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MSDS FOR SYNTHETIC CRYOLITE

Section 1: Chemical Name

Chemical Name in Chinese 1: 氟化铝钠

Chemical Name in English 1: Sodium aluminium fluoride Chemical Name in Chinese 2: 冰晶石

Chemical Name in English 2: Aluminum sodium fluoride
(Synthetic Cryolite)

CAS No.: 15096-52-3

Molecular Formula: Na₃AlF₆

Molecular Weight: 209.95

Section 2: Composition and Information on Ingredients

Name	Content (%)	CAS No.
Cryolite	95.5	15096-52-3

Section 3: Hazards Identification

- 1: Health Hazard: Accidental ingestion may cause acute gastroenteritis symptom. Long-term inhalation of this dust may induce pneumoconiosis and fluorosis of bone. Its decomposition product hydrogen fluoride can produce irritation;
- 2: Environment Hazard: It's harmful to environment, it may cause water pollution;
- 3: Inflammation Hazard: It's non-inflammable, but toxic and irritant;

Section 4: First Aid Measures

- 1: Skin Contact: Remove contaminated clothing and immediately flush skin with plenty of running water;
- 2: Eye Contact: Lift eyelids and flush eyes with plenty of running water or normal saline. Get medical attention;
- 3: Inhalation: Remove rapidly to fresh-air area. Keep respiratory tract clear. If breathing is difficult, give oxygen; if respiratory arrests, immediately give artificial respiration. Get medical attention;
- 4: Ingestion: Drink enough tepid water. Get medical attention;

Section 5: Fire Fighting Measures

- 1: Hazard Characteristic: It emits virulent fumes when heated, contacted acid or virulent;
- 2: Noxious Combustion Product: Sodium oxide, hydrogen fluoride, aluminum oxide;
- 3: Fire Extinguishing Method: Fire fighter must wear full fire- and gas-protection clothing and extinguish fire at upwind. Remove container from fire scene to open area as soon as possible. Select appropriate extinguishing agent according to ignition cause;

Section 6: Accidental Release Measures

- 1: Isolate leakage pollution area and restrict access;
- 2: Emergency disposal personnel shall wear dust mask and antitoxic clothing. Don't touch leakage directly;
- 3: Small Spill: Sweep carefully and transfer it to safety area;
- 4: Large Spill: Collection reclamation or deliver it to waste disposal area;

Section 7: Handling and Storage

- 1: Handling Precautions: Keep hermetic and local ventilation;
- 2: Operating personnel must be professionally trained and strictly comply with operation regulations;
- 3: Wear self-inhalation filter type dust respirator, chemical safety goggles, poison-infiltration-resistant clothing and rubber gloves. Avoid dust and avert contacting acids. Furnish with leakage emergency equipment;
- 4: Emptied container may have residues;
- 5: Storage Precautions: Store in shady and ventilated warehouse. Keep away from kindling and heat source. Prevent from direct sunlight. Provide with package encapsulation. Deposit separately from acids and avoid reserving mixedly. Storage area shall be furnished with suitable material to accept leakage;

Section 8: Exposure Controls/Personal Protection

- 1: Occupation Exposure Limits China MAC (mg/m³): 1(F)
Former Soviet Union MAC (mg/m³): not applicable. TLVTN: 2mg(Al)/m³
TLVMA: not applicable

Personnel shall wear air respirator when salvage or evacuation at emergency;

5: Eye Protection: Wear chemical safety goggles;

6: Skin Protection: Wear poison-infiltration-resistant clothing, rubber gloves and boots;

7: Other Protection: No smoking, taking food and drinking water at operational site. Wash hands before meals. Have a shower and change clothes after finishing work;

8: Maintain good hygienic habits;

Section 9: Physical and Chemical Properties

1: Major Constituent:

2: Appearance and Character: Colorless to white hyaloid solid;

3: PH:

4: Melting Point (°C): 1000°C

5: Bolling Point (°C): No information.

6: Relative Density (water=1): 2.95

7: Relative Vapour Density (air=1): No information.

8: Saturated Vapor Pressure (kPa): No information.

9: Combustion Heat (kJ/mol): Not available.

10: Critical Temperature (°C): Not available.

11: Critical Pressure (MPa): Not available.

12: Octanol/Water Partition Coefficient of numerical: No information.

13: Flash Point (°C): Not available.

14: Ignition Temperature (°C): Not available.

15: Upper Explosive Limit (V/V): Not available.

16: Lower Explosive Limit (V/V): Not available.

17: Solubility: Soluble in concentrated sulfuric acid;

18: Main Application: It's used in electrolytic aluminum. It's also used to produce milk glass, insecticide etc;

19: Other Physical and Chemical Properties:

Section 10: Stability and Reactivity

1: Stability:

2: Incompatibility with various substances: acid;

3: Conditions of Avoiding Contact:

4: Polymerization Hazard:

5: Decomposition Product:

Section 11: Toxicological Information

1: Acute Toxicity: LD50: 200 mg/kg (Rat)

LC50: No information.

2: Subacute and Chronic Toxicity:

3: Irritation:

4: Sensitization:

5: Mutagenicity:

6: Teratogenicity:

7: Carcinogenicity:

Section 12: Ecological Information

1: Ecotoxicity:

2: Biological Degradability:

3: Abiological Degradability:

4: Biological Enrichment or Cumulative:

5: Hazardous Effect: The substance is harmful to environment, suggest that don't let it enter surroundings. Pay special attention to water pollution;

Section 13: Disposal Considerations

1: Waste Properties:

2: Waste Disposal Method: Recycle if possible. Or dispose with safety landfill. Return emptied container to manufacturer or bury it at specified site;

3: Waste Precautions:

Section 14: Transport Information

1: Packing Mark:

2: Package Category:

3: Packing Method: No information.

4. IMDG Regulatron: Not Regulated.

5: Transport Precautions: Package shall be integrated and loading shall be stable when shipment. It shall ensure container nonleaky, noncollapsed, nondownfallen and undamaged. It mustn't be mixedly load and transport with acids, edible chemicals, etc.. It

shall prevent from insolation, rain water and high temperature. Vehicle shall be cleaned thoroughly after finishing transportation.
Drive according to specified route while highway transportation;

Section 15: Regulatory Information

Regulatory Information: The Regulations of Safe Management Regarding Dangerous Chemicals (issued by State Council on Feb. 17th, 1987), Implementation Regulations of Safe Management Regarding Dangerous Chemicals ([1992] No.677), Regulations of Safely Use Chemicals at Operational Site, ([1996] No.423) etc., stipulating safety use, production, storage, transportation, assembly, discharge, etc.

Section 16: Other Information

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