

# SAFETY DATA SHEET

Date Printed: 05/20/2024

Date Revised: 01/15/2022

---

## SECTION 1. IDENTIFICATION

**Product Identifier:** (2N) 99% Iron Boride (Fe<sub>2</sub>B) Sputtering Target

**Product Code:** FE2-B-02-ST

**CAS Number:** 12006-85-8

**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

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements

None required

Hazards not otherwise classified (HNOC)

None identified

---

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component

Iron boride (Fe<sub>2</sub>B)

Cas No.: 12006-85-8

---

## SECTION 4. FIRST AID MEASURES

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. Get medical attention immediately if symptoms occur.

Inhalation Remove to fresh air. Get medical attention immediately 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

None reasonably foreseeable.

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

Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Oxides of boron. Iron 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.

---

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

Personal Precautions Ensure adequate ventilation. Use personal protective equipment as required.

Avoid dust formation.

Environmental Precautions Should not be released into the environment. See Section 12 for additional Ecological Information. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

---

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

Handling Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or 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**

Engineering Measures None under normal use conditions.

#### 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 Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection No protective equipment is needed under normal use conditions.

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 7.3 g/cm<sup>3</sup>

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 Fe<sub>2</sub>B

Molecular Weight 122.50

---

## 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 agent

Hazardous Decomposition Products Oxides of boron, Iron 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  
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  
Aspiration hazard No information available  
Symptoms / effects, both acute and delayed  
No information available  
Endocrine Disruptor Information No information available  
Other Adverse Effects The toxicological properties have not been fully investigated.

---

## **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity  
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  
SARA 313 Not applicable  
SARA 311/312 Hazard Categories See section 2 for more information  
CWA (Clean Water Act) Not applicable  
Clean Air Act Not applicable  
OSHA - Occupational Safety and Health Administration  
Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S.

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.