



## Safety Data Sheet

Revision Date: 05/06/2022

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name : Boron Oxide Powder  
Product No.: 1186DF  
CAS-No: 77704-22-4

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

#### 1.3 Details of the supplier of the safety data sheet

Company : Nanostructured & Amorphous Materials Inc.  
1526 Katy Gap Rd, Suite 302  
Katy, TX 77494, USA

Telephone : +1 281-858-6571

#### 1.4 Emergency telephone number

Emergency Phone # +1 832-800-0355

### 2 Composition/Data on components:

Formula :  $B_2O_3$   
CAS-No. 77704-22-4

### 3 Hazards identification

#### Emergency Overview

##### OSHA Hazards

Irritant

#### HMIS Classification

Health Hazard: 2

Flammability: 0

Physical hazards: 0

#### NFPA Rating

Health Hazard: 2

Fire: 0

Reactivity Hazard: 0

Potential Health Effects

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.

**Skin** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes** Causes eye irritation.

**Ingestion** May be harmful if swallowed.

#### **4 First aid measures**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### **5 Fire fighting measures**

**Flammable properties**

Flash point not applicable  
Ignition temperature no data available

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

#### **6 Accidental release measures**

**Personal precautions**

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

**Environmental precautions**

Do not let product enter drains.

**Methods for cleaning up**

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

#### **7 Handling and storage**

**Handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Storage**

Keep container tightly closed in a dry and well-ventilated place.

## **8 Exposure controls and personal protection**

Contains no substances with occupational exposure limit values.

### **Personal protective equipment**

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Hand protection**

Handle with gloves.

#### **Eye protection**

Safety glasses

#### **Skin and body protection**

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### **Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## **9 Physical and chemical properties:**

### **Appearance**

Form:	solid
pH	no data available
Melting point	450 °C (842 °F)
Boiling point	no data available
Flash point	not applicable
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	2.474 g/mL at 25 °C (77 °F)
Water solubility	no data available

## **10 Stability and reactivity**

### **Storage stability**

Stable under recommended storage conditions.

### **Conditions to avoid**

Avoid moisture.

### **Materials to avoid**

acids, Hydroxides

### **Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Borane/boron oxides

## **11 Toxicological information**

### **Acute toxicity**

no data available

### **Irritation and corrosion**

no data available

### **Sensitisation**

no data available

### **Chronic exposure**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### **Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### **Potential Health Effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.

**Skin** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes** Causes eye irritation.

**Ingestion** May be harmful if swallowed

## **12 Ecological information:**

### **Elimination information (persistence and degradability)**

no data available

### **Ecotoxicity effects**

no data available

### **Further information on ecology**

no data available

## **13 Disposal considerations**

### **Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

### **Contaminated packaging**

Dispose of as unused product.

#### **14 Transport information**

##### **DOT (US)**

Not dangerous goods

##### **IMDG**

Not dangerous goods

##### **IATA**

Not dangerous goods

#### **15 Regulations**

##### **OSHA Hazards**

Irritant

##### **DSL Status**

This product contains the following components that are not on the Canadian DSL nor NDSL lists.

Boron oxide, CAS-No. 77704-22-4

##### **SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

##### **SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

##### **SARA 311/312 Hazards**

Acute Health Hazard

##### **Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

##### **Pennsylvania Right To Know Components**

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##### **New Jersey Right To Know Components**

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##### **California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

#### **Further information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without

warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.