

Safety data sheet
according to UK REACH

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Version number 7.06 (replaces version 7.05)

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

- **1.1 Product identifier**
- **Trade name:** potassium fluoride
- **Article number:** 1976
- **CAS Number:**
7789-23-3
- **EC number:**
232-151-5
- **Index number:**
009-005-00-2
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
PANREAC QUIMICA S.L.U.
C/Garraf 2
Polígono Pla de la Bruguera
E-08211 Castellar del Vallès (Barcelona)
Tel. (+34) 937 489 400
Fax. (+34) 937 489 401
e-mail: product.safety@itwreagents.com
- **Further information obtainable from:** email: product.safety@panreac.com
- **1.4 Emergency telephone number:**
Single telephone number for emergency calls: 112 (EU)
Tel.: (+34) 937 489 499

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Acute Tox. 3 H301 Toxic if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.
Acute Tox. 3 H331 Toxic if inhaled.
Eye Dam. 1 H318 Causes serious eye damage.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the GB CLP regulation.

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· **Hazard pictograms**



GHS05 GHS06

· **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/gas/mist/vapours/spray.

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

P321 Specific treatment (see on this label).

P330 Rinse mouth.

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

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P405 Store locked up.

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

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.1 Substances**

· **CAS No. Description**

7789-23-3 potassium fluoride

· **Identification number(s)**

· **EC number:** 232-151-5

· **Index number:** 009-005-00-2

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Personal protection for the First Aider.

Position and transport stably in side position.

Take affected persons out of danger area and lay down.

Immediately remove any clothing soiled by the product.

Remove breathing equipment only after contaminated clothing have been completely removed.

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

Involve doctor immediately.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

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- **After skin contact:**
Call a doctor immediately.
Rub in Ca-gluconate solution or Ca-gluconate gel immediately.
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Protect unharmed eye.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
make victim drink water (maximum of 2 drinking glasses)
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Hydrogen fluoride (HF)
Non-combustible.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Mouth respiratory protective device.
Wear self-contained respiratory protective device.
- **Additional information**
Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust.
Wear protective equipment. Keep unprotected persons away.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Avoid substance contact.
Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Avoid formation of dust.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Clean up affected area.
- **6.4 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

- **7.1 Precautions for safe handling**
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Any unavoidable deposit of dust must be regularly removed.
- **Information about fire - and explosion protection:**
Keep respiratory protective device available.
The product is not flammable.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
The product is hygroscopic.
Protect from moisture and water.
Keep receptacles tightly sealed.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Open receptacle only under localised extractor facilities.
Store receptacle in a well ventilated area.
Store under lock and key and with access restricted to technical experts or their assistants only.
- **Recommended storage temperature:** Room Temperature
- **Storage class:** 6.1 D
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

7789-23-3 potassium fluoride

WEL	Long-term value: 2.5 mg/m ³ as F
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- **DNELs**

Dermal	Acute - systemic effects, worker	0.36 mg/kg
	Long-term - systemic effects, worker	0.36 mg/kg
Inhalative	Acute - systemic effects, worker	2.5 mg/m ³
	Long-term - local effects, worker	2.5 mg/m ³

- **PNECs**

Aquatic compartment - freshwater	0.89 mg/L
Terrestrial compartment - soil	11 mg/kg
Sewage treatment plant	51 mg/L

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing

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Wash hands before breaks and at the end of work.
Store protective clothing separately.
Vacuum clean contaminated clothing. Do not blow or brush off contamination.
Avoid contact with the eyes and skin.

· **Respiratory protection:**

Filter P3

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Required when dusts are generated.

· **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact gloves made of the following materials are suitable:**

Natural rubber, NR

Recommended thickness of the material: ≥ 0.6 mm

Value for the permeation: Level ≥ 480 min

· **As protection from splashes gloves made of the following materials are suitable:**

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≥ 480 min

· **Eye/face protection**



Gauze goggles

· **Body protection:**

Use protective suit.

