



## MATERIAL SAFETY DATA SHEET

Manufacturer: Strem Chemicals, Inc  
7 Mulliken Way  
Newburyport, MA 01950-4098 U.S.A.  
www.strem.com

Strem Customer Service (978) 499-1600  
CHEMTREC (Emergency Only) (800) 424-9300  
Poison Center (800) 562-8236

### Section 1: Product Identification

Chemical Name: Cesium (99.9+%) (prescored ampoule)  
Product Number: 55-5551  
CAS Registry Number: 7440-46-2  
Formula: Cs  
EINECS Number: 231-155-4  
Chemical Family: metal or element  
Synonym: Alkali metal

### Section 2: Composition and Information on Ingredients

Ingredient	CAS Number	Percent	ACGIH (TWA)	OSHA (PEL)
Title Compound	7440-46-2	100%	no data	no data

### Section 3: Hazards Identification

Emergency Overview: The metal rapidly forms caustic and highly corrosive alkali hydroxide with evolution of heat. Severe thermal and chemical burns will result at every point of human contact.

Primary Routes of Exposure: Contact with skin and eyes.

Eye Contact: Severe thermal burns, corrosion and ulceration of the eyes may occur on direct contact.

Skin Contact: Severe thermal burns, corrosion and ulceration of the skin may occur on direct contact.

Inhalation: Inhalation is not a likely mode of entry.

Ingestion: Ingestion will cause burns and perforations of the gastrointestinal tract.

Acute Health Affects: With moisture or human contact, metal rapidly forms caustic and highly corrosive alkali hydroxide with evolution of heat. Severe thermal and chemical burns will result.

Chronic Health Affects: No information available on long-term chronic effects.

NTP: No

IARC: No

OSHA: No

### SECTION 4: First Aid Measures

Eye Exposure: Immediately flush the eyes with copious amounts of water for at least 10-15 minutes. A victim may need assistance in keeping their eye lids open. Get immediate medical attention.

Skin Exposure: Wash the affected area with water for at least 15 minutes. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

Inhalation: (For dust or fume) Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing or coughing. In such cases seek immediate medical assistance.

Ingestion: Seek medical attention immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.



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### SECTION 5: Fire Fighting Measures

Flash Point: not applicable  
Autoignition Temperature: no data  
Explosion Limits: no data  
Extinguishing Medium: Class D metal fire agent, dry salt or sand.  
Special Fire Fighting Procedures: If this product is involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus.  
Hazardous Combustion and Decomposition Products: If involved in a fire, burning metal may produce severely corrosive fumes of cesium oxide and hydroxide.  
Unusual Fire or Explosion Hazards: Pyrophoric solid. May self-ignite. Evolves flammable hydrogen with water.

### SECTION 6: Accidental Release Measures

Spill and Leak Procedures: Not applicable; material is metal pieces

### SECTION 7: Handling and Storage

Handling and Storage: Handle and store in a tightly sealed container under an inert atmosphere of argon.

### SECTION 8: Exposure Controls and Personal Protection

Eye Protection: Always wear approved chemical splash proof goggles.  
Skin Protection: Wear protective clothing and gloves. Consult with glove manufacturer to determine the proper type of glove.  
Ventilation: Handle in an efficient fume hood.  
Respirator: If ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 1910.134.  
Ventilation: Handle in an efficient fume hood.  
Additional Protection: Prepare for the possibility of fire.

### SECTION 9: Physical and Chemical Properties

Color and Form: under argon  
Molecular Weight: 132.91  
Melting Point: 28.64°  
Boiling Point: 690°  
Vapor Pressure: 1mm (279 °C)  
Specific Gravity: 1.892  
Odor: none  
Solubility in Water: reacts violently

### SECTION 10: Stability and Reactivity

Stability: moisture sensitive, pyrophoric  
Hazardous Polymerization: no hazardous polymerization  
Conditions to Avoid: Contact with water or air.  
Incompatibility: Water, alcohols, oxidizers, oxygen, carbon dioxide, halogens, halocarbons, acids.  
Decomposition Products: Flammable hydrogen with moisture, caustic oxide with air.



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### SECTION 11: Toxicological Information

RTECS Data: Intraperitoneal (mouse); LD50: 1700 mg/kg.  
Carcinogenic Effects: No data available  
Mutagenic Effects: No data available  
Tetratogenic Effects: No data available

### SECTION 12: Ecological Information

Ecological Information: No information available

### SECTION 13: Disposal Considerations

Disposal: Dispose of according to local, state and federal regulations.

### SECTION 14: Transportation

Shipping Name (CFR): Cesium  
Hazard Class (CFR): 4.3  
Additional Hazard Class (CFR): NA  
Packaging Group (CFR): I  
UN ID Number (CFR): UN# 1407  
Shipping Name (IATA): Cesium  
Hazard Class (IATA): 4.3  
Additional Hazard Class (IATA): NA  
Packaging Group (IATA): I  
UN ID Number (IATA): UN# 1407

### SECTION 15: Regulatory Information

TSCA: Listed in the TSCA inventory  
SARA (Title 313): Title compound not listed  
Second Ingredient: none  
Third Ingredient: none

### SECTION 16: Other Information

Disclaimer: The information herein is believed to be accurate and reliable as of the date compiled. However, Strem Chemicals, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information contained in this document or any use of the product based on this information.

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