



XI'AN FUNCTION MATERIAL GROUP CO., LTD  
Material Safety Data Sheet  
Lithium hexafluorophosphate

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1. Product and Company Identification

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Trade Name: Lithium hexafluorophosphate  
Chemical Formula:  $\text{LiPF}_6$   
Recommended Use: Scientific research and development

Manufacturer/Supplier: XI'AN FUNCTION MATERIAL GROUP CO., LTD  
Street: No. 69, Gazelle Valley, High-Tech Zone  
City: XI'AN  
State: Shannxi  
Zip Code: 710077  
Country: China  
Tel #: +86-29-88993870/+86-13519132051

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2. Hazards Identification

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Signal Word:

Danger



Hazard Statements:

H301: Toxic if swallowed  
H314: Causes severe skin burns and eye damage  
H318: Causes serious eye damage  
H335: May cause respiratory irritation  
H372: Causes damage to organs through prolonged or repeated exposure

Precautionary Statements:

P260: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264: Wash face, hands and any exposed 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  
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection  
P301 + P310+ P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.  
P305 + P351 + P338 + P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P314: Get medical advice/ attention if you feel unwell.  
P363: Wash contaminated clothing before reuse.  
P403+P233: Store in a well-ventilated place. Keep container tightly closed  
P405: Store locked up.  
P501: Dispose of contents/ container to an approved waste disposal plant.

HMIS Health Ratings (0-4):

Health:	3
Flammability:	0
Physical:	1

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### 3. Composition

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Chemical Family:	Inorganic
Additional Names:	N/A

Lithium hexafluorophosphate (LiPF<sub>6</sub>):

Percentage:	100 wt%
CAS #:	21324-40-3
EC #:	244-334-7

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### 4. First Aid Procedures

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General Treatment:	Immediate medical attention is required if symptoms persist.
Special Treatment:	None
Important Symptoms:	Causes burns by all exposure routes. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.
Inhalation:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion:	Give one to two glasses of water. Never induce vomiting or give anything by mouth to an unconscious person. Call a physician or poison control center immediately.
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing. Immediate medical attention is required
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediate medical attention is required

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### 5. Firefighting Measures

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Flammability:	Non-flammable
Extinguishing Media:	No special restrictions – use suitable extinguishing agent for surrounding material and type of fire. Do not use water for metal fires – use CO <sub>2</sub> , sand, extinguishing powder.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

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## 6. Accidental Release Measures

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If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

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## 7. Handling and Storage

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Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

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## 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits:	2.5 mg/m <sup>3</sup> as LiPF <sub>6</sub> , long-term value
Threshold Limit Value:	2.5 mg/m <sup>3</sup> as LiPF <sub>6</sub> , long-term value
Special Equipment:	None
Respiratory Protection:	Use a respirator with type P100 (USA) or P3 (EN143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protective Gloves:	Nitrile rubber, NBR 0.11mm thick.
Eye Protection:	Tight sealing safety goggles. Face protection shield.
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## 9. Physical and Chemical Characteristics

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Color	Off-White
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	200 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	2.83 g/cc
Molecular weight:	151.91 g/mol

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## 10. Reactivity

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Stability:	Moisture sensitive. Air sensitive.
Reacts With:	Reacts dangerously with glass. Avoid strong oxidizing agents, Strong acids.
Incompatible Conditions:	Moisture, Air
Hazardous Decomposition Products:	Oxides of phosphorus, Hydrogen fluoride, Lithium oxide

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## 11. Toxicological Information

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### Potential Health Effects:

Eyes:	Causes serious eye damage
Skin:	Causes severe skin burns, Toxic
Ingestion:	Harmful, Strong corrosive effect on mouth and throat to the danger of perforation of esophagus and stomach
Inhalation:	May cause irritation
Chronic:	N/A

Signs & Symptoms: N/A

Aggravated Medical Conditions: N/A

Median Lethal Dose: N/A

Carcinogen: N/A

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## 12. Ecological Information

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Aquatic Toxicity: N/A

Persistent Bioaccumulation Toxicity: N/A

Very Persistent, Very Bioaccumulative: N/A

Notes: N/A

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## 13. Disposal Considerations

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Dispose of in accordance with local, state, national, and international regulations.

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## 14. Transportation Data

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Hazardous: Hazardous for transportation



Hazard Class: 8 Corrosive substances

Secondary Class: 6.1 Toxic substances.

Packing Group: I

UN Number: UN2923

Proper Shipping Name: Corrosive solids, toxic, n.o.s. (Lithium hexafluorophosphate)

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## 15. Regulatory Information

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Sec 302 Extremely Hazardous: No

Sec 304 Reportable Quantities: N/A

Sec 313 Toxic Chemicals: No

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## 16. Other Information

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This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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