

# SAFETY DATA SHEET

Date Printed: 05/17/2024

Date Revised: 01/15/2022

## SECTION 1. IDENTIFICATION

**Product Identifier:** (4N) 99.99% Chromium Boride Sputtering Target

**Product Code:** CR-B-04-ST

**CAS Number:** 12006-79-0

**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

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Sensitization: Category 1

Carcinogenicity: Category 1A

Label Elements

Signal Word: Danger

Hazard Statements:

May cause an allergic skin reaction

May cause cancer by inhalation



Precautionary Statements

Prevention:

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

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

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves

Response:

IF exposed or concerned: Get medical attention/advice

Skin:

IF ON SKIN: Wash with plenty of soap and water

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

Storage:

Store locked up

Disposal:

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects

WARNING. Cancer and Reproductive Harm - <https://www.p65warnings.ca.gov/>.

---

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

Component: Chromium boride (CrB)

CAS-No: 12006-79-0

Weight: < 100%

---

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

General Advice:

If symptoms persist, call a physician.

Eye Contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact:

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion:

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Most important symptoms and effects:

May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Notes to Physician:

Treat symptomatically

---

### **SECTION 5. FIREFIGHTING MEASURES**

Suitable Extinguishing Media: Not combustible.

Unsuitable Extinguishing Media: No information available

Flash Point: No information available

Method - No information available

Autoignition Temperature: No information available

Explosion Limits

Upper: No data available

Lower: No data available

Sensitivity to Mechanical Impact: No information available

Sensitivity to Static Discharge: No information available

Specific Hazards Arising from the Chemical:

Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous Combustion Products:

Oxides of boron Chromium oxides

Protective Equipment and Precautions for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health: 2

Flammability: 0

Instability: 0

Physical hazards: -

---

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

Personal Precautions:

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

Environmental Precautions:

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment.

Methods for Containment and CleanUp:

Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

---

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

Handling:

Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

Storage:

Keep containers tightly closed in a dry, cool and well-ventilated place.

---

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

Exposure Guidelines

Component: Chromium boride (CrB)

ACGIH TLV:

OSHA PEL:

NIOSH IDLH: TWA: 0.0002 mg/m<sup>3</sup>

Mexico OEL (TWA): TWA: 0.5 mg/m<sup>3</sup>

Engineering Measures:

Ensure adequate ventilation, especially in confined area

Personal Protective Equipment

Eye/face Protection:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and

face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection:

Long sleeved clothing.

Respiratory Protection:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures:

Handle in accordance with good industrial hygiene and safety practice

---

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

Physical State: Solid

Appearance: No information available

Odor: Odorless

Odor Threshold: No information available

pH: No information available

Melting Point/Range: No data available

Boiling Point/Range: No information available

Flash Point: No information available

Evaporation Rate: Not applicable

Flammability (solid,gas): No information available

Flammability or explosive limits

Upper: No data available

Lower: No data available

Vapor Pressure: No information available

Vapor Density: Not applicable

Specific Gravity: No information available

Solubility: No information available

Partition coefficient; n-octanol/water: No data available

Autoignition Temperature: No information available

Decomposition Temperature: No information available

Viscosity: Not applicable

Molecular Formula: CrB

Molecular Weight: 62.81

---

## **SECTION 10. STABILITY AND REACTIVITY**

Reactive Hazard:

None known, based on information available

Stability:

Stable under normal conditions.

Conditions to Avoid:

Incompatible products.

Incompatible Materials:

Oxidizing agents

Hazardous Decomposition Products:

Oxides of boron, Chromium oxides

Hazardous Polymerization:

Hazardous polymerization does not occur.

Hazardous Reactions:

None under normal processing.

---

## SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

Component Information

Toxicologically Synergistic

Products

No information available

Delayed and immediate effects as well as chronic effects from short and long term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component: Chromium boride (CrB)

CAS-No: 12006-79-0

IARC: Not listed

NTP: Known

ACGIH: Not listed

OSHA: Not listed

Mexico: A1

Mutagenic Effects: No information available

Reproductive Effects: No information available.

Developmental Effects: No information available.

Teratogenicity: No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Symptoms / effects, both acute and delayed:

Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Endocrine Disruptor Information:

No information available

Other Adverse Effects:

The toxicological properties have not been fully investigated.

Aspiration hazard No information available

---

## SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Persistence and Degradability:

Insoluble in water May persist

Bioaccumulation/ Accumulation:

No information available.

Mobility:

Is not likely mobile in the environment due its low water solubility

---

## SECTION 13. DISPOSAL CONSIDERATIONS

### Waste Disposal Methods:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

---

## SECTION 14. TRANSPORT INFORMATION

DOT Not regulated  
TDG Not regulated  
IATA Not regulated  
IMDG/IMO Not regulated

---

## SECTION 15. REGULATORY INFORMATION

U.S. Federal Regulations  
TSCA 12(b) Not applicable  
Component: Chromium boride (CrB)  
TSCA 12(b): Section 6  
SARA 313  
Component: Chromium boride (CrB)  
CAS-No: 12006-79-0  
Weight: < 100%  
SARA 313 - Threshold Values: 0.1 %  
CWA (Clean Water Act)  
Component: Chromium boride (CrB)  
CWA - Hazardous Substances  
CWA - Reportable Quantities  
CWA - Toxic Pollutants X  
CWA - Priority Pollutants  
Clean Air Act  
Component: Chromium boride (CrB)  
HAPS Data: X  
Class 1 Ozone Depletors  
Class 2 Ozone Depletors  
OSHA: Not applicable  
Component: Chromium boride (CrB)  
Specifically Regulated Chemicals: 5 µg/m<sup>3</sup> TWA 2.5 µg/m<sup>3</sup> Action Level  
Highly Hazardous Chemical  
California Proposition 65  
Component: Chromium boride (CrB)  
CAS-No: 12006-79-0  
California Prop 65: Carcinogen  
Developmental  
Female Reproductive  
Male Reproductive  
Prop 65 NSRL: 0.001 µg/day  
U.S. Department of Transportation  
Reportable Quantity (RQ): N

DOT Marine Pollutant N  
DOT Severe Marine Pollutant N  
U.S. Department of Homeland Security  
This product does not contain any DHS chemicals. Other International Regulations  
Mexico - Grade No information available

---

## **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.