

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 18.07.2021

Revision: 18.07.2021

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name:** *Cesium (99.9+%) (prescored ampoule)*
- **Item number:** 55-5551
- **CAS Number:**  
7440-46-2
- **EC number:**  
231-155-4
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
*No further relevant information available.*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
*Strem Chemicals, Inc.*  
*7 Mulliken Way*  
*NEWBURYPORT, MA 01950*  
*USA*  
*info@strem.com*
- **Further information obtainable from:** *Technical Department*
- **1.4 Emergency telephone number:**  
*EMERGENCY: CHEMTREC: + 1 (800) 424-9300*  
*During normal opening times: +1 (978) 499-1600*

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

*Water-react. 1 H260 In contact with water releases flammable gases which may ignite spontaneously.*



GHS05 corrosion

*Skin Corr. 1B H314 Causes severe skin burns and eye damage.*

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
*The substance is classified and labelled according to the CLP regulation.*
- **Hazard pictograms**



GHS02



GHS05

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**  
*Cesium (99.9+%) (prescored ampoule)*
- **Hazard statements**  
*H260 In contact with water releases flammable gases which may ignite spontaneously.*  
*H314 Causes severe skin burns and eye damage.*

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· **Precautionary statements**

- P101 *If medical advice is needed, have product container or label at hand.*
- P102 *Keep out of reach of children.*
- P103 *Read label before use.*
- P231+P232 *Handle under inert gas. Protect from moisture.*
- 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.*
- P403+P233 *Store in a well-ventilated place. Keep container tightly closed.*
- P422 *Store contents under inert gas.*
- P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Additional information:**

*EUH014 Reacts violently with water.*

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**

· **3.1 Chemical characterisation: Substances**

· **CAS No. Description**

*7440-46-2 Cesium (99.9+%) (prescored ampoule)*

· **Identification number(s)**

· **EC number:** 231-155-4

**SECTION 4: First aid measures**

· **4.1 Description of first aid measures**

- **General information:** *Immediately remove any clothing soiled by the product.*
- **After inhalation:** *In case of unconsciousness place patient stably in side position for transportation.*
- **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*
- **After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.*
- **After swallowing:** *Drink plenty of water and provide fresh air. Call for a doctor immediately.*
- **4.2 Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
- **4.3 Indication of any immediate medical attention and special treatment needed**  
*No further relevant information available.*

**SECTION 5: Firefighting measures**

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

*Sand. Do not use water.*

*CO<sub>2</sub>, sand, extinguishing powder. Do not use water.*

*Use fire extinguishing methods suitable to surrounding conditions.*

· **For safety reasons unsuitable extinguishing agents:** *Water*

· **5.2 Special hazards arising from the substance or mixture** *No further relevant information available.*

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- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** No special measures required.
- **6.3 Methods and material for containment and cleaning up:**  
Use neutralising agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **6.4 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.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
Thorough dedusting.  
Open and handle receptacle with care.
- **Information about fire - and explosion protection:** Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· <b>Form:</b>	Solid
· <b>Colour:</b>	Gold coloured
· <b>Odour:</b>	Odourless
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

· <b>Melting point/freezing point:</b>	28.64 °C
· <b>Initial boiling point and boiling range:</b>	690 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Flammable.  
Contact with water liberates extremely flammable gases.

· **Ignition temperature:**

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Not determined.

· **Explosive properties:** Not determined.

· **Explosion limits:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· **Vapour pressure at 20 °C:** 1 hPa

· <b>Density at 20 °C:</b>	1.892 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.

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· <b>Solubility in / Miscibility with water:</b>	<i>Insoluble.</i>
· <b>Partition coefficient: n-octanol/water:</b>	<i>Not determined.</i>
· <b>Viscosity:</b>	
<b>Dynamic:</b>	<i>Not applicable.</i>
<b>Kinematic:</b>	<i>Not applicable.</i>
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	<i>0.0 %</i>
<b>VOC (EC)</b>	<i>0.00 %</i>
· <b>Solids content:</b>	<i>100.0 %</i>
· <b>9.2 Other information</b>	<i>No further relevant information available.</i>

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity** *No further relevant information available.*
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **10.3 Possibility of hazardous reactions** *Contact with water releases flammable gases.*
- **10.4 Conditions to avoid** *No further relevant information available.*
- **10.5 Incompatible materials:** *No further relevant information available.*
- **10.6 Hazardous decomposition products:** *No dangerous decomposition products known.*

**SECTION 11: Toxicological information**

- **11.1 Information on toxicological effects**
- **Acute toxicity** *Based on available data, the classification criteria are not met.*
- **Primary irritant effect:**
- **Skin corrosion/irritation**  
*Causes severe skin burns and eye damage.*
- **Serious eye damage/irritation**  
*Causes severe skin burns and eye damage.*
- **Respiratory or skin sensitisation** *Based on available data, the classification criteria are not met.*
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** *Based on available data, the classification criteria are not met.*
- **Carcinogenicity** *Based on available data, the classification criteria are not met.*
- **Reproductive toxicity** *Based on available data, the classification criteria are not met.*
- **STOT-single exposure** *Based on available data, the classification criteria are not met.*
- **STOT-repeated exposure** *Based on available data, the classification criteria are not met.*
- **Aspiration hazard** *Based on available data, the classification criteria are not met.*

**SECTION 12: Ecological information**

- **12.1 Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **12.2 Persistence and degradability** *No further relevant information available.*
- **12.3 Bioaccumulative potential** *No further relevant information available.*
- **12.4 Mobility in soil** *No further relevant information available.*

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- **Additional ecological information:**
- **General notes:** Must not reach sewage water or drainage ditch undiluted or unneutralised.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

· **14.1 UN-Number**  
· **ADR, IMDG, IATA** UN1407

· **14.2 UN proper shipping name**  
· **ADR** 1407 CAESIUM  
· **IMDG, IATA** CAESIUM

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class** 4  
· **Label** 4.3

· **IMDG, IATA**



· **Class** 4.3 Substances which, in contact with water, emit flammable gases.  
· **Label** 4.3

· **14.4 Packing group**  
· **ADR, IMDG, IATA** I

· **14.5 Environmental hazards:**  
· **Marine pollutant:** No

· **14.6 Special precautions for user** Not applicable.  
· **Danger code (Kemler):** X423  
· **Stowage Category** D

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· <b>Handling Code</b>	H1 Keep as dry as reasonably practicable
· <b>Segregation Code</b>	SG26 In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained. SG35 Stow "separated from" acids.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	0
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>Transport category</b>	1
· <b>Tunnel restriction code</b>	B/E
· <b>UN "Model Regulation":</b>	UN 1407 CAESIUM, 4.3, I

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category O1** Substances or mixtures with hazard statement EUH014
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 40
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** Technical Department.
- **Contact:** Technical Director
- **Abbreviations and acronyms:**  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1  
Skin Corr. 1B: Skin corrosion/irritation – Category 1B