

POTASSIUM FLUORIDE

GHS Safety Data Sheet

Version No:2.0

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

POTASSIUM FLUORIDE

OTHER NAMES

K-F, "potassium monofluoride", "hydrofluoric acid, potassium salt"

PROPER SHIPPING NAME

POTASSIUM FLUORIDE, SOLID

PRODUCT USE

In the fluorination of organic compounds; in flux for hard solder; to prevent unwanted fermentations; in insecticide formulations; for etching glass.

SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V. INDUSTRIAL ESTATE,
248, WORLI,

MUMBAI- 400030.INDIA.

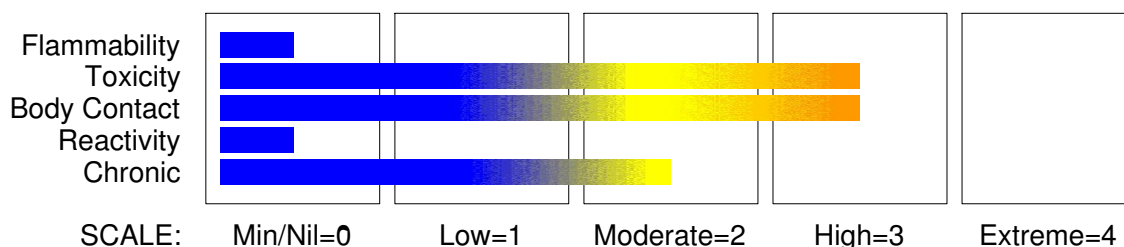
technical@sdfine.com

Telephone: 91- 22- 24959898

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HAZARD RATINGS



Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity (Dermal) Category 3

Acute Toxicity (Inhalation) Category 3

Acute Toxicity (Oral) Category 3

Skin Corrosion/Irritation Category 1C

continued...

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Section 2 - HAZARDS IDENTIFICATION



EMERGENCY OVERVIEW

HAZARD

DANGER

Determined by using GHS criteria:

H301 H311 H331 H314

Toxic if swallowed

Toxic in contact with skin

Toxic if inhaled

Causes severe skin burns and eye damage

PRECAUTIONARY STATEMENTS

Prevention

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

Wear protective gloves/clothing and eye/face protection.

Wash thoroughly after handling.

Do not breathe dust/fume/gas/mist/vapours/spray.

Use only outdoors or in a well ventilated area.

Wear protective gloves/clothing

Do not eat, drink or smoke when using this product.

Wash hands thoroughly after handling.

Do not breathe dust or mist.

Response

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

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor/physician.

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

Keep container tightly closed.

Wash contaminated clothing before reuse.

If on skin or hair: remove/take off immediately all contaminated clothing. Rinse with water/shower.

Call a POISON CENTER or doctor/physician if you feel unwell.

Specific treatment: refer to Label or MSDS.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN: Gently wash with plenty of soap and water.

Remove/Take off immediately all contaminated clothing

Wash/Decontaminate removed clothing before reuse.

Storage

Store locked up.

Disposal

Dispose of contents and container in accordance with relevant legislation.

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Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
potassium fluoride	7789-23-3	>97

Section 4 - FIRST AID MEASURES

SWALLOWED

For advice, contact a Poisons Information Centre or a doctor.

- IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.

- For advice, contact a Poisons Information Centre or a doctor.

Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:

- Induce vomiting with fingers down the back of the of the throat, ONLY IF CONSCIOUS.

- Lean patient forward or place on left side (head-down position if possible) to maintain open airway and prevent aspiration.

NOTE: Wear a protective glove when inducing vomiting by mechanical means.

- In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.

- If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the MSDS should be provided. Further action will be the responsibility of the medical specialist.

- If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the MSDS.

EYE

If this product or its vapours come in contact with the eyes,

- DO NOT DELAY: Immediately irrigate continuously by holding the eyelids apart and washing with fresh running water.

- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids

- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

- Transport to hospital, eye clinic or eye specialist, ophthalmologist without delay.

SKIN

If there is evidence of severe skin irritation or skin burns:

- Avoid further contact. Immediately remove contaminated clothing, including footwear.

