

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (4N) 99.99% Cryolite (Na<sub>3</sub>AlF<sub>6</sub>) Sputtering Target

**Product Code:** NA-ALF-04-ST

**CAS Number:** 15096-52-3

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Inhalation (Category 4), H332

Specific target organ toxicity - repeated exposure (Category 1), H372

Short-term (acute) aquatic hazard (Category 2), H401

Long-term (chronic) aquatic hazard (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H332 Harmful if inhaled.

H372 Causes damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash 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.  
P273 Avoid release to the environment.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
P314 Get medical advice/ attention if you feel unwell.  
P391 Collect spillage.  
P501 Dispose of contents/ container to an approved waste disposal plant.  
Hazards not otherwise classified (HNOC) or not covered by GHS - none

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## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances  
Synonyms : Kryolith  
Sodium hexafluoroaluminate  
Formula :  $\text{AlF}_6\text{Na}_3$   
Molecular weight : 209.94 g/mol  
CAS-No. : 15096-52-3

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## **SECTION 4. FIRST AID MEASURES**

Description of first aid measures  
General advice  
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.  
If inhaled  
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.  
In case of skin contact  
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.  
In case of eye contact  
Flush eyes with water as a precaution.  
If swallowed  
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.  
Most important symptoms and effects, both acute and delayed  
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11  
Indication of any immediate medical attention and special treatment needed  
No data available

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media  
Suitable extinguishing media  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
Special hazards arising from the substance or mixture

Hydrogen fluoride, Sodium oxides, Aluminum oxide  
Advice for firefighters  
Wear self-contained breathing apparatus for firefighting if necessary.  
Further information  
No data available

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures  
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.  
For personal protection see section 8.  
Environmental precautions  
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.  
Discharge into the environment must be avoided.  
Methods and materials for containment and cleaning up  
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.  
Reference to other sections  
For disposal see section 13.

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## **SECTION 7. HANDLING AND STORAGE**

Precautions for safe handling  
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.  
Provide appropriate exhaust ventilation at places where dust is formed.  
For precautions see section 2.  
Conditions for safe storage, including any incompatibilities  
Keep container tightly closed in a dry and well-ventilated place.  
Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects  
Specific end use(s)  
Apart from the uses mentioned in section 1 no other specific uses are stipulated

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure controls  
Appropriate engineering controls  
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.  
Personal protective equipment  
Eye/face protection  
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).  
Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

a) Appearance Form: solid

Colour: beige

b) Odour No data available

c) Odour Threshold No data available

d) pH No data available

e) Melting point/freezing point

No data available

f) Initial boiling point and boiling range

No data available

g) Flash point (°)Not applicable

h) Evaporation rate No data available

i) Flammability (solid, gas)

No data available

j) Upper/lower flammability or explosive limits

No data available

k) Vapour pressure No data available

l) Vapour density No data available

m) Relative density No data available

n) Water solubility No data available

o) Partition coefficient: n-octanol/water

No data available

p) Auto-ignition temperature

No data available

q) Decomposition temperature

No data available

r) Viscosity No data available

s) Explosive properties No data available

t) Oxidizing properties No data available

Other safety information

No data available

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

No data available

Incompatible materials

Strong oxidizing agents Strong bases

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen fluoride, Sodium oxides, Aluminum oxide

Other decomposition products - No data available

In the event of fire: see section 5

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## SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - > 5,000 mg/kg

Remarks: Gastrointestinal: Changes in structure or function of salivary glands. Skin and

Appendages: Other: Hair.

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

Additional Information  
RTECS: Not available

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## SECTION 12. ECOLOGICAL INFORMATION

### Toxicity

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 42.5 mg/l - 96.0 h

Toxicity to daphnia  
and other aquatic  
invertebrates

EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h

### Persistence and degradability

No data available

### Bioaccumulative potential

No data available

### Mobility in soil

No data available

### Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life with long lasting effects.

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

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## SECTION 14. TRANSPORT INFORMATION

### DOT (US)

Not dangerous goods

### IMDG

UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cryolite)

Marine pollutant : yes

### IATA

UN number: 3077 Class: 9 Packing group: III

Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Cryolite)

### Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids

or > 5kg for solids.

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## SECTION 15. REGULATORY INFORMATION

### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right To Know Components

Cryolite CAS-No.

15096-52-3

Revision Date

2007-03-01

Cryolite CAS-No.

15096-52-3

Revision Date

2007-03-01

### New Jersey Right To Know Components

Cryolite CAS-No.

15096-52-3

Revision Date

2007-03-01

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.