

AWSM Industries, LLC

MATERIAL SAFETY DATA SHEET

Cryolite, synthetic

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Cryolite, synthetic

OTHER/GENERIC NAMES: Trisodium hexafluoroaluminate

PRODUCT USE: Metallurgy, Abrasives, Glass industry, Filters

DISTRIBUTOR: AWSM Industries, LLC
12 Route 17 North, Suite 309
Paramus, NJ 07652

TELEPHONE: (201) 845-4666
(Monday-Friday, 8:30 AM – 5:00 PM)

CHEMTREC PHONE: 1800-424-9300
(24 Hours/Day, 7 Days/Week)

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME:</u>	<u>CAS NO.</u>	<u>% WT</u>
Trisodium hexafluoroaluminate	15096-52-3	95.00

Trace impurities and additional material names not listed above may also appear in Section 15 towards the end of the MSDS. These materials may be listed for local "Right-to-Know" compliance and for other reasons.

OSHA Hazard Communication Standard: *This product is considered hazardous under the OSHA Hazard Communication Standard*

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Hazardous product for human health and aquatic environment. Presents hazards from its ionizing fluorine. In case of decomposition, releases hydrogen fluoride.

POTENTIAL HEALTH HAZARDS

EYES: Slight irritation.

SKIN: Contact will cause slight irritation. In case of repeated contact: risk of dermatitis.

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.

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.

DELAYED EFFECTS: None reported.

Ingredients found on one of the three OSHA designated carcinogen lists are listed below.

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INGREDIENT NAME

No ingredients listed in this section

NTP STATUS

IARC STATUS

OSHA LIST

SECTION 4: FIRST AID MEASURES

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.

INHALATION: If inhaled, remove subject from dusty environment and let him blow his nose. Consult with a physician in case of respiratory symptoms.

INGESTION: Do not induce vomiting. Seek medical attention.

IF THE SUBJECT IS COMPLETELY CONSCIOUS: Rinse mouth with fresh water. Give to drink a 1% aqueous calcium gluconate solution. If the subject presents nervous, respiratory or cardiovascular disorders: administer oxygen.

IF THE SUBJECT IS UNCONSCIOUS: Classical resuscitation measures. Never give anything by mouth to an unconscious person.

Medical Treatment/ Notes to Physician: None

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT:	Not flammable
FLASH POINT METHOD:	Not applicable
AUTOIGNITION TEMPERATURE:	Not applicable
UPPER FLAME LIMIT (volume % in air)	Not applicable
LOWER FLAME LIMIT (volume % in air)	Not applicable
FLAME PROPAGATION RATE (solids)	Not applicable

EXTINGUISHING MEDIA:

If involved in a fire, use water. Control the use of water due to environmental risk.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

No data.

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Non-combustible, formation of dangerous gas/vapors in case of decomposition.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (See section 8 for recommended personal protective equipment.)
Avoid dispersing the dust into a cloud.

PRECAUTIONS FOR PROTECTION OF THE ENVIROMENT:

Collect the product with suitable means avoiding dust formation. Place everything into a closed, labeled container compatible with the product. For disposal methods, refer to section 13. Clean area with large quantities of water.

CLEANUP METHODS:

Immediately notify the appropriate authorities in case of significant discharge. Do not discharge into the environment (sewers, rivers, soils,...)

SECTION 7: HANDLING AND STORAGE

NORMAL HANDLING: (See section 10 for recommended personal and protective equipment.)

Keep away from reactive products. (see section 10). Avoid heating the product above the decomposition temperature (see section 9).

STORAGE RECOMMENDATIONS:

Keep in original packaging, closed.

OTHER PRECAUTIONS:

Warn people about the dangers of the product. Avoid dust and formation of dust clouds.

Packaging: Paper.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION:	Protective clothing suitable for the handling of chemicals. Protective gloves-chemical resistant (PVC).
EYE PROTECTION:	Dust proof goggles, if dusty.
RESPIRATORY PROTECTION	Use only respiratory protection that conforms to international/national standards.
ADDITIONAL RECOMMENDATIONS	Shower and eye wash stations. Do not smoke, eat and drink in the working area. Consult the industrial hygienist or the safety manager for the selection of personal protective equipment suitable for the working conditions.

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EXPOSURE GUIDELINES:

INGREDIENT NAME

Trisodium hexafluoroaluminate

ACGIH TLV

2.5 mg/m³ (as F)

OSHA PEL

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

Crystalline powder

CHANGE OF STATE:

Melting Point: 1,027°C (1880 °F)
Boiling Point: Not applicable (Decomposition)
Decomposition Temperature: > 1,000 °C (1832 °F)

MOLECULAR WEIGHT:

Unknown

CHEMICAL FORMULA:

3NaF* AlF₃

ODOR:

Odorless

SPECIFIC GRAVITY (H₂O = 1):

2.9-2.96 @ 20 °C (68°F)

SOLUBILITY:

Water: 0.41 g/l at 25 °C (77°F)

pH:

Bulk Density: Not applicable (Decomposition)

Decomposition Temperature: > 1,000°C (1832°F)

6 @ 20 °C (68°F) 0.42 g/l

VAPOR PRESSURE:

No data

VAPOR DENSITY (air= 1.0):

No data

EVAPORATION RATE:

No Data

OTHER INFORMATION:

SECTION 10: STABILITY AND REACTIVITY

NORMALLY STABLE/(CONDITIONS TO AVOID):

None.

MATERIALS AND SUBSTANCES TO AVOID:

Strong acids and strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS:

Hydrogen Fluoride

HAZARDOUS POLYMERIZATION:

Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Inhalation: No data

Oral: LD₅₀, > 2,000 mg/kg, rat

Dermal: No data.

