

SAFETY DATA SHEET

Revision Date: Jun. 24, 2026

SECTION 1. IDENTIFICATION

Item	Information
Product Name	Hafnium Boride Powder
Chemical Name	Hafnium boride
Chemical Formula	HfB ₂
CAS No.	12007-23-7
Recommended Use	Scientific research and development; advanced ceramic materials; powder metallurgy and industrial material applications.
Uses Advised Against	Food, drug, pesticide, biocidal product use, or other applications not specified by the supplier.

Supplier details:

Supplier	MetalsTek Engineering
Legal Name	Keyue Advanced Materials LLC
Address	32 N Gould St., Sheridan, WY 82801, USA
Tel.	+1 (213) 373-5225
Email	sales@metalstek.com
Website	www.metalstek.com
Emergency Telephone	For emergency assistance, contact local emergency services or a poison control center.

SECTION 2. HAZARDS IDENTIFICATION

This product is not considered hazardous by the US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200) according to the source SDS.

Hazard Class	Category / Classification
OSHA HCS classification	Not classified
Signal Word	None required
Hazard Statement(s)	None required according to the source SDS.

SAFETY DATA SHEET

Revision Date: Jun. 24, 2026

Precautionary Statements:

- Avoid dust formation.
- Avoid contact with skin, eyes, or clothing.
- Use adequate ventilation.
- Wear appropriate eye protection and protective gloves during handling.
- Keep container tightly closed in a dry, cool, and well-ventilated place.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	Weight %
Hafnium boride (HfB ₂)	12007-23-7	<=100

SECTION 4. FIRST-AID MEASURES

Item	Information
General Advice	If symptoms persist, call a physician. Show this safety data sheet to medical personnel.
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 if irritation persists.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
Ingestion	Rinse mouth with water. Do not give anything by mouth to an unconscious person. Get medical attention if symptoms occur.
Notes to Physician	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Item	Information
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SAFETY DATA SHEET

Revision Date: Jun. 24, 2026

Suitable Extinguishing Media	Use extinguishing measures appropriate to the surrounding fire conditions. The product is not combustible according to the source SDS.
Specific Hazards	The product is not combustible according to the source SDS. Hazardous combustion/decomposition products may include oxides of boron and hafnium oxide.
Protective Equipment	Wear self-contained breathing apparatus and full protective gear in case of fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Ensure adequate ventilation.
- Use personal protective equipment as required.
- Avoid dust formation and avoid breathing dust.
- Sweep up and shovel into suitable closed containers for disposal.
- Do not allow material to enter drains, surface water, sanitary sewer systems, or groundwater.

SECTION 7. HANDLING AND STORAGE

Item	Information
Handling	Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with eyes, skin, or clothing. Avoid ingestion and inhalation. Avoid dust formation.
Storage	Keep containers tightly closed in a dry, cool, and well-ventilated place.
Incompatible Materials	Oxidizing agents.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Item	Information
Exposure Guidelines	ACGIH TLV TWA 0.5 mg/m ³ ; NIOSH REL TWA 0.5 mg/m ³ ; NIOSH IDLH 50 mg/m ³ ; Mexico OEL TWA 0.5 mg/m ³ , as listed in the source SDS.
Engineering Controls	Ensure adequate ventilation, especially in confined areas.

SAFETY DATA SHEET

Revision Date: Jun. 24, 2026

Eye / Face Protection	Wear appropriate protective eyeglasses or chemical safety goggles.
Skin / Body Protection	Wear appropriate protective gloves and protective clothing to prevent skin exposure.
Respiratory Protection	Use an approved particulate respirator if exposure limits are exceeded or if irritation or other symptoms occur.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Item	Information
Physical state	Solid
Odor	Odorless
Molecular formula	B ₂ H ₆
Molecular weight	200.11 g/mol
Melting point/range	3250 °C / 5882 °F
Water solubility	Insoluble in water
Density / specific gravity	10.5 g/cm ³ @ 20 °C

SECTION 10. STABILITY AND REACTIVITY

Item	Information
Reactivity	No reactive hazards known based on available information.
Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	Incompatible products; heat and ignition sources where dust may be present.
Incompatible Materials	Oxidizing agents.
Hazardous Decomposition Products	See Section 5.
Hazardous Polymerization	Hazardous polymerization does not occur.

SAFETY DATA SHEET

Revision Date: Jun. 24, 2026

SECTION 11. TOXICOLOGICAL INFORMATION

- Inhalation is not an expected route of exposure according to the source SDS.
- No known effect based on information supplied for ingestion, eyes, and skin according to the source SDS.
- The toxicological properties have not been fully investigated.
- Not listed as a carcinogen by IARC, NTP, ACGIH, OSHA, or Mexico in the source SDS.

SECTION 12. ECOLOGICAL INFORMATION

- May cause long-term adverse effects in the environment.
- Do not allow material to contaminate groundwater, surface water, or sanitary sewer systems.
- Insoluble in water; may persist.

SECTION 13. DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification. Dispose of contents and container through an approved waste disposal facility.

SECTION 14. TRANSPORT INFORMATION

Regulation	Transport Information
DOT	Not regulated
TDG	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated

SECTION 15. REGULATORY INFORMATION

- TSCA: Listed; inventory status ACTIVE.
- SARA 313: Does not contain chemicals subject to reporting requirements according to the source SDS.
- California Proposition 65: Does not contain Proposition 65 chemicals according to the source SDS.
- CERCLA/SARA hazardous substances: Not applicable according to the source SDS.

SAFETY DATA SHEET

Revision Date: Jun. 24, 2026

SECTION 16. OTHER INFORMATION

Item	Information
Prepared By	MetalsTek Engineering
Revision Date	Jun. 24, 2026
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of publication. It is intended only as guidance for safe handling, use, storage, transportation, disposal, and release. It is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.