- Flush skin under running water for 15 minutes.

- Avoiding contamination of the hands, massage calcium gluconate gel into affected areas, pay particular attention to creases in skin.

- Contact the Poisons Information Centre.

- Continue gel application for at least 15 minutes after burning sensation ceases.

- If pain recurs, repeat application of calcium gluconate gel or apply every 20 minutes.

- If no gel is available, continue washing for at least 15 minutes, using soap if available. If patient is conscious, give six calcium gluconate or calcium carbonate tablets in water by mouth.

- Transport to hospital, or doctor, urgently.

INHALED

For massive exposures:

- If dusts, vapours, aerosols, fumes or combustion products are inhaled, remove from contaminated area.

- Lay patient down.

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Section 4 - FIRST AID MEASURES

- Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- If victim is conscious, give six calcium gluconate or calcium carbonate tablets in water by mouth.
- Transport to hospital, or doctor, urgently.

NOTES TO PHYSICIAN

For acute or short term repeated exposures to fluorides:

- Fluoride absorption from gastro-intestinal tract may be retarded by calcium salts, milk or antacids.
- Fluoride particulates or fume may be absorbed through the respiratory tract with 20-30% deposited at alveolar level.
- Peak serum levels are reached 30 mins. post-exposure; 50% appears in the urine within 24 hours.
- For acute poisoning (endotracheal intubation if inadequate tidal volume), monitor breathing and evaluate/monitor blood pressure and pulse frequently since shock may supervene with little warning. Monitor ECG immediately; watch for arrhythmias and evidence of Q-T prolongation or T-wave changes. Maintain monitor. Treat shock vigorously with isotonic saline (in 5% glucose) to restore blood volume and enhance renal excretion.
- Where evidence of hypocalcaemic or normocalcaemic tetany exists, calcium gluconate (10 ml of a 10% solution) is injected to avoid tachycardia.

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
Fluorides in urine	3 mg/gm creatinine	Prior to shift	B, NS
	10mg/gm creatinine	End of shift	B, NS

B: Background levels occur in specimens collected from subjects NOT exposed

NS: Non-specific determinant; also observed after exposure to other exposures.

Following acute or short term repeated exposure to hydrofluoric acid:

- Subcutaneous injections of Calcium Gluconate may be necessary around the burnt area. Continued application of Calcium Gluconate Gel or subcutaneous Calcium Gluconate should then continue for 3-4 days at a frequency of 4-6 times per day. If a "burning" sensation recurs, apply more frequently.
- Systemic effects of extensive hydrofluoric acid burns include renal damage, hypocalcaemia and consequent cardiac arrhythmias. Monitor haematological, respiratory, renal, cardiac and electrolyte status at least daily. Tests should include FBE, blood gases, chest X-ray, creatinine and electrolytes, urine output, Ca ions, Mg ions and phosphate ions. Continuous ECG monitoring may be required.
- Where serum calcium is low, or clinical, or ECG signs of hypocalcaemia develop, infusions of calcium gluconate, or if less serious, oral Sandocal, should be given. Hydrocortisone 500 mg in a four to six hourly infusion may help.
- Antibiotics should not be given as a routine, but only when indicated.
- Eye contact pain may be excruciating and 2-3 drops of 0.05% pentocaine hydrochloride may be instilled, followed by further irrigation

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
1. Methaemoglobin in blood	1.5% of haemoglobin	During or end of shift	B, NS, SQ

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Section 4 - FIRST AID MEASURES

B: Background levels occur in specimens collected from subjects NOT exposed.
NS: Non-specific determinant; Also seen after exposure to other materials
SQ: Semi-quantitative determinant - Interpretation may be ambiguous; should be used as a screening test or confirmatory test.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Water spray or fog.
Foam.
Dry chemical powder.
Carbon dioxide.

