Material Safety Data Sheet

Los Angeles Chemical Company
Ardine Street, South Gate, CA. 90280
213/562-9500 CHEMTREC 800/424-9300
L.A. POISON INFO CENTER 800/356-3129

Product: CRYOLITE 4545

MSDS No: LACCO / 207
Date: April, 1993

National Paint and Coatings Association

Hazardous Material Identification System

HEALTH HAZARD	2 - Moderate
FLAMMABILITY HAZARD	0 - Minimal
REACTIVITY HAZARD	0 - Minimal
PERSONAL PROTECTION	SEE SECTION 8

SECTION I. MATERIAL IDENTIFICATION

Trade/Material Name: CRYOLITE

Description: A natural fluoride of sodium and aluminum; made synthetically from fluorspar, sulfuric acid, hydrated alumina, and sodium carbonate. Used as an electrolyte in the reduction of alumina to aluminum; in ceramics; as an insecticide; binder for abrasives; in electric insulation; explosives; polishes.

Other Designations: Sodium Fluoroaluminate, Aluminum Sodium Fluoride, Sodium Aluminum Fluoride, Sodium Aluminofluoride, Cryolite, Na_3AlF6, 3NF-AlF3, Sodium Hexafluoroaluminate.

CAS: 15096-52-3

Available from several suppliers, including:

SECTION II. INGREDIENTS AND HAZARDS

Ingredient Name:	**CAS Number:**	**Percent:**	**Exposure Limits:**
Sodium Hexafluoroaluminate	15096-52-3	>98.5%	ACGIH TLV* 8- r. TWA: 2.5 mg/m OSHA PEL* 8-hr. TWA: 2.5 mg/m^3 Oral, Rat, LD50: 200 mg/kg Oral, Rabbit, LDLo: 9000 mg/kg

*Current(1986-87)ACGIH TLV and OSHA PEL for fluoride, as F.

NOTE: Some grades may contain significant impurity levels. Consult supplier's specification.

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SECTION III. PHYSICAL DATA

Appearance & Odor: Normally a white powder. However, the natural mineral form may be reddish, brown, or black. No odor.

Boiling point:	Decomposes	**Evaporation rate:**	Not Found
Vapor pressure:	@ 25°C: Negligible	**Melting point:**	1854°F (1012°C)
Water solubility(%):	@ 25^0C: 0.042 g/L		
	@ 100^0C: 0.135 g/L	**Molecular weight:**	209.94
Vapor density (air=1):	@ 25°C: 2.97 g/cc		

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point (method): Not Found **Limits: LEL %:** - - **UEL %:** - -
Extinguishing Media: Sodium hexafluoroaluminate is not combustible and does not support combustion. Use extinguishing agents that are suitable to the surrounding fire. Move containers from the fire area if it is safe to do so. **Autoignition Temp:** Not Found

Unusual fire or explosion hazards: This material is poisonous when inhaled or swallowed. Toxic and irritating gases/fumes may be evolved under fire conditions.

Special fire-fighting procedures: Fire fighters should use self-contained breathing apparatus and wear full protective gear.

SECTION V. REACTIVITY DATA

Material is stable under normal conditions Hazardous polymerization does not occur

Chemical incompatibilities: Highly toxic and corrosive hydrogen fluoride gas can be generated when this material comes in contact with strong acids or in its exposure to water vapor at high temperatures.

Hazardous decomposition Products: Hydrogen fluoride gas is evolved when sodium hexafluoroaluminate decomposes in the presence moisture.

SECTION VI. HEALTH HAZARD INFORMATION

This product is not. considered a carcinogen by the NTP, IARC, or OSHA.

Summary of risks: This material can enter the body if it is inhaled or swallowed. Excessive dust inhalation may cause irritation of the nose, throat, and respiratory tract. Skin and eye contact can cause irritation. Ingestion causes severe gastrointestinal distress with excessive salivation, nausea, vomiting, diarrhea, and abdominal pain. Other effects may include muscular weakness, tremors, convulsions, weak pulse, loss of consciousness, and death. Prolonged exposure to fluoride by

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HEALTH HAZARD INFORMATION continued from page 2

inhalation or ingestion can result in skeletal abnormalities characterized by mottling of tooth enamel, stiff joints, bone densification, and calcification of the ligaments of the pelvis and spine. Digestive tract disturbances have also been reported in workers who have been exposed to fluoride. Prolonged/repeated skin contact can cause dermatitis.

