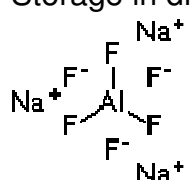


NAVIN FLUORINE INTERNATIONAL LTD		web: http://www.nfil.in mailto: bulkfluoride@nfil.in
		2nd Floor, Suntek Centre, 37/40, Subhash Road, Vile Parle (East), Mumbai-400057. India.

PRODUCT SPECIFICATION	
Title: SYNTHETIC CRYOLITE (Na ₃ AlF ₆)	Document No. : NFIL/QC/SPEC/FP/054/00 Effective Date : 05/11/2008

- Material Code : FLU008006
- Packing : HDPE 25kg, 50 kg Bags & HDPE 1.0 Ton jumbo bags.
- Storage Specifications : Storage in dry condition at Room temperature.
- Structural Formula : 
- Molecular Formula : Na₃AlF₆
- Molecular Weight : 209.94
- Synonyms : Sodium Aluminum Fluoride; Sodium fluoaluminate

Sr. No.	TEST	SPECIFICATION		
		Pure Quality	Extra Pure Quality	Normal Quality
Product Specification:				
1	Appearance/Description	White to pink colored granules		
2	Purity (as Na ₃ AlF ₆)	98.00 % Min.	98.00 % Min.	97.00 % Min.
3	Total fluorine (as F)	53.00 % Min.	53.00 % Min.	53.00 % Min.
4	Aluminium (as Al)	12 - 14 %	12 - 14 %	--
5	Sodium (as Na)	30 - 34 %	30 - 34 %	--
6	Silica (as SiO ₂)	0.20 %Max.	0.20 %Max.	0.20 %Max.
7	Iron (as Fe ₂ O ₃)	0.10 %Max.	0.10 %Max.	0.05 %Max.
8	Sulphur trioxide (as SO ₃)	0.50% Max.	0.50% Max.	0.30% Max.
9	NaF/AlF ₃ (by molar ratio)	1.30 -1.45	--	2.6 -3.0
10	Phosphorous (as P ₂ O ₅)	--	0.010%Max.	0.030%Max.
11	Loss on ignition (at 550 °C)	1.00% Max.	1.00% Max.	0.50% Max.
12	Bulk Density	--	--	0.95% g/cc. Min.

- Customer should discuss with business unit at bulkfluoride@nfil.in for the other requirements than specified.
- Analytical Method No. **NFIL/QC/WI/FP/054**



NAVIN FLUORINE
INTERNATIONAL LIMITED

MATERIAL SAFETY DATA SHEET (MSDS)

Cryolite

1. CHEMICAL IDENTITY

Chemical name	Cryolite, synthetic
Synonym	Trisodium hexafluoroaluminate
Chemical Formula	3NaF* AlF ₃

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients Name	Trisodium hexafluoroaluminate	CAS No.: 15096-52-3
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3. PHYSICAL / CHEMICAL DATA

Boiling Point	Not applicable (Decomposes)	Vapour Pressure	Not Available
Melting Point	1,027°C (1880 °F)	Solubility in water	0.41 g/l at 25 oC (77oF)
Vapour Density	Not Available	Appearance	Crystalline powder
pH	6 @ 20 °C (68°F) 0.42 g/l	Odour	
Specific Gravity	2.9-2.96 @ 20 °C (68°F)	Decomposition Temperature	> 1,000 °C (1832 °F)
Physical State	solid	Other	

4. FIRE / EXPLOSION HAZARD DATA

Flammability	No	Flash Point	Not flammable
Auto ignition temperature	Not applicable	LEL	Not applicable
Explosion sensitivity to impact		UEL	Not applicable
Explosion sensitivity to static electricity			
Hazardous Combustion products			
Hazardous Polymerization	Will not occur.		
Pyrophoric material		Corrosive	
Organic Peroxide		Oxidizer	
Explosive material	Not Available	Other	

5. STABILITY & REACTIVITY DATA

Chemical Stability	Stable under normal temperatures and pressures.
Incompatibility	Strong acids and strong bases.
Conditions to avoid	None.
Hazardous reaction / decomposition products.	Hydrogen Fluoride

6. HEALTH HAZARD DATA


Effects of exposure / symptoms	<p>Eye: Slight irritation.</p> <p>Skin: Contact will cause slight irritation. In case of repeated contact: risk of dermatitis.</p> <p>Ingestion: By ingestion of large quantities: nausea and vomiting, abdominal cramps and diarrhea. By ingestion of large quantities: risk of hypocalcaemia with nervous disorders (tetany) and cardiac rhythm disorders. By ingestion of large quantities: risk of general symptoms. By ingestion of large quantities: risk of liver alterations.</p>
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	<p>Inhalation: Contact will cause nose and throat irritation and cough. At high concentrations, risk of chemical pneumonitis. In case of repeated or prolonged exposure: risk of bronchial hyperreactivity In case of repeated or prolonged exposure: risk of sore throat, nosebleeds, and chronic bronchitis. In case of repeated or prolonged exposure, at high concentrations: risk of pulmonary fibrosis.</p> <p>Chronic: None reported.</p>	
7. TOXICOLOGICAL INFORMATION		
LD 50 /	> 2,000 mg/kg, rat	
Exposure Limit (ACGIH TLV)	2.5 mg/m ³ (as F)	
8. ECOLOGICAL INFORMATION		
<p>Acute ecotoxicity: • Fishes, <i>Salmo gairdneri</i>, LC50, 96 hour(s), 47 mg/l • Crustaceans, <i>Daphnia pulex</i>, EC50, 48 hour(s), 5 mg/l • Algae, <i>Scenedesmus quadricauda</i>, NOEC, 96 hour(s), 5,000 mg/l</p>		
9. PREVENTIVE MEASURES / EXPOSURE CONTROL / PERSONAL PROTECTION		
Engineering Control		
Personal Protective Equipment	<p>Eyes: Dust proof goggles, if dusty.</p> <p>Skin: Protective clothing suitable for the handling of chemicals. Protective gloves- chemical resistant (PVC).</p> <p>Clothing:</p> <p>Respirators: Use only respiratory protection that conforms to international/national standards.</p>	
10. HANDLING & STORAGE		
Normal handling	Keep away from reactive products. Avoid heating the product above the decomposition temperature.	
Storage Recommendation	Keep in original packaging, closed.	
11. EMERGENCY / FIRST AID MEASURES		
Fire	Fire Extinguishing Medium	If involved in a fire, use water. Control the use of water due to environmental risk.
Exposure / First Aid Measure	Inhalation	If inhaled, remove subject from dusty environment and let him blow his nose. Consult with a physician in case of respiratory symptoms.
	Skin	Remove contaminated shoes, socks and clothing; wash the affected skin with soap and water.
	Eyes	Immediately flush eyes with running water for 15 minutes, while keeping the eyelids wide open. Consult with an ophthalmologist in case of persistent pain.
	Ingestion	Do not induce vomiting. Seek medical attention.
Special Procedure		
12. ACCIDENTAL RELEASE MEASURE		
Spills/Leaks	Avoid dispersing the dust into a cloud.	

13. DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

14. TRASPOT INFORMATION

Proper shipping Name	Solid, N.O.S., (Cryolite)
Hazard Class	9
UN Number	3077
Packing Group	III
Hazard Label	

15. REGULATORY INFORMATION**16. NAME OF FIRM - NAVIN FLUORINE INTERNATIONAL LIMITED**

Mailing address	Post Office - Bhestan, Surat, PIN 395 023, Gujarat, India
Telephone	+91-261-2890325 to 2890329
Fax	+91-261-2890288

DISCLAIMER

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