FIRE FIGHTING

Alert Fire Brigade and tell them location and nature of hazard.
· Wear breathing apparatus plus protective gloves.
· Prevent, by any means available, spillage from entering drains or water courses.
Use fire fighting procedures suitable for surrounding area.
Cool fire exposed containers with water spray from a protected location.
DO NOT approach containers suspected to be hot.
If safe to do so, remove containers from path of fire.
Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

Non combustible.
Not considered to be a significant fire risk.
Will not burn, but heat produces highly toxic fumes/vapours.
Contact with acids produces toxic fumes.
Decomposes on heating and produces toxic and corrosive fumes of fluorides.

FIRE INCOMPATIBILITY

None known.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Wear impervious gloves and safety glasses.
- Use dry clean up procedures and avoid generating dust.
- Sweep up or
- Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- Place spilled material in clean, dry, sealable, labelled container.

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.

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Section 6 - ACCIDENTAL RELEASE MEASURES

- Collect recoverable product into labelled containers for recycling.
- Neutralise/decontaminate residue.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

potassium fluoride 500 mg/m³

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

potassium fluoride 40 mg/m³

other than mild, transient adverse effects without perceiving a clearly defined odour is:

potassium fluoride 20 mg/m³

The threshold concentration below which most people will experience no appreciable risk of health effects:

potassium fluoride 7.5 mg/m³

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

Very Toxic (T+)	>= 0.1%	Toxic (T)	>= 3.0%
R50	>= 0.25%	Corrosive (C)	>= 5.0%
R51	>= 2.5%		
else	>= 10%		

where percentage is percentage of ingredient found in the mixture

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

Use good occupational work practice.
Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Avoid generating and breathing dust.
Avoid contact with skin and eyes.
Wear personal protective equipment when handling.
Use in a well-ventilated area.
When handling, DO NOT eat, drink or smoke.
Avoid contact with incompatible materials.
Avoid sources of heat.
Avoid physical damage to containers.
Keep containers securely sealed when not in use.
Wash hands with soap and water after handling.
Work clothes should be laundered separately: NOT at home.

SUITABLE CONTAINER

Store in an isolated area away from other materials.
Plastic drum.

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Section 7 - HANDLING AND STORAGE

Multi-ply woven plastic or paper bag with sealed plastic liner

NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse.

Steel drum with plastic liner.

- Check that containers are clearly labelled.

Packaging as recommended by manufacturer.

STORAGE INCOMPATIBILITY

Segregate from acids, platinum, bromine trifluoride, glass and porcelain.

Avoid contact with acids.

Solutions of potassium fluoride are corrosive to glass and porcelain.

Reacts violently with platinum (Pt) and bromine trifluoride (BrF₃).

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



X



X



+



X



X



+

+: May be stored together

O: May be stored together with specific precautions

X: Must not be stored together

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

• potassium fluoride:

CAS:7789- 23- 3 CAS:13455- 21- 5

EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m ³)	Revised IDLH Value (ppm)
potassium fluoride	4	

MATERIAL DATA

Based on a study in which the threshold for minimum increase in bone density due to fluoride exposure was 3.38 mg/m³ (as fluoride), the present TLV-TWA has been adopted to prevent irritant effects and disabling bone changes. There is also support for the proposition that occupational exposure below the TLV will have no adverse effect on pregnant women or off-spring. IARC has classified fluorides in drinking water as Group 3 carcinogens; i.e. Not classifiable as to its carcinogenicity to humans. Equivocal evidence of carcinogenic activity (osteosarcoma) has been found in male rats administered sodium fluoride in drinking water. (0-175 ppm) Evidence was not found in female rats or in male or female mice.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTION



EYE

- Chemical goggles.
- Full face shield.

DO NOT wear contact lenses.

• Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

Impervious gloves.
PVC gloves.
Rubber gloves.
Rubber boots.

OTHER

Acid-resistant overalls.

- Impervious apron.
- Impervious protective clothing.
- Barrier cream.
- Eyewash unit.

Ensure there is ready access to a safety shower.

Always ensure that a supply, is on hand, of calcium gluconate gel for treatment of burns and calcium carbonate tablets for accidental ingestion.

RESPIRATOR

Protection Factor	Half- Face Respirator	Full- Face Respirator	Powered Air Respirator
10 x ES	P1 Air- line*	- -	PAPR- P1 -
50 x ES	Air- line**	P2	PAPR- P2
100 x ES	-	P3	-
		Air- line*	-
100+ x ES	-	Air- line**	PAPR- P3

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult your Occupational Health and Safety Advisor.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

Use in a well-ventilated area.