First aid:

Eye contact: Immediately flush eyes, including under the eyelids, with a gentle flow of running water for at least 15 minutes. Get medical help.*

Skin contact: Thoroughly wash affected area with mild soap and water. If irritation persists or recurs, prevent further contact and oet medical help.*

Inhalation: Remove victim from exposure. If his breathing is difficult, administer oxygen under low pressure. If his breathing has stopped, start artificial respiration immediately. Get medical help.*

Ingestion: Give victim a large quantity of milk or water to drink. Milk is preferable because its calcium content precipitates fluoride. Keep victim warm and at rest. Get medical help immediately.* NOTE: Never give anything by mouth to someone who is convulsing.

* GET MEDICAL ASSISTANCE = In plant, paramedic, community. Get medical help for further treatment, observation, and support after first aid.

SECTION VII. SPILL, LEAK AND DISPOSAL PROCEDURES

Spill / Leak procedures: Before using sodium hexafluoroaluminate it is essential that proper emergency procedures be established and made known to all involved personnel. Ventilate the sodium hexafluoroaluminate spill area. Cleanup personnel should wear gloves, goggles, and, if dust is generated, respiratory protective equipment. Wear protective clothing as required by the spill situation to prevent skin contact. Clean up spilled material in a manner that minimizes dust generation, such as vacuuming (with appropriate filter to prevent dust dispersion) or wet methods.

W**aste management / Disposal:** Place material into an appropriate container in an approved chemical-waste landfill. Contact your supplier or a licensed chemical waste disposal contractor for disposal instructions. Follow all applicable Federal, state, and local regulations.

Reportable Spill Quantity: None give in 40 CFR 117.3, "Reportable Quantities of Hazardous Substances."

EPA Hazardous Waste Number: Not listed in 40 CFR 261, Subpart D, "List of Hazardous Wastes."

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SECTION VIII. SPECIAL PROTECTION INFORMATION

Personal protective equipment:

Goggles: Dust-proof chemical goggles should be worn when handling this material

Contact lenses pose a special hazard; soft lenses may absorb irritants, and all lenses concentrate them. Particles may adhere to lens surfaces and cause corneal damage.

Gloves: Impervious gloves should be worn when handling this material.

Respirator: Use a NIOSH-approved respirator where dust levels exceed the TLV and during emergency and nonroutine operations. Respirators should have protection factors suitable to the level of exposure. Particulate respirators (except single-use or quarter-mask respirators) are acceptable for concentrations up to 25 mg/m-, a high-efficiency particulate filter respirator with full facepiece can be used for concentrations of up to 125 mg/m .*

Other: Other protective clothing such as aprons, coveralls, etc., should be worn as required by the work situation to prevent skin contact.

Workplace considerations:

Ventilation: Use local exhaust ventilation to control airborne sodium hexafluoroaluminate dust levels to below the TLV.

Safety stations:
Eyewash stations and washing facilities should be readily accessible, *

*Respirator usage must be in accordance with OSHA requirements (29 CFR 1910.134).

SECTION IX. SPECIAL PRECAUTIONS

Storage segregation: Store sodium hexafluoroaluminate in a cool, dry location away from acids. Protect containers from physical damage. Keep this material away from food products.

Special handling / storage: Practice good housekeeping to prevent accumulation of dust. Use procedures that minimize dust generation such as vacuuming or wet methods. Wash thoroughly after handling this material and before eating, drinking, smoking, and at the end of the workshift. Remove contaminated clothing promptly and launder it before wearing it again. Do not take this material out of your work area or to your home on your clothes or equipment.

Other precautions: Do not eat, drink, or use tobacco in areas where this material is handled. Avoid its contact with skin, eyes, and clothing. Use it with adequate ventilation and avoid inhaling its dust. Do not eat this material.

DOT Class: Not listed in Hazardous
Data source code(s): 2, 4, 5, 6, 9, 12, 14, 25, 27, 43, 49, 55, 61, 62, 82. CV 172.101 adn 172.102).
Prepared/revised by: B. MARTINEZ

 SPECIAL PRECAUTIONS continues on page 5

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SPECIAL PRECAUTIONS continued from page 4

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