Full head, face and neck protection

· **Environmental exposure controls** In accordance with the local environment and safety guidelines.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Solid

· **Colour:**

Colourless

· **Odour:**

Odourless

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

846 °C

· **Boiling point or initial boiling point and boiling range**

1,505 °C

· **Flammability**

Product is not flammable.

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· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	Not applicable.
· Decomposition temperature:	Not determined.
· pH	8-9 (5%)
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water at 18 °C:	923 g/l
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density at 20 °C:	2.48 g/cm ³
· Relative density	Not determined.
· Bulk density:	400 kg/m ³
· Vapour density	Not applicable.

· 9.2 Other information	
· Appearance:	
· Form:	Solid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· Molecular weight	58.1 g/mol
· Change in condition	
· Evaporation rate	Not applicable.

· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

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SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Contact with strong acids releases hydrogen fluoride.
- **10.4 Conditions to avoid**
When temperature is raised up:
Danger of bursting.
- **10.5 Incompatible materials:**
A risk of explosion and/or of toxic gas formation exists with the following substances:
strong acids
glass, quartzes/silicate ceramics
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Toxic if swallowed, in contact with skin or if inhaled.
- **LD/LC50 values relevant for classification:**
Quantitative data on the toxicological effect of this product are not available.

Components	Type	Value	Species
Oral	LD50	223 mg/kg (rat)	
Dermal	LD50	>2,000 mg/kg (rat)	
Inhalative	LC50/4 h	1 mg/l (rat)	

- **Primary irritant effect:**
- **Serious eye damage/irritation** Causes serious eye damage.
- **After inhalation:** No irritant effect.

· Subacute to chronic toxicity:			
Oral	NOAEL	25 mg/kg (rat)	

- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.

Type of test	Effective concentration	Method	Assessment
EC50/96 h	43 mg/l (Algae)		
	26 mg/l (daphnia magna)		
LC50/96 h	1.08 mg/l (fish)		
NOEC (21 d)	3.7 mg/l (daphnia magna)		
	4 mg/l (fish)		

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Chemicals must be disposed of in compliance with the respective national regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

- | | |
|---|----------------------------|
| · 14.1 UN number or ID number | UN1812 |
| · ADR, IMDG, IATA | |
| · 14.2 UN proper shipping name | POTASSIUM FLUORIDE, SOLID |
| · ADR, IMDG, IATA | |
| · 14.3 Transport hazard class(es) | |
| · ADR | |
| A diamond-shaped hazard pictogram with a black border. Inside, there is a skull and crossbones symbol, and the number '6' is at the bottom. | |
| · Class | 6.1 (T5) Toxic substances. |
| · Label | 6.1 |
| · IMDG, IATA | |
| A diamond-shaped hazard pictogram with a black border. Inside, there is a skull and crossbones symbol, and the number '6' is at the bottom. | |
| · Class | 6.1 Toxic substances. |
| · Label | 6.1 |
| · 14.4 Packing group | |
| · ADR, IMDG, IATA | III |
| · 14.5 Environmental hazards: | Not applicable. |
| · 14.6 Special precautions for user | Warning: Toxic substances. |
| · Hazard identification number (Kemler code): | 60 |
| · EMS Number: | F-A,S-A |

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· Stowage Category	A
· Segregation Code	SG35 Stow "separated from" SGG1-acids
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· UN "Model Regulation":	UN 1812 POTASSIUM FLUORIDE, SOLID, 6.1, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors** Substance is not listed.
- **Regulated poisons** Substance is not listed.
- **Reportable explosives precursors** Substance is not listed.
- **Reportable poisons** Listed
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category** H2 ACUTE TOXIC
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL: Derived No-Effect Level (UK REACH)
 PNEC: Predicted No-Effect Concentration (UK REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative

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Acute Tox. 3: Acute toxicity – Category 3

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

· *** Data compared to the previous version altered.**

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