




<a href="#">Cesium Fluoride</a>	<a href="#">Pricing &gt;</a>
<a href="#">Cesium Fluoride Sputtering Target</a>	<a href="#">Pricing &gt;</a>

<b>Linear Formula</b>	CsF
<b>Pubchem CID</b>	25953
<b>MDL Number</b>	MFCD00010960
<b>EC No.</b>	236-487-3
<b>IUPAC Name</b>	cesium fluoride
<b>Beilstein/Reaxys No.</b>	N/A
<b>SMILES</b>	[F-].[Cs+]
<b>Inchl Identifier</b>	InChI=1S/Cs.FH/h;1H/q+1;/p-1
<b>Inchl Key</b>	XJHCXCQVJFPJIK-UHFFFAOYSA-M
<b>Signal Word</b>	Danger
<b>Hazard Statements</b>	H301 + H311 + H331-H315-H318-H361f
<b>Hazard Codes</b>	T
<b>Precautionary Statements</b>	P261-P280-P302 + P352 + P312-P304 + P340 + P312-P305 + P351 + P338 + P310
<b>Flash Point</b>	Not applicable
<b>Risk Codes</b>	23/24/25-34
<b>Safety Statements</b>	26-36/37/39-45
<b>RTECS Number</b>	FK9650000
<b>Transport Information</b>	UN 3288 6.1 / PGIII
<b>WGK Germany</b>	2

GHS Pictograms	<a href="#"><u>GHS05 Corrosive</u></a>
	
	<a href="#"><u>GHS08 Health Hazard</u></a>
	
	<a href="#"><u>GHS06 Skull and Crossbones</u></a>
	

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## SAFETY DATA SHEET

Date Accessed: 04/24/2024

Date Revised: 01/15/2022

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### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #13400-13-0

**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:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

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### SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)  
GHS06 Skull and crossbones  
Acute Tox. 2 H300 Fatal if swallowed.  
Acute Tox. 2 H310 Fatal in contact with skin.  
Acute Tox. 2 H330 Fatal if inhaled.  
GHS05 Corrosion  
Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1

H318 Causes serious eye damage.

Hazards not otherwise classified

No data available

GHS label elements

GHS label elements, including precautionary statements

Hazard pictogram



GHS05 GHS06

Signal word

Danger

Hazard statements

H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe

dust/fume/gas/mist/vapors/spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P320 Specific treatment is urgent (see on this label).

P361 Take off immediately all contaminated clothing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

D1A - Very toxic material causing immediate and serious toxic effects

D2B - Toxic material causing other toxic effects

E - Corrosive material

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

Health (acute effects) = 3

Flammability = 0

Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

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

Substances

CAS No. / Substance Name: 13400-13-0 Cesium  
fluoride

Identification number(s):

EC number: 236-487-3

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

Description of first aid measures

General information

Immediately remove any clothing soiled by the  
product.

Remove breathing apparatus only after contaminated  
clothing has been completely removed.

In case of irregular breathing or respiratory arrest  
provide artificial respiration.

If inhaled:

Supply patient with fresh air. If not breathing, provide  
artificial respiration. Keep patient warm.

Seek immediate medical advice.

In case of skin contact:

Immediately wash with soap and water; rinse  
thoroughly.

Seek immediate medical advice.

In case of eye contact:

Rinse opened eye for several minutes under running  
water. Consult a physician.

If swallowed:

Do not induce vomiting; immediately call for medical  
help.

Information for doctor

Most important symptoms and effects, both acute and  
delayed

Causes severe skin burns.

Causes serious eye damage.

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 agents

Product is not flammable. Use fire-fighting measures  
that suit the surrounding fire.

Special hazards arising from the substance or mixture  
If this product is involved in a fire, the following can be  
released:

Hydrogen fluoride (HF)

Toxic metal oxide fume  
Advice for firefighters  
Protective equipment:  
Wear self-contained respirator.  
Wear fully protective impervious suit.

