
Substance is not listed.  
Prop 65 - Developmental toxicity, male  
Substance is not listed.  
Information about limitation of use:  
For use only by technically qualified individuals.  
Other regulations, limitations and prohibitive

regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use)

Substance is not listed.

REACH - Pre-registered substances

Substance is listed.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

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