

SAFETY DATA SHEET

Date Printed: 05/17/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifier: (2N5) 99.5% Dysprosium Boride (DyB6)

Product Code: DY-B6-025-SLD

CAS Number: 12008-04-7

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

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Not a dangerous substance or mixture according to GHS

HMIS CLASSIFICATION:

Health: 1 Fire: 0 Reactivity Hazard: 0

NFPA RATING:

Health: 1 Flammability: 0 Reactivity Hazard: 0

EYE CONTACT: May cause eye irritation.

SKIN CONTACT: May cause skin irritation.

INHALATION: May cause respiratory tract irritation.

INGESTION: May be irritating if swallowed.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: DyB6

Molecular Weight: 227.36

CHEMICAL NAME: Dysprosium Boride

CAS#: 12008-04-7

%: 100

SECTION 4. FIRST AID MEASURES

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

SKIN EXPOSURE: Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

INHALATION: Remove to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

SECTION 5. FIREFIGHTING MEASURES

FLASH POINT: This product is not flammable.

AUTO IGNITION TEMPERATURE: Not available

EXPLOSION LIMITS: Not available

EXTINGUISHING MEDIUM: Use fire fighting measures that suit the surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Dysprosium, boron, and their oxides.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear all appropriate equipment when using this material. Ensure adequate ventilation. Avoid the formation of dust. Avoid breathing vapors, mist, gas, or dust.

ENVIRONMENTAL PRECAUTIONS: Prevent spillage from entering drains or allowing to be released into the environment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Sweep up and place in suitable container for proper disposal.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear appropriate personal protective equipment. Avoid contact with skin and eyes. Use with adequate ventilation. Avoid formation of dusts and aerosols.

CONDITIONS FOR SAFE STORAGE: Store in cool, dry, and well-ventilated area. Protect from moisture.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS: Contains no substances with occupational exposure limit values.

EYE PROTECTION: Wear chemical safety glasses or goggles and face shield.

SKIN PROTECTION: Wear nitrile or rubber gloves, and a complete suit protecting against chemicals.

VENTILATION: Provide local exhaust, preferably mechanical.

RESPIRATOR: Use an approved respirator.

ADDITIONAL PROTECTION: Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: Grayish-black solid

ODOR: None

MOLECULAR WEIGHT: 227.36

BOILING POINT: No data available

MELTING POINT: No data available

SPECIFIC GRAVITY: No data available

SOLUBILITY: Insoluble

SECTION 10. STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: None

INCOMPATIBILITY: Strong oxidizing agents and strong acids

DECOMPOSITION PRODUCTS: Dysprosium, boron, and their oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

CARCINOGENIC EFFECTS: No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.

MUTAGENIC EFFECTS: Not available

TETRATOGENIC EFFECTS: Not available

RTECS: No data

ACUTE AND CHRONIC TOXICITY: Dysprosium Compounds: Soluble dysprosium salts, such as dysprosium chloride and dysprosium nitrate, are mildly toxic when ingested. The insoluble salts, however, are non-toxic. Based on the toxicity of dysprosium chloride to

mice, it is estimated that the ingestion of 500 gm. or more could be fatal to a human. Boron

Compounds: Only a few human studies

have been conducted to assess health effects associated with exposure to boron compounds. The available data show that exposure

is associated with short-term irritant effects on the upper respiratory tract, nasopharynx, and eye.

These effects, however, appear to be

short-term and reversible. The sole long-term (7-year) follow-up study failed to identify any long-term health effects. No studies have

been identified that assess reproductive outcomes. From 782 cases of boric acid ingestion, all except two cases were acute ingestions. 88.3% were asymptomatic. Among the remaining 11.7%, frequent symptoms included vomiting, abdominal pain, and diarrhea. Among the children less than 6 years of age, 21 ingested more than the estimated lethal dose of 15 gm all without severe manifestations of toxicity or life-threatening symptoms. In this series only minimal toxicity was seen at serum levels or less than or equal to 640 mg/ml. To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12. ECOLOGICAL INFORMATION

No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14. TRANSPORT INFORMATION

Not a dangerous good.

SECTION 15. REGULATORY INFORMATION

TSCA: Listed in the TSCA
SARA 302/304: Not Listed
SARA 311/312: Not Listed
SARA (TITLE 313): Not Listed
CALIFORNIA PROP. 65: Not Listed

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.
