

# SAFETY DATA SHEET

Date Printed: 04/19/2024

Date Revised: 01/15/2022

## SECTION 1. IDENTIFICATION

**Product Identifier:** (5N) 99.999% Cerium(III) Sulfate

**Product Code:** CE3-SAT-05

**CAS Number:** 13454-94-9

**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:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2

H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Other hazards that do not result in classification

No data available

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



GHS07

Signal word

Warning

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statements

P261

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

P280

Wear protective gloves/protective clothing/eye protection/face protection.

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

ntinue rinsing.

P304+P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P405

Store locked up.

P501

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

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

N/A

vPvB:

N/A

---

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

CAS# Designation:

13454-94-9 Cerium (III) sulfate

Identification number(s):

EC number: 236-644-6

---

## SECTION 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

If inhaled:

Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

Seek immediate medical advice.

In case of skin contact:

Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

In case of eye contact:

Rinse opened eye for several minutes under running water. Then consult doctor.

If swallowed:

Seek medical treatment.

### 4.2 Most important symptoms and effects, both acute and delayed

No data available

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

---

## **SECTION 5. FIREFIGHTING MEASURES**

### **5.1 Extinguishing media**

Suitable extinguishing agents

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

### **5.2 Special hazards arising from the substance or mixture**

If this product is involved in a fire, the following can be released:

Sulphur oxides (SO<sub>x</sub>)

### **5.3 Advice for firefighters**

Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

---

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

### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

### **6.2 Environmental precautions:**

Do not allow material to be released to the environment without official permits.

### **6.3 Methods and materials for containment and cleanup:**

Ensure adequate ventilation.

Prevention of secondary hazards:

No special measures required.

### **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 information on disposal.

---

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

### **7.1 Precautions for safe handling**

Keep containers tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:

The product is not flammable

### **7.2 Conditions for safe storage, including any incompatibilities**

Requirements to be met by storerooms and containers:

No special requirements.

Information about storage in one common storage facility:

No data available

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

### **7.3 Specific end use(s)**

No data available

---

## 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.

### 8.1 Control parameters

Components with critical values that require monitoring at the workplace:

Not required.

Additional information:

No data

### 8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures should be adhered to in handling the chemicals.

Keep away from foodstuffs, beverages and food.

Instantly remove any soiled and impregnated garments.

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use breathing protection with high concentrations.

Protection of hands:

Inspect gloves prior to use.

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.

Material of gloves

Impervious gloves

Eye protection:

Safety glasses

Face protection

Body protection:

Protective work clothing.

---

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance:

Form: Powder

Colour: White

Smell: No data available

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 920 °C

Boiling point/Boiling range: No data available

Sublimation temperature / start: No data available

Flash point: N/A

Inflammability (solid, gas)

No data available.

Ignition temperature: No data available

Decomposition temperature: No data available

Self-inflammability: No data available.

Danger of explosion: Product is not explosive.  
Critical values for explosion:  
Lower: No data available  
Upper: No data available  
Steam pressure: N/A  
Density at 20 °C  
3.912 g/cm<sup>3</sup>  
Relative density  
No data available.  
Vapor density  
N/A  
Evaporation rate  
N/A  
Solubility in Water (H<sub>2</sub>O): Soluble  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: N/A  
Kinematic: N/A  
9.2 Other information  
No data available

---

## SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity  
No data available  
10.2 Chemical stability  
Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided:  
No decomposition if used and stored according to specifications.  
10.3 Possibility of hazardous reactions  
No dangerous reactions known  
10.4 Conditions to avoid  
No data available  
10.5 Incompatible materials:  
No data available  
10.6 Hazardous decomposition products:  
Sulphur oxides (SO<sub>x</sub>)

---

## SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects  
Acute toxicity:  
No effects known.  
LD/LC50 values that are relevant for classification:  
No data  
Skin irritation or corrosion:  
Causes skin irritation.  
Eye irritation or corrosion:  
Causes serious eye irritation.  
Sensitization:  
No sensitizing effect known.

Germ cell mutagenicity:

No effects known.

Carcinogenicity:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity:

No effects known.

Specific target organ system toxicity - repeated exposure:

No effects known.

Specific target organ system toxicity - single exposure:

May cause respiratory irritation.

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.

---

## **SECTION 12. ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

Aquatic toxicity:

No data available

### **12.2 Persistence and degradability**

No data available

### **12.3 Bioaccumulative potential**

No data available

### **12.4 Mobility in soil**

No data available

Additional ecological information:

Do not allow material to be released to the environment without official permits.

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

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

Avoid transfer into the environment.

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

PBT:

N/A

vPvB:

N/A

### **12.6 Other adverse effects**

No data available

---

## **SECTION 13. DISPOSAL CONSIDERATIONS**

### **13.1 Waste treatment methods**

Recommendation

Hand over to disposers of hazardous waste.

Must be specially treated under adherence to official regulations.

Consult official regulations for proper disposal.

Uncleaned packagings:

Recommendation:  
Disposal must be made according to official regulations.  
Recommended cleaning agent:  
Water, if necessary with cleaning agent.

---

## SECTION 14. TRANSPORT INFORMATION

UN-Number  
ADR, IMDG, IATA  
None  
14.2 UN proper shipping name  
ADR, IMDG, IATA  
None  
14.3 Transport hazard class(es)  
ADR, IMDG, IATA  
Class  
None  
Packing group  
ADR, IMDG, IATA  
None  
14.5 Environmental hazards:  
N/A  
14.6 Special precautions for user  
N/A  
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC  
Code  
N/A  
Transport/Additional information:  
Not dangerous according to the above specifications.

---

## SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
Australian Inventory of Chemical Substances  
Substance is listed.  
Standard for the Uniform Scheduling of Drugs and Poisons  
Substance is not listed.  
National regulations  
Information about limitation of use:  
Employment restrictions concerning young persons must be observed.  
For use only by technically qualified individuals.  
Water hazard class:  
Water hazard class 1 (Self-assessment): slightly hazardous for water.  
Other regulations, limitations and prohibitive regulations  
ELINCS (European List of Notified Chemical Substances)  
Substance is not listed.  
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.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

---

## 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.