

Material Safety Data Sheet



According to EC-directive 91/155/EEC

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1. Substance and Company Information

Name of Product: **Cesium Alloy**

Usage of Compound: Metal vapor sources

Company: ALVATEC Production and Sales GesmbH
Friesacher Straße 3
A-9330 Treibach-Althofen, Austria
Tel.: +43/4262/26441321

Emergency: National Poisons Emergency Number: 1 800 222 1222
See also: <http://www.aapcc.org>

2. Composition/Information of Ingredients

Chemical name: CESIUM
CAS-Number: 7440-46-2
UN-Number: 1407
EINECS-Number: 231-155-4

3. Hazards Information

Symbols: F; C Highly flammable; Corrosive

R-Phrases: 11 Highly flammable.
14/15 Reacts violently with water, liberating highly flammable gases.
34 Causes burns.

HMIS RATING: HEALTH: 3
FLAMMABILITY: 3
REACTIVITY: 2
SPECIAL HAZARD(S): Water reactive

4. First Aid Measures

General notes: Remove contaminated clothes instantly.

Inhalation exposure: If inhaled remove to fresh air. If breathing is stopped give artificial respiration and call a physician.

Dermal exposure: In case of skin contact, flush with water for 15 minutes. Remove contaminated clothes instantly. Call a physician.

Eye exposure: After contact with eyes, flush with water for 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Oral exposure: If swallowed wash out the mouth with water provided person is conscious. Call a physician.

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5. Fire-fighting measures

Suitable extinguishing media: Use approved class D extinguishers or smother with dry sand, dry grounded limestone or dry clay.
Unsuitable media: Water; water containing extinguishers; carbon dioxide; Halo carbon extinguishers
Special risks: Contact with water liberates hydrogen (Risk of explosion). Fire generates toxic fumes.
Special protective equipment for fire fighting: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. Accidental Release Measures

Personal Precautions: Avoid contact with substances. Remove sources of ignition. Wear protective clothing. Remove unprotected persons. Ventilate area.
Environmental protection: Do not allow to enter the sewage system. Risk of explosion.
Measures for cleaning: Do not use water. Take up mechanically. Hold for waste disposal. Ventilate area.

7. Handling and storage

Handling: Handle under dry inert gas. Keep container safely closed. Ensure ventilation of workplace. Container should be opened only by a technically qualified person.
Storage: Do not store together with strong oxidizers, water and acids. Store under inert gas. Keep container dry and safely closed.

8. Exposure control and personal protection

Personal Protection:

General notes: Avoid contact with eyes and skin.
Industrial hygiene: Remove contaminated clothing immediately. Store working clothes separately.
Hand protection: Use gloves from Latex, Chloropren, Nitrile rubber, Viton, or Butyl rubber (Level 6, Permeation time* >480 min)
*)Permeation times may vary depending of type and usage conditions!
Eye protection: Safety glasses
Personal protection: Use protective clothes ascertained resistance to chemicals
Respiratory protection: Use self-contained breathing apparatus in case of risk of dust or fumes. Ensure ventilation of the workplace.

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9. Physical and chemical properties

Physical State: solid
Color: red-golden shining
Odor: not available
Melting point: alloy depending
Boiling point: alloy depending
Flammable point: not available
Density: not available
Solubility in water: reacts violent with water
pH-Value: not available

10. Stability and reactivity

Thermal decomposition: Evaporation of Cesium from the alloy is possible.
Conditions to avoid: Moisture.
Materials to avoid: Oxidizers, water, acids, ammonia, halohydro carbons.
Hazardous reactions: Reactions with water, halohydro carbons, acids.
Hazardous decomposition products: Hydrogen, metal oxide fume
Further information: Highly flammable.

11. Toxicological Information

Notes: Change of activity of Potassium transport channels possible. Values of acute and chronic toxicology are not known completely.
Further notes: Reacts with tissue moisture.
After Breathing: Causes burns of mucous membrane and respiratory system.
After skin contact: Causes burns.
After eye contact: Causes burns.
After swallowing: Causes burns in mouth, throat, gullet and gastrointestinal tract. (Risk of perforation in the gullet and stomach)
LD50: 1700 mg/kg, Mouse (intraperitoneal)

12. Ecological information

Ecotoxic effects: Toxic effects to aquatic organisms by pH shift.
Further notes: Don't allow to enter water, sewage systems or soil!

13. Disposal information

General notes: Observe chapter 7 before handle with product or container.

EPA hazardous waste number: D001 Cesium

This material must be disposed in the compliance of the local, federal or national waste regulations. Contact a licensed waste disposal services to dispose this material.

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14. Transport information

Road / Rail (ADR/RID)

Class: 4.3
Packaging group: I
UN-Number: 3208
Name: METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S. (Cesium alloy solid)

Sea (IMDG)

UN-Number: 3208
Class: 4.3
PG: I
Technical name: METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S. (Cesium alloy solid)

Air transport (ICAO/IATA)

UN-Number: 3208
Class: 4.3
PG: I
Technical name: METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S. (Cesium alloy solid)

15. Regulatory Information

Labeling according to EC-Directives:

Symbols:



F Highly flammable



C Corrosive

R-Phrases: 11 Highly flammable.
14/15 Reacts violently with water, liberating extremely flammable gases.

S-Phrases: 34 Causes burns.
8 Keep container dry.
16 Keep away from sources of ignition - no smoking.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37/39 Wear suitable protective clothing, gloves, and eye/face protection.
43 In case of fire, never use water.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Water hazard class: 1 (Self-assessment): slightly hazardous for water.

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16. Further Information

All information is based upon our best present knowledge. Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. The applicant is responsible for the observance of the appropriate safety regulations.
