



<a href="#">Cesium Formate</a>	<a href="#">Pricing &gt;</a>
<a href="#">Cesium Formate Solution</a>	<a href="#">Pricing &gt;</a>
<b>Linear Formula</b>	CsOOCH
<b>Pubchem CID</b>	23663999
<b>MDL Number</b>	MFCD00039103
<b>EC No.</b>	222-492-8
<b>IUPAC Name</b>	cesium; formate
<b>Beilstein/Reaxys No.</b>	3912426
<b>SMILES</b>	[Cs]OC=O
<b>Inchl Identifier</b>	InChI=1S/CH2O2.Cs/c2-1-3;/h1H,(H,2,3);/q;+1/p-1
<b>Inchl Key</b>	ATZQZZAXOPPAQ-UHFFFAOYSA-M
<b>Signal Word</b>	Warning
<b>Hazard Statements</b>	H302-H319-H371-H373
<b>Hazard Codes</b>	Xi
<b>Risk Codes</b>	36/37/38
<b>Safety Statements</b>	26-36/37/39
<b>RTECS Number</b>	N/A
<b>Transport Information</b>	NONH for all modes of transport
<b>WGK Germany</b>	3
<b>GHS Pictograms</b>	<a href="#">GHS07 Exclamation Point</a>  <a href="#">GHS08 Health Hazard</a> 

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## SAFETY DATA SHEET

Date Accessed: 05/03/2024

## SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #3495-36-1

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

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## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture  
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)  
Acute toxicity, Oral (Category 4), H302  
Eye irritation (Category 2A), H319  
Specific target organ toxicity - single exposure, Oral (Category 2), Nervous system, H371  
Specific target organ toxicity - repeated exposure, Oral (Category 2), Nervous system, Blood, H373  
GHS Label elements, including precautionary statements  
Pictogram



Signal word Warning  
Hazard statement(s)  
H302 Harmful if swallowed.  
H319 Causes serious eye irritation.  
H371 May cause damage to organs if swallowed.  
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.  
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.  
P280 Wear protective gloves/ eye protection/ face protection.  
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.

P314 Get medical advice/ attention if you feel unwell.  
P330 Rinse mouth.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P405 Store locked up.  
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 : Formic acid cesium salt  
Formula :  $\text{CHCsO}_2$   
Molecular weight : 177.92 g/mol  
CAS-No. : 3495-36-1  
EC-No. : 222-492-8  
Water  
Cas-No. 7732-18-5

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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. Consult a physician.  
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.  
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

Carbon oxides, Cesium/cesium oxides

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.

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 combustion products. Formation should be taken into consideration before additional processing

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.

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**

Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

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

Safety glasses with side-shields conforming to EN166

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

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle r (US) or type ABEK-P2 (EU EN 143) respirator cartridges. 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.

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

on basic physical and chemical properties

Appearance Form: Solution

Odour No data available

Odour Threshold No data available  
pH No data available  
Melting point/freezing point  
No data available  
Initial boiling point and boiling range  
No data available  
Flash point ( )No data available  
Evaporation rate No data available  
Flammability (solid, gas) The product is not flammable. - Flammability (solids)  
Upper/lower flammability or explosive limits  
No data available  
Vapour pressure No data available  
Vapour density No data available  
Relative density No data available  
Auto-ignition temperature  
No data available  
Decomposition temperature  
No data available  
Viscosity No data available  
Explosive properties No data available  
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, Alkali metals, Sulfuric acid, Halogens  
Hazardous decomposition products  
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Cesium/cesium oxides  
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 - male and female - 1,780 mg/kg(Cesium formate)

(OECD Test Guideline 401)  
Remarks: Behavioral:Ataxia.  
LD50 Dermal - Rat - male and female - > 2,000  
mg/kg(Cesium formate)  
(OECD Test Guideline 402)  
No data available(Cesium formate)  
Skin corrosion/irritation  
Skin - Rabbit(Cesium formate)  
Result: Mild skin irritation - 4 h  
(OECD Test Guideline 404)  
Serious eye damage/eye irritation  
Eyes - Rabbit(Cesium formate)  
Result: Irritating to eyes.  
(OECD Test Guideline 405)  
Respiratory or skin sensitisation  
in vivo assay - Mouse(Cesium formate)  
Result: Does not cause skin sensitisation.  
(OECD Test Guideline 429)  
Germ cell mutagenicity  
Ames test(Cesium formate)  
S. typhimurium  
Result: negative  
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.  
ACGIH: No component of this product present at  
levels greater than or equal to 0.1% is identified as a  
carcinogen or potential carcinogen by ACGIH.  
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 identified as a  
carcinogen or potential carcinogen by OSHA.  
Reproductive toxicity  
No data available(Cesium formate)  
No data available(Cesium formate)  
Specific target organ toxicity - single exposure  
Oral - May cause damage to organs. - Nervous  
system(Cesium formate)  
Specific target organ toxicity - repeated exposure  
Oral - May cause damage to organs through  
prolonged or repeated exposure. - Nervous system,  
Blood  
Aspiration hazard  
No data available(Cesium formate)  
Additional Information  
Repeated dose toxicity - Rat - male and female - Oral  
- No observed adverse effect level - 15 mg/kg(Cesium  
formate)  
RTECS: Not available  
To the best of our knowledge, the chemical, physical,  
and toxicological properties have not been thoroughly

investigated.(Cesium formate)

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## **SECTION 12. ECOLOGICAL INFORMATION**

### **Toxicity**

Toxicity to fish semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - ca. 2,100 mg/l -

96 h(Cesium formate)

(OECD Test Guideline 203)

### **Toxicity to daphnia and**

**other aquatic invertebrates**

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

formate)

(Directive 67/548/EEC, Annex V, C.2.)

### **Toxicity to algae static test EC50 -**

Pseudokirchneriella subcapitata (algae) - 110 mg/l -

72h(Cesium formate)

(OECD Test Guideline 201)

### **Persistence and degradability**

Biodegradability anaerobic - Exposure time 28

d(Cesium formate)

Result: 83 % - Readily biodegradable.

(OECD Test Guideline 301D)

### **Bioaccumulative potential**

No data available

### **Mobility in soil**

No data available(Cesium formate)

### **Results of PBT and vPvB assessment**

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

### **Other adverse effects**

No data available

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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  
Not dangerous goods  
IATA  
Not dangerous goods

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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.

### **SARA 311/312 Hazards**

#### **Acute Health Hazard**

### **Massachusetts Right To Know Components**

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

### **Pennsylvania Right To Know Components**

#### **Cesium formate**

#### **CAS-No.**

3495-36-1

#### **Revision Date**

### **New Jersey Right To Know Components**

#### **Cesium formate**

#### **CAS-No.**

3495-36-1

#### **Revision Date**

### **California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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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

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