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25- 0.5 m/s (50- 100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5- 1 m/s (100- 200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1- 2.5 m/s (200- 500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5- 10 m/s (500- 2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood- local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

White, odourless, deliquescent powder or crystals with sharp, saline taste; mixes with water (92.3 g/100ml @ 18 deg C). Soluble in hydrofluoric acid, and liquid ammonia, but insoluble in alcohol.

PHYSICAL PROPERTIES

Solid.

Mixes with water.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Acid.

Contact with acids liberates toxic gas.

Molecular Weight: 58.10

Melting Range (°C): 858

Solubility in water (g/L): Miscible

pH (1% solution): Not available.

Volatile Component (%vol): None

Relative Vapour Density (air=1): Not available

Lower Explosive Limit (%): Not applicable

Autoignition Temp (°C): Not applicable

State: Divided solid

Boiling Range (°C): 1505

Specific Gravity (water=1): 2.48 @ 25 C

pH (as supplied): Not applicable

Vapour Pressure (kPa): 0.13 @ 885 C

Evaporation Rate: Not available

Flash Point (°C): Not applicable

Upper Explosive Limit (%): Not applicable

Decomposition Temp (°C): Not available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

Contact with acids liberates toxic gases.

Product is considered stable under normal handling conditions.

Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual.

The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.

Fluoride is a general protoplasmic poison which appears to produce at least four major functional derangements;

(1) enzyme inhibition, (2) hypocalcaemia, (3) cardiovascular collapse and (4) specific organ damage.

Hypocalcaemia which leads to severe reductions in plasma levels of both total calcium and ionic calcium, may appear several hours after exposure producing painful and involuntary muscular contractions (tetany) initially of the extremities (carpopedal spasm, twitching of limb muscles, laryngo-spasm, cardiospasm etc). Cardiovascular collapse is probably the principal cause of death in acute fluoride poisoning with sinus tachycardia the commonest cardiac finding and serious cardiac arrhythmias also common. Poisonings also cause major adverse effects on the brain and kidneys.

Toxic effects may include headache, excessive salivation, rapid movements of the eyeball (nystagmus) and dilated pupils. Convulsions may occur but lethargy, stupor and coma are more common. Renal pathology (acute congestion) has been described in human casualties.

EYE

The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.

When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.

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Section 11 - TOXICOLOGICAL INFORMATION

SKIN

Skin contact with the material may produce toxic effects; systemic effects may result following absorption.

The material can produce chemical burns following direct contact with the skin.

Open cuts, abraded or irritated skin should not be exposed to this material.

The material may accentuate any pre-existing skin condition.

Toxic effects may result from skin absorption.

The skin is readily penetrated by the fluoride ion causing liquefaction necrosis of the soft tissues and decalcification and corrosion of bone. Healing is delayed and necrotic changes may continue to occur and spread beneath a layer of tough coagulated skin.

INHALED

Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system in a substantial number of individuals following inhalation.

Acute effects of fluoride inhalation include irritation of nose and throat, coughing and chest discomfort.

A single acute over-exposure may even cause nose bleed. Pre-existing respiratory conditions such as emphysema, bronchitis may be aggravated by exposure. Occupational asthma may result from exposure.

Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

Acidic corrosives produce respiratory tract irritation with coughing, choking and mucous membrane damage. Symptoms of exposure may include dizziness, headache, nausea and weakness. In more severe exposures, pulmonary oedema may be evident either immediately or after a latent period of 5-72 hours. Symptoms of pulmonary oedema include a tightness in the chest, dyspnoea, frothy sputum and cyanosis. Examination may reveal hypotension, a weak and rapid pulse and moist rates. Death, due to anoxia, may occur several hours after onset of the pulmonary oedema.

CHRONIC HEALTH EFFECTS

Principal routes of exposure are by accidental skin and eye contact and inhalation of generated dusts.

Acute effects of fluoride inhalation include irritation of nose and throat, coughing and chest discomfort.