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

Personal precautions, protective equipment and emergency procedures  
Use personal protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Environmental precautions:  
Do not allow product to enter drains, sewage systems, or other water courses.  
Methods and materials for containment and cleanup:  
Use neutralizing agent.  
Dispose of contaminated material as waste according to section 13.  
Ensure adequate ventilation.  
Prevention of secondary hazards:  
No special measures required.  
Reference to other sections  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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

Handling  
Precautions for safe handling  
Handle under dry protective gas.  
Keep container tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation at the workplace.  
Open and handle container with care.  
Information about protection against explosions and fires:  
The product is not flammable  
Conditions for safe storage, including any incompatibilities  
Requirements to be met by storerooms and receptacles:  
No special requirements.  
Information about storage in one common storage facility:  
Store away from water/moisture.  
Store away from strong bases.

Store away from oxidizing agents.  
Further information about storage conditions:  
Store under dry inert gas.  
This product is hygroscopic.  
Keep container tightly sealed.  
Store in cool, dry conditions in well-sealed containers.  
Protect from humidity and water.  
Specific end use(s)  
No further relevant information available

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

Additional information about design of technical systems:  
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.  
Control parameters  
Components with limit values that require monitoring at the workplace:  
13400-13-0 Cesium fluoride (100.0%)  
PEL (USA)  
Long-term value: 2.5 mg/m<sup>3</sup>  
as F  
REL (USA)  
Long-term value: 2.5 mg/m<sup>3</sup>  
as F  
TLV (USA)  
Long-term value: 2.5 mg/m<sup>3</sup>  
as F, BEI  
EL (Canada) Long-term value: 2.5 mg/m<sup>3</sup>  
as F  
Ingredients with biological limit values:  
13400-13-0 Cesium fluoride (100.0%)  
BEI (USA) 2 mg/L  
Medium: urine  
Time: prior to shift  
Parameter: Fluoride (background, nonspecific)  
3 mg/L  
Medium: urine  
Time: end of shift  
Parameter: Fluoride (background, nonspecific)  
Additional information:  
No data  
Exposure controls  
Personal protective equipment  
Follow typical protective and hygienic practices for handling chemicals.  
Keep away from foodstuffs, beverages and feed.  
Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the eyes and skin.  
Maintain an ergonomically appropriate working environment.  
Breathing equipment:  
Use self-contained respiratory protective device in emergency situations.  
Protection of hands:  
Impervious gloves  
Inspect gloves prior to use.  
Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer.  
Penetration time of glove material (in minutes)  
No data available  
Eye protection:  
Tightly sealed goggles  
Full face protection  
Body protection: Protective work clothing.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties  
Appearance:  
Form: Various forms (powder/flake/crystalline/beads, etc.)  
Color: White  
Odor: Odorless  
Odor threshold: No data available.  
pH (152 g/l) at 20 °C (68 °F): 6.5-7.5  
Melting point/Melting range: 682 °C (1260 °F)  
Boiling point/Boiling range: 1251 °C (2284 °F)  
Sublimation temperature / start: No data available  
Flammability (solid, gas): No data available.  
Ignition temperature: No data available  
Decomposition temperature: No data available  
Autoignition: No data available.  
Danger of explosion: No data available.  
Explosion limits:  
Lower: No data available  
Upper: No data available  
Vapor pressure: N/A  
Density: No data available  
Relative density: No data available.  
Vapor density: N/A  
Evaporation rate: N/A  
Solubility in / Miscibility with Water at 18 °C (64 °F):  
3670 g/l Soluble  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:

Dynamic: N/A  
Kinematic: N/A  
Other information: No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions

Reacts with strong oxidizing agents

Conditions to avoid

No data available

Incompatible materials:

Water/moisture

Bases

Oxidizing agents

Hazardous decomposition products:

Hydrogen fluoride

Toxic metal oxide fume

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects

Acute toxicity: Fatal if inhaled.

