

SDS Potassium Fluoride

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Expiry: 01/08/2024

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name **ECP Limited**
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Product	Potassium Fluoride	Code	42201, 5366, PA090			
CAS#	HSNO#	UN #	DG Class/es	Packing group #	Tracking?	Handlers Certificate?
7789-23-3	HSR006970	1812	6.1	III	No	6.1C

Recommended use: Laboratory Investigations

2. Hazards identification

2.1 GHS Classification

Acute toxicity, Oral (Category C)

Acute toxicity, Inhalation (Category C)

2.2 GHS Label elements, including precautionary statements



Pictogram

Signal word **Danger**

Hazard statement(s)

H301 Toxic if swallowed.

H331 Toxic if inhaled.

Precautionary statement(s)

Prevention

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

P264 Wash 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.

Response

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

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P330 Rinse mouth.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

2.3 Other hazards

Strong hydrogen fluoride-releaser.

3. Composition/information on ingredients

Component	Concentration
Potassium fluoride	
CAS No. 7789-23-3	<= 100%

4. First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. 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 hypocalcaemia, hypomagnesemia and cardiac arrhythmias should be monitored for, since they can occur after exposure.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician. First treatment with calcium gluconate paste.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcaemia.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.

Store under inert gas. Do not store in glass

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits Table

Component	CAS No.	Value	Control parameters	Basis
Potassium fluoride	7789-23-3	WES-TWA	2.5 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
	Remarks	Exposure can also be estimated by biological monitoring.		

Biological occupational exposure limits

Component	CAS No.	Parameters	Value	Biological specimen	Basis
Potassium fluoride	7789-23-3	Fluoride	160micro mol per litre	Urine	New Zealand. Biological Exposure Indices
		Fluoride	3.0000 mg/l	Urine	New Zealand. Biological Exposure Indices
		Fluoride	530micro mol per litre	Urine	New Zealand. Biological Exposure Indices
		Fluoride	10.0000 mg/l	Urine	New Zealand. Biological Exposure Indices

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.

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.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Body Protection

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.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or 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.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance

Form: crystalline

Colour: white

b) Melting point/freezing point

Melting point/range: 858 °C - lit.

c) Initial boiling point and boiling range

1,505 °C

d) Relative density

2.48 g/cm³ at 25 °C

10. Stability and reactivity

10.1 Conditions to avoid

Reacts dangerously with glass.

10.2 Incompatible materials

Strong acids, glass

10.3 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions:

Hydrogen fluoride, potassium oxides

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 245 mg/kg

Dermal: No data available

LD50 Intraperitoneal - Rat - 64 mg/kg

LD50 Intraperitoneal - Mouse - 40,030 mg/kg

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Potential health effects

Inhalation

Toxic if inhaled. May cause respiratory tract irritation.

Ingestion

Toxic if swallowed.

Skin

Toxic if absorbed through skin. May cause skin irritation.

Eyes

May cause eye irritation.

Signs and Symptoms of Exposure

Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcaemia.

12. Disposal considerations

12.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. 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.

13. Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
13.1	UN Number	1812	1812	1812
13.2	UN Proper Shipping name	POTASSIUM FLUORIDE, SOLID	POTASSIUM FLUORIDE, SOLID	Potassium fluoride, solid
13.3	Transport Hazard Class	6.1	6.1	6.1
13.4	Packaging group	III	III	III
13.5	Environmental Hazards	No	No	No
13.6	Special precautions for user	None		

14. Regulatory information

14.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: 6.1C

15. Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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