Irritation:

Rabbit, non irritant (skin)

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Rabbit, irritant (eyes)
Sensitization: Nodata.

Comments: Chronic exposure may entail dental or skeletal fluorosis.

CHRONIC TOXICITY:

- Inhalation, after prolonged exposure, rat, = 1 mg/m³, observed effect
- Oral route (diet), after repeated exposure, various species, Target organ: skeleton, = 14 ppm, observed effect
- Oral route (diet), after repeated exposure, rat/mouse, Target organ: skeleton, 25 ppm, observed effect (Sodium fluoride) 600 mg/m³, observed effect
- In vitro, no mutagenic effect
- In vivo, ambiguous mutagenic effect.
- No teratogenic effect
- No carcinogenic effect (Sodium fluoride)

Main Health Effects:

- Possible irritation of the mucous membranes, eyes and skin.
- Risk of respiratory sensitization.
- Chronic exposure to the product can cause bone fluorosis.

Inhalation:

- Nose and throat irritation
- Cough.
- At high concentrations, risk of chemical pneumonitis.
- In case of repeated or prolonged exposure: risk of bronchial hyperreativity or sore throat, nose bleeds, chronic bronchitis, or risk of pulmonary fibrosis

Eye Contact: Slight irritation

Skin Contact:

- Slight irritation.
- In case of repeated contact: risk of allergic dermatitis

Ingestion:

- By ingestion of large quantities: nausea and vomiting, abdominal cramps and diarrhea or risk of hypocalcaemia with nervous disorders (tetany) and cardiac rhythm disorders.
- By ingestion of large quantities: risk of general symptoms or liver alterations

Carcinogenic Designation: None

SECTION 12: ECOLOGICAL INFORMATION

Acute ecotoxicity:

- Fishes, *Salmo gairdneri*, LC50, 96 hour(s), 47 mg/l
- Crustaceans, *Daphnia pulex*, EC50, 48 hour(s), 5 mg/l
- Algae, *Scenedesmus quadricauda*, NOEC, 96 hour(s), 5,000 mg/l

Mobility:

- Air - Result: mobility as solid aerosols
- Water/soil - Result: low solubility and mobility
- Soil/sediments - Result: adsorption on mineral and organic soil constituents

Abiotic Degradation:

- Water/soil - Result: acid/base equilibrium as a function of pH
Degradation's products: fluoro-complexes (acid pH) / hydroxy-aluminum (environmental pH) / fluorhydric acid/fluoride

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- Water/soil - Result: complexation/precipitation of inorganic and organic materials
- Biotic Degradation:** Result: not applicable (inorganic compound)
- Potential for bioaccumulation:**
- Bioconcentration: log Po/w - Result: not applicable (ionizable inorganic compound)
 - Bioconcentration - Result: accumulation into vegetable leaves (Fluorides)
- Other adverse effects /Comments:**
- Study in progress.
 - Toxic for aquatic organisms.
 - Product fate is highly depending on environmental conditions: pH, temperature, oxidoreductive potential, mineral and organic content of the medium,...
-

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment:

- Dispose in compliance with local, state and federal regulations.
- It is recommended to contact the producer for recycling/recovery.
- Dispose of the product in a facility authorized for industrial waste taking care of elution risks.

Packaging treatment: Dispose of the containers by dispatching them to an approved incineration facility for hazardous waste.

RCRA Hazardous Waste: Not listed

SECTION 14: TRANSPORT INFORMATION

US DOT HAZARD CLASS: 9, PG III
US DOT ID NUMBER: UN3077
PROPER SHIPPING NAME: Environmentally hazardous substance, Solid, N.O.S., (Cryolite)

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

SECTION 15: REGULATORY INFORMATION

National Regulations (US)

TSCA Inventory 8(b): Yes

SARA Title III Sec. 302/303 Extremely Hazardous Substances (40 CFR355): No

SARA Title III Sec. 311/312 (40 CFR 370): Yes

Hazard Category: Chronic health hazard

Threshold planning quantity: 10,000 lbs

SARA Title III Sec. 313 Toxic Chemical Emissions Reporting (40 CFR 372): No

CERCLA Hazardous Substance (40CFR Part 302)

Listed Substance: No

Unlisted Substance: No

State Component Listing: No data

National Regulations (Canada) Canadian DSL Registration: DSL

WHMIS Classification: D2B - Toxic material

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Labeling according to Directive 1999/45/EC.
 Category ID Phrase

Category	ID	Phrase
Symbols	T	Toxic
	N	Dangerous for the environment
Phrases R	20/22	Harmful by inhalation and if swallowed.
	48/23/25	Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
	51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Phrases S	(1/2)	(Keep locked up and out of the reach of children.)
	22	Do not breathe dust
	37	Wear Suitable gloves
	45	In case of an accident or if you feel unwell, seek medical advice immediately (show the label where possible) seek medical advice.

SECTION 16: OTHER INFORMATION

CURRENT ISSUE DATE: JUNE 17, 2005
PREVIOUS ISSUE DATE: JANUARY 1, 2005

CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:
 Revised to fit standard 16 section format.

Ratings:

NFPA (NATIONAL FIRE PROTECTION ASSOCIATION)

Health = 0 Flammability = 0 Instability = 0 Special = None

HMIS (HAZARDOUS MATERIAL INFORMATION SYSTEM)

Health = 0 Fire = 0 Reactivity = 0 PPE = Supplied by User; dependent on local conditions

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Date Created	Created By	Replaces	Area	Product/ Process	Special
9/01/05	JD	01/01/05	MSDS	Cryolite	SVY