Fatal in contact with skin.

Fatal if swallowed.

Danger through skin absorption.

Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

LD/LC50 values that are relevant for classification: No data

Skin irritation or corrosion: Causes severe skin burns.

Eye irritation or corrosion: Causes serious eye damage.

Sensitization: No sensitizing effects known.

Germ cell mutagenicity: No effects known.

Carcinogenicity:

ACGIH A4: Not classifiable as a human carcinogen:

Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

Reproductive toxicity: No effects known.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single



exposure: No effects known.  
Aspiration hazard: No effects known.  
Subacute to chronic toxicity: No effects known.  
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity

Aquatic toxicity:

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Additional ecological information:

Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems.

Avoid transfer into the environment.

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

Other adverse effects: No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods

Recommendation

Consult official regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation:

Disposal must be made according to official regulations.

Recommended cleansing agent:

Water, if necessary with cleansing agents.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number

DOT, IMDG, IATA

UN2923

UN proper shipping name

DOT

Corrosive solids, toxic, n.o.s.

IMDG, IATA

CORROSIVE SOLID, TOXIC, N.O.S. (Caesium fluoride)  
Transport hazard class(es)  
DOT  
Class  
8 Corrosive substances.  
Label  
8+6.1  
Class  
8 (CT2) Corrosive substances  
Label  
8+6.1  
IMDG, IATA  
Class  
8 Corrosive substances.  
Label  
8+6.1  
Packing group  
DOT, IMDG, IATA  
II  
Environmental hazards:  
N/A  
Special precautions for user  
Warning: Corrosive substances  
EMS Number:  
F-A,S-B  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  
N/A  
Transport/Additional information: DOT  
Marine Pollutant (DOT): No  
UN "Model Regulation": UN2923, Corrosive solids, toxic, n.o.s., 8 (6.1), II

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture  
GHS GHS label elements, including precautionary statements  
Hazard pictograms  
GHS05  
GHS06  
Signal word  
Danger  
Hazard statements  
H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.  
H314 Causes severe skin burns and eye damage.  
Precautionary statements  
P260 Do not breathe

dust/fume/gas/mist/vapors/spray.  
P301+P310 IF SWALLOWED: Immediately call a  
POISON CENTER/ doctor/...  
P303+P361+P353 If on skin (or hair): Take off  
immediately all contaminated clothing. Rinse skin with  
water/shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with  
water for several minutes. Remove contact lenses, if  
present and easy to do. Continue rinsing.  
P320 Specific treatment is urgent (see on this label).  
P361 Take off immediately all contaminated clothing.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance  
with local/regional/national/international regulations.  
National regulations  
All components of this product are listed in the U.S.  
Environmental Protection Agency Toxic Substances  
Control Act Chemical substance Inventory.  
All components of this product are listed on the  
Canadian Non-Domestic Substances List (NDSL).  
SARA Section 313 (specific toxic chemical listings)  
Substance is not listed.  
California Proposition 65  
Prop 65 - Chemicals known to cause cancer  
Substance is not listed.  
Prop 65 - Developmental toxicity  
Substance is not listed.  
Prop 65 - Developmental toxicity, female  
Substance is not listed.  
Prop 65 - Developmental toxicity, male  
Substance is not listed.  
Information about limitation of use:  
For use only by technically qualified individuals.  
Other regulations, limitations and prohibitive  
regulations  
Substance of Very High Concern (SVHC) according to  
the REACH Regulations (EC) No. 1907/2006.  
Substance is not listed.  
The conditions of restrictions according to Article 67  
and Annex XVII of the Regulation (EC) No 1907/2006  
(REACH) for the manufacturing, placing on the market  
and use must be observed.  
Substance is not listed.  
Annex XIV of the REACH Regulations (requiring  
Authorisation for use)  
Substance is not listed.  
Chemical safety assessment: A Chemical Safety  
Assessment has not been carried out.

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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.

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