

ALADDIN SCIENTIFIC CORPORATION  
14078 Meridian Parkway, Riverside, CA. 92518

# SAFETY DATA SHEET

Version: v1  
Revision Date: 2024-01-10  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Cesium fluoride  
Product Number : C105360  
Brand : aladdin  
CAS-No. : 13400-13-0

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

### 1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION  
Address : 14078 Meridian Parkway,  
Riverside, CA. 92518  
Telephone : +1 (833) 552-7181  
Fax : no data available

### 1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300  
CHEMTREC®, Outside the USA :

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311


Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Reproductive toxicity (Category 2), H361f

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

### 2.2 GHS Label elements, including precautionary statements

|                            |  |
|----------------------------|--|
| Pictogram                  |    |
| Signal word                | Danger   |
| Hazard statement(s)        |  |
| H315                       | Causes skin irritation   |
| H318                       | Causes serious eye damage  |
| H361                       | Suspected of damaging fertility or the unborn child  |
| H301+H311+H331             | Toxic if swallowed, in contact with skin or if inhaled   |
| Precautionary statement(s) |  |
| P201                       | Obtain special instructions before use.  |
| P202                       | Do not handle until all safety precautions have been read and understood.  |
| P261                       | Avoid breathing dust/fume/gas/mist/vapors/spray.   |
| P264                       | Wash hands [and ...] thoroughly after handling.  |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/protective clothing/eye protection/face protection.   |
| P310                       | Immediately call a POISON CENTER or doctor/physician.  |
| P311                       | Call a POISON CENTER or doctor/...   |
| P330                       | Rinse mouth.   |
| P301+P310                  | IF SWALLOWED: Immediately call a POISON CENTER/doctor/...  |
| P304+P340                  | IF INHALED: Remove person to fresh air and keep comfortable for breathing.   |
| P305+P351+P338             | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. |
| P308+P313                  | IF exposed or concerned: Get medical advice/attention.   |
| P332+P313                  | IF SKIN irritation occurs: Get medical advice/attention.   |
| P405                       | Store locked up.   |
| P403+P233                  | Store in a well-ventilated place. Keep container tightly closed.   |
| P501                       | Dispose of contents/container to an approved waste disposal plant.   |
| P302+P352+P312             | IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.  |

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

|                  |              |
|------------------|--------------|
| Synonyms         | : NSC 84270  |
| Formula          | : CsF        |
| Molecular weight | : 151.9      |
| CAS No.          | : 13400-13-0 |

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EC-NO. : 236-487-3

| Component       | Classification   | Concentration |
|-----------------|--|---------------|
| Cesium fluoride | Acute Tox. 4; Eye Dam. 1; Repr. 2; STOT RE 2; Aquatic Chronic 3; H302, H318, H361d, H373, H412 | 99%           |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance. Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel repeated until burning ceases. More serious skin exposures may require subcutaneous calcium gluconate except for digital areas unless the physician is experienced in this technique, due to the potential for tissue injury from increased pressure.

Absorption can readily occur through the subungual areas and should be considered when undergoing decontamination. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or Milk of Magnesia to conscious victims. Conditions such as hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored for, since they can occur after exposure.

#### 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. First treatment with calcium gluconate paste.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

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Dry powder

Unsuitable extinguishing media

no data available

## 5.2 Special hazards arising from the substance or mixture

Hydrogen fluoride Cesium/cesium oxides

## 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

no data available

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

### 6.2 Environmental precautions

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

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage. Do not store near acids. hygroscopic Store under inert gas. Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

### 7.3 Specific end use(s)

no data available

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Hazard composition and occupational exposure limits

| Component        | CAS No.    | Value  | Control parameters  | Basis   |
|------------------|------------|--------|---------------------|---|
| caesium fluoride | 13400-13-0 | PC-TWA | 2 mg/m <sup>3</sup> | Occupational exposure limits for workplace harmful factors - chemical harmful factors |

Biological limits

| Component        | CAS No.    | parameters            | Value                 | Biological specimens | Basis                                   |
|------------------|------------|-----------------------|-----------------------|----------------------|---|
| caesium fluoride | 13400-13-0 | fluorine              | 42mmol/mol Creatinine | urine                | Occupational exposure biological limits |
|                  | 备注         | After work            |                       |                      |   |
|                  |            | fluorine              | 7mg/g Creatinine      | urine                | Occupational exposure biological limits |
|                  |            | After work            |                       |                      |   |
|                  |            | fluorine              | 24mmol/mol Creatinine | urine                | Occupational exposure biological limits |
|                  |            | Before the work shift |                       |                      |   |
|                  |            | fluorine              | 4mg/g Creatinine      | urine                | Occupational exposure biological limits |
|                  |            | Before the work shift |                       |                      |   |

### 8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash your hands before rest and immediately after operating this

product.

#### 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. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

##### 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 N100 (US) or type P3 (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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|   |   |
|---|---|
| a) Appearance                                   | form: powder and/or chunks color: White |
| b) Odour  | no data available                       |
| c) Odour Threshold                              | no data available                       |
| d) pH   | no data available                       |
| e) Melting point/freezing point                 | 682 °C                                  |
| f) Initial boiling point and boiling range      | 1251°C                                  |
| g) Flash point                                  | no data available                       |
| 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                             | 4.115                                   |

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|   |                   |
|---|-------------------|
| 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 N                 | no data available |
| t) Oxidizing properties N                 | no data available |

## 9.2 Other safety information

no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

hygroscopic

### 10.5 Incompatible materials

Strong oxidizing agents, acids

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - female - 500 mg/kg (OECD Test Guideline 423) Inhalation: No data available Dermal: No data available

Skin corrosion/irritation

Skin - human skin Result: No irritation (OECD Test Guideline 439)

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

no data available

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Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure. - Kidney, Adrenal gland

Aspiration hazard

no data available

Additional Information

RTECS: FK9650000 Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia. Salivation, Nausea, Vomiting, Fever, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 62 mg/l - 48 h (OECD Test Guideline 202) static test NOEC - Daphnia magna (Water flea) - 48 mg/l - 48 h (OECD Test Guideline 202)  
Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - 36 mg/l - 72 h (OECD Test Guideline 201)

### 12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

no data available

### 12.6 Other adverse effects

no data available

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## SECTION 13:

### 13.1 Disposal considerations



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**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information****DOT (US)**

UN number: 3288

Packing group: III

Class: 6.1

Proper shipping name: TOXIC SOLID, INORGANIC, N.O.S. (caesium fluoride) available

Reportable Quantity(RQ): no data  
Poison Inhalation Hazard: no data available

Environmental Hazards: no

**IMDG**

UN number: 3288

Packing group: III

EMS-No: no data available

Proper shipping name: TOXIC SOLID, INORGANIC, N.O.S. (caesium fluoride)

**IATA**

UN number: 3288

Packing group: III

Class: 6.1

Proper shipping name: TOXIC SOLID, INORGANIC, N.O.S. (caesium fluoride)

**SECTION 15: Regulatory information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**SECTION 16: Other information****Prepared By**

Regulatory Affairs

ALADDIN SCIENTIFIC CORPORATION

Email: QualityAssurance@aladdinsci.com

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**Revision Summary**

SDS sections updated v1

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