A single acute over-exposure may even cause nose bleed. Pre-existing respiratory conditions such as emphysema, bronchitis may be aggravated by exposure. Occupational asthma may result from exposure.

Long term exposure to vapour or dust with inorganic fluorides may result in fluorosis, with rheumatic symptoms, stiff joints, mottling of tooth enamel. Other signs may include nausea, vomiting, anorexia, diarrhoea or constipation, weight loss, anaemia, weakness and general ill-health. Polyuria and polydipsia may also occur. Exfoliative dermatitis, atopic dermatitis, stomatitis, gastrointestinal and respiratory allergy, and on occasions, central nervous system involvement have all been described.

When regular dust exposure occurs, annual determination of urinary fluoride is recommended.

TOXICITY AND IRRITATION

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (rat) LD50: 245 mg/kg

IRRITATION

Nil Reported

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Section 12 - ECOLOGICAL INFORMATION

No data for potassium fluoride.

Section 13 - DISPOSAL CONSIDERATIONS

Recycle wherever possible. Consult manufacturer for recycling options. Consult State Land Waste Management Authority for disposal.

Dissolve solid waste in water.

Treat with an excess of lime to precipitate the fluoride.

Bury residue in an authorised landfill.

Decontaminate empty containers with a lime slurry.

For small quantities:

- Cautiously dissolve in water
- Neutralise with sodium carbonate or if product does not dissolve completely add a small quantity of hydrochloric acid followed by sodium carbonate
- Add excess calcium chloride to precipitate the fluoride and/ or carbonate
- Remove solids to site approved for hazardous waste.

WASTE DISPOSAL PROCEDURES

- Wear eye protection, protective clothing and butyl rubber gloves to control personal contact from potassium fluoride. Work in a well ventilated area. Add 0.6g of calcium hydroxide and 13mL of water to every 1g of fluoride. Stir the contents of the mixture for 24 hours. Filter the mixture. Collect and wash the filtrate into the drain with copious amounts of water. Dispose of the solid residue with normal refuse [Armour 1996].

SPILLAGE DISPOSAL

- Wear a face shield, goggles, protective clothing and butyl rubber gloves to control personal contact from potassium fluoride. Collect the potassium fluoride in a large beaker. For every 1g of potassium fluoride add 0.6g of calcium hydroxide and 13mL of water to the beaker. Stir the contents for 24 hours. Filter the mixture. Empty the filtrate into the drain. Discard the solid residue with normal refuse [Armour 1996].

Section 14 - TRANSPORTATION INFORMATION



Labels Required: TOXIC
HAZCHEM: 2Z

UNDG:

Dangerous Goods Class: 6.1

UN Number: 1812

Shipping Name: POTASSIUM FLUORIDE, SOLID

Subrisk:

Packing Group:

None

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Section 14 - TRANSPORTATION INFORMATION

Air Transport IATA:

ICAO/IATA Class:	6.1	ICAO/IATA Subrisk:	None
UN/ID Number:	1812	Packing Group:	III
Special provisions:	None		
Shipping Name: POTASSIUM FLUORIDE, SOLID			

Maritime Transport IMDG:

IMDG Class:	6.1	IMDG Subrisk:	None
UN Number:	1812	Packing Group:	III
EMS Number:	F- A, S- A	Special provisions:	None
Shipping Name: POTASSIUM FLUORIDE, SOLID			

Section 15 - REGULATORY INFORMATION

REGULATIONS

potassium fluoride (CAS: 7789-23-3) is found on the following regulatory lists;
International Agency for Research on Cancer (IARC) Carcinogens
OECD Representative List of High Production Volume (HPV) Chemicals
The Australia Group Export Control List: Chemical Weapons Precursors
WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established

potassium fluoride (CAS: 13455-21-5) is found on the following regulatory lists;
International Agency for Research on Cancer (IARC) Carcinogens
OECD Representative List of High Production Volume (HPV) Chemicals
The Australia Group Export Control List: Chemical Weapons Precursors
WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
potassium fluoride	7789- 23- 3, 13455- 21- 5

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

Issue Date: 12-May-2018