

# SAFETY DATA SHEET

Date Printed: 05/10/2024

Date Revised: 01/15/2022

---

## SECTION 1. IDENTIFICATION

**Product Identifier:** (5N) 99.999% Cerium Carbide

**Product Code:** CE-C-05

**CAS Number:** 12012-32-7

**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

Physical hazards:

Not classified.

Health hazards:

Not classified.

Environmental hazards:

Not classified.

OSHA defined hazards:

Not classified.

Label Elements

Hazard symbol: None

Signal word: None

Hazard statement: The substance does not meet the criteria for classification

Precautionary Statement

Prevention: Observe good industrial hygiene practices.

Response: Wash hands after handling.

Storage: Store away from incompatible materials.

Disposal: Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC):

None known.

---

## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component:  
Cerium Carbide  
CAS No.:  
12012-32-7

---

## **SECTION 4. FIRST AID MEASURES**

Inhalation:  
Move to fresh air. Call a physician if symptoms develop or persist.  
Skin contact:  
Get medical attention if irritation develops and persists.  
Eye contact:  
Rinse with water. Get medical attention if irritation develops and persists.  
Ingestion:  
Get medical advice/attention if you feel unwell.  
Most important symptoms/effects, acute and delayed:  
Direct contact with eyes may cause temporary irritation.  
Indication of immediate medical attention and special treatment needed:  
Treat symptomatically.  
General Information:  
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

---

## **SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media:  
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).  
Unsuitable extinguishing media:  
None known  
Specific hazards arising from the chemical:  
During fire, gases hazardous to health may be formed.  
Special protective equipment and precautions for firefighters:  
Wear suitable protective equipment.  
Fire fighting equipment/instructions:  
Use water spray to cool unopened containers.  
Specific methods:  
Use standard firefighting procedures and consider the hazards of other involved materials.  
General fire hazards:  
No unusual fire or explosion hazards noted.

---

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

Personal precautions, protective equipment and emergency procedures:  
Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.  
Methods and materials for containment and cleaning up:  
Stop the flow of material, if this is without risk. Following product recovery, flush area with water.

For waste disposal, see section 13 of the SDS.

Environmental precautions:

No special environmental precautions required.

---

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

Precautions for safe handling:

Use care in handling/storage

Conditions for safe storage, including any incompatibilities:

Store in original tightly closed container. Store away from incompatible materials

---

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Occupational exposure limits:

No exposure limits noted for ingredient(s).

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection:

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection:

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other:

Wear suitable protective clothing.

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards:

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

---

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

Appearance

Physical state Solid.

Form Solid.

Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling

range  
Not available.  
Flash point Not available.  
Evaporation rate Not available.  
Flammability (solid, gas) Not available.  
Upper/lower flammability or explosive limits  
Flammability limit - lower (%)  
Not available.  
Flammability limit - upper (%)  
Not available.  
Explosive limit - lower (%) Not available.  
Explosive limit - upper (%) Not available.  
Vapor pressure Not available.  
Vapor density Not available.  
Relative density Not available.  
Solubility(ies)  
Solubility (water) Not available.  
Partition coefficient  
(n-octanol/water)  
Not available.  
Auto-ignition temperature Not available.  
Decomposition temperature Not available.  
Viscosity Not available.  
Other information  
Explosive properties Not explosive.  
Molecular formula C<sub>2</sub>Ce  
Oxidizing properties Not oxidizing.

---

## SECTION 10. STABILITY AND REACTIVITY

Reactivity:  
The product is stable and non-reactive under normal conditions of use, storage and transport.  
Chemical stability:  
Material is stable under normal conditions.  
Possibility of hazardous reactions:  
No dangerous reaction known under conditions of normal use.  
Conditions to avoid:  
Contact with incompatible materials.  
Incompatible materials:  
None known.  
Hazardous decomposition products:  
No hazardous decomposition products are known.

---

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure  
Inhalation:  
Due to lack of data the classification is not possible.  
Skin contact:  
Due to lack of data the classification is not possible.  
Eye contact:

Due to lack of data the classification is not possible.

Ingestion:

Due to lack of data the classification is not possible.

Symptoms related to the physical, chemical and toxicological characteristics:

Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity: Not available.

Skin corrosion/irritation: Due to lack of data the classification is not possible.

Serious eye damage/eye irritation: Due to lack of data the classification is not possible.

Respiratory or skin sensitization

Respiratory sensitization: Due to lack of data the classification is not possible.

Skin sensitization: Due to lack of data the classification is not possible.

Germ cell mutagenicity: Due to lack of data the classification is not possible.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity: Due to lack of data the classification is not possible.

Specific target organ toxicity - single exposure: Due to lack of data the classification is not possible.

Specific target organ toxicity - repeated exposure: Due to lack of data the classification is not possible.

Aspiration hazard: Due to lack of data the classification is not possible.

---

## **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity:

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability:

No data is available on the degradability of this product.

Bioaccumulative potential:

No data available.

Mobility in soil:

No data available.

Other adverse effects:

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

---

## **SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal instructions:

Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations:

Dispose in accordance with all applicable regulations.

Hazardous waste code:

The waste code should be assigned in discussion between the user, the producer and the waste disposal company

Waste from residues / unused products:

Dispose of in accordance with local regulations. Empty containers or liners may retain some

product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging:

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

---

## **SECTION 14. TRANSPORT INFORMATION**

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

---

## **SECTION 15. REGULATORY INFORMATION**

US federal regulations:

CERCLA/SARA Hazardous Substances - Not applicable.

All components are on the U.S. EPA TSCA Inventory List.

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories:

Immediate Hazard - No

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed

SARA 311/312 Hazardous chemical:

No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated

US state regulations:

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

---

## **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.