



MATERIAL SAFETY DATA SHEETS

23

Aluminium fluoride

1. CHEMICAL IDENTITY

Chemical Name : Aluminium fluoride

Chemical Classification: Reactive

Trade Name :

Synonyms: Aluminium trifluoride

Formula : AlF₃

CAS No: 7784-18-1

UN No: 2811

Regulated Identification

Shipping Name : Poisonous solid

Hazchem Code : 2X

Codes / Label : Class 6.1, Reactive

Hazardous Waste ID No : 17

HAZARDOUS INGREDIENTS	C.A.S. No.	HAZARDOUS INGREDIENTS	C.A.S. No.
1 Aluminium fluoride	7784-18-1	3	
2		4	

2. PHYSICAL / CHEMICAL DATA

Boiling Pt. °C: Sublimes at 1272°C (760 mmHg) **Physical State:** Solid **Appearance:** White powder (White, hexagonal crystals).

Melting Pt °C: 1291 **Vapour Pressure @ 35°C mmHg:** 1 mm Hg at 1238 °C **Odour:** Odourless

Vapour Density(Air =1): **Solubility in water at 30°C g/100ml:** 0.559 g/100 mL @ 25 °C **Others:** Sparingly soluble in acids and alkalies. Hydrolyzed by superheated steam at 300-400 °C.

Specific Gravity (Water =1): 2.882 at 25°C

pH :

3. FIRE / EXPLOSION HAZARD DATA

Flammability : No

LEL:

Flash Point °C in OC:

TDG Flammability:

UEL:

Flash Point °C in CC:

Autoignition Temperature °C :

Explosion sensitivity to impact: Stable

Explosion sensitivity to static Electricity: Stable

Hazardous Combustion Products : Emits toxic fumes of fluoride

Hazardous Polymerization : Will not occur.

Combustible Liquid: No

Explosive Material: No

Corrosive Material No

Flammable Material: No

Oxidiser : No

Others:

Pyrophoric Material: No

Organic Peroxide : No

4. REACTIVITY DATA

Chemical Stability : Stable

Incompatibility with other material : Acids, glass.

Reactivity : Violently impact-sensitive when in contact with Na and K

Hazardous :
Reaction Products

5. HEALTH HAZARD DATA

Routes of entry: Inhalation, skin, eyes and ingestion

Effects of Exposure / Symptoms:

Inhalation acute: Respiratory irritation, possible nose bleeding or vomiting. Chronic: Aggravates bronchitis, asthma, increased bone density.

Emergency Treatment :

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do not use mouth-to-mouth respiration.

Skin: Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do not induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

LD50 (oral-rat) mg/kg: 103 mg/kg (Mouse)	STEL:
LC50 (rat) mg/kg:	Odour Threshold:
Permissible Exposure Limit: 2.5 mg/m ³	TLV (ACGIH) : 2.5 mg/m ³

NFPA Hazard	Health	Flammability	Reactivity	Special
Signals	2	0	0	

6. PREVENTIVE MEASURES

Personal Protective Equipment : Wear appropriate protective eyeglasses or chemical safety goggles.

Equipment : Wear appropriate protective gloves to prevent skin exposure. Wear appropriate protective clothing to prevent skin exposure.

Handling : Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Wash clothing before reuse.

Storage : Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Do not store in glass. Store under argon.

Precautions : Avoid contact with solid or dust Provide respirator for intermittent heavy dust exposures.

7. EMERGENCY / FIRST AID MEASURES

FIRE:

Fire Extinguishing Media : Use dry chemical or carbon dioxide. Do not use halogenated extinguishing agents on spilled material. Violent reaction may result.

Special Procedure : Keep the containers cool by spraying water, if exposed to heat or flame.

Unusual Hazards : Poisonous gases are produced.

EXPOSURE: First Aid Measures:

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do not use mouth-to-mouth respiration.

- Skin:** Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
- Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
- Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid. Do not induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Antidotes / Dosages: Infusion of Glucose, Gluconates.

SPILLS :

Steps To Be Taken : Sweep and collect without making dust. Wash the surface with water and soap.

Waste Disposal Method: Seal all waste in vapour tight plastic bags for eventual disposal.

8. ADDITIONAL INFORMATION / REFERENCES

9. MANUFACTURERS / SUPPLIERS DATA

NAME OF FIRM :	Contact person
MAILING ADDRESS :	in Emergency :
TELEPHONE / TELEX NOS :	Local Bodies involved :
TELEGRAPHIC ADDRESS :	Standard Packing :
OTHERS :	Trem Card Details / Ref :

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