

# Material Safety Data Sheet

Material Name: Tres BN Boron Nitride Powders  
Issue Date : 20-Oct-2003

ID: MSDS-100  
Date Revised: 06-Jul-2007

## \*\*\* Section 1 - Chemical Product and Company Identification \*\*\*

Part Number: PUHPxxxxxx, TBNxxxxxx

(Where x = any digit 0-9 and/or any letter A – Z or blank)

Example: PUHPxxxxxx = PUHP3008

**Chemical Name:** Boron Nitride Powder

**Product Use:** Cosmetic application. Not intended for food and drug use.

### Manufacturer Information

Saint-Gobain Advanced Ceramics  
Boron Nitride  
168 Creekside Drive  
Amherst, NY 14428-2027

Phone: (716) 691-2000  
Fax: (716) 691-2090  
Emergency # 1-800-424-9300 (CHEMTREC)

NOTE: CHEMTREC emergency telephone number is to be used in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

## \*\*\* Section 2 - Composition / Information on Ingredients \*\*\*

CAS #	Component	Percent
10043-11-5	Boron nitride (BN)	96-99
1303-86-2	Boron oxide	0 – 0.2

### Component Information/Information on Non-Hazardous Components

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

## \*\*\* Section 3 - Hazards Identification \*\*\*

### Emergency Overview

This is a non-flammable, non-reactive solid material. It is supplied in the form of an odorless, white powder. Exposure to dust may be irritating to eyes, nose and throat.

### Potential Health Effects: Eyes

No significant eye irritation can be expected from contact with this product.

### Potential Health Effects: Skin

No significant skin irritation can be expected from contact with this product.

### Potential Health Effects: Ingestion

Ingestion of this product may cause nausea, vomiting and diarrhea.

### Potential Health Effects: Inhalation

Inhalation of dusts may cause respiratory irritation.

**HMIS Ratings: Health: 1 Fire: 1 Reactivity: 0 Pers. Prot.:** Safety glasses, gloves

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

## \*\*\* Section 4 - First Aid Measures \*\*\*

### First Aid: Eyes

Flush eyes immediately with large amounts of water. If irritation persists get medical attention.

### First Aid: Skin

If irritation results, wash affected area with soap and water.

### First Aid: Ingestion

If ingested, get immediate medical attention. Do not induce vomiting unless instructed to do so by medical personnel.

### First Aid: Inhalation

Move person to non-contaminated air. If symptoms persist, get medical attention.

### First Aid: Notes to Physician

None.

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## \*\*\* Section 5 - Fire Fighting Measures \*\*\*

**Flash Point:** Not available

**Method Used:** Not available

**Upper Flammable Limit (UFL):** Not available

**Lower Flammable Limit (LFL):** Not available

**Auto Ignition:** Not available

**Flammability Classification:** Non-flammable

**Rate of Burning:** Not available

### General Fire Hazards

None.

### Hazardous Combustion Products

Decomposition of this product may yield oxides of boron and nitrogen. Decomposition of boron nitride occurs at 2204 C (4000 F).

### Extinguishing Media

Use methods for the surrounding fire.

### Fire Fighting Equipment/Instructions

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

**NFPA Ratings: Health: 1 Fire: 1 Reactivity: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

## \*\*\* Section 6 - Accidental Release Measures \*\*\*

### Containment Procedures

None necessary.

### Clean-Up Procedures

Sweep up or gather material and place in appropriate container for disposal.

### Evacuation Procedures

None necessary.

### Special Procedures

Avoid inhalation of dust from the spilled material. Follow all Local, State, Federal and Provincial regulations for disposal.

## \*\*\* Section 7 - Handling and Storage \*\*\*

### Handling Procedures

Wash thoroughly after handling. Avoid breathing dusts from this material. Avoid contact with skin and eyes. Use this product with adequate ventilation. Not for food and drug use.

### Storage Procedures

Store in original containers away from incompatibles. Keep the container dry.

## \*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\*

### Exposure Guidelines

#### A: General Product Information

Follow recommended exposure limits.

#### B: Component Exposure Limits

##### Boron oxide (1303-86-2)

ACGIH: 10 mg/m3 TWA

OSHA: total dust: 10 mg/m3 TWA

NIOSH: 10 mg/m3 TWA

### Engineering Controls

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

### PERSONAL PROTECTIVE EQUIPMENT

#### Personal Protective Equipment: Eyes/Face

Wear safety glasses with side shields.

#### Personal Protective Equipment: Skin

Use impervious gloves.

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## Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively prevent buildup of dusts, appropriate NIOSH respiratory protection must be provided.

## Personal Protective Equipment: General

Use good industrial hygiene practices in handling this material.

### \*\*\* Section 9 - Physical & Chemical Properties \*\*\*

<b>Appearance:</b>	White powder	<b>Odor:</b>	Odorless
<b>Physical State:</b>	solid	<b>pH:</b>	Not available
<b>Vapor Pressure:</b>	Not applicable	<b>Vapor Density:</b>	Not applicable
<b>Boiling Point:</b>	Not applicable	<b>Melting Point:</b>	Not applicable
<b>Solubility (H2O):</b>	Insoluble	<b>Specific Gravity:</b>	1.8 - 2.1
<b>Evaporation Rate:</b>	Not applicable	<b>Viscosity:</b>	Not applicable
<b>Percent Volatile:</b>	Not applicable	<b>Molecular Weight:</b>	Mixture

### \*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

#### Chemical Stability

Stable under normal conditions.

#### Chemical Stability: Conditions to Avoid

Avoid strong oxidizing agents.

#### Incompatibility

This product may react with strong acids or oxidizing agents.

#### Hazardous Decomposition

Thermal decomposition products may include oxides of boron and nitrogen. Decomposition of boron nitride occurs at 2204 C (4000 F).

#### Hazardous Polymerization

Will not occur.

### \*\*\* Section 11 - Toxicological Information \*\*\*

#### Acute and Chronic Toxicity

##### A: General Product Information

Based on results of animal tests, this product is not considered irritating to the eyes or skin. Delayed contact hypersensitivity testing in guinea pigs showed no allergic skin sensitization.

For this product: Oral LD50 Rat: >5 gm/kg

This product is considered a nuisance dust. Excessive airborne concentrations of nuisance dusts may cause irritation to skin or mucous membranes by chemical or mechanical action. Asthma and chronic respiratory conditions may be aggravated by exposure to this product. Exposure to boron nitride has not been shown to result in boron poisoning. Under normal operating conditions or thermal decomposition, boron nitride has not been shown to liberate free boron. Boron oxide may cause irritation, may alter kidney function, and may produce changes in the blood as a result of occupational exposure. Boron oxide may cause reversible effects that are generally not life threatening.

##### B: Component Analysis - LD50/LC50

###### Boron oxide (1303-86-2)

Oral LD50 Mouse : 3163 mg/kg

#### Carcinogenicity

##### A: General Product Information

No information available.

##### B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

#### Epidemiology

No information available.

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## Neurotoxicity

Some reports of neurological effects due to boron (ingested by infants as boric acid) have been reported. However, no direct effects of boron nitride have been shown.

## Mutagenicity

No information available.

## Teratogenicity

Chronic ingestion of boron has been reported to cause male and female reproductive damage in experimental animals. However, no direct effects of boron nitride have been shown.

### \*\*\* Section 12 - Ecological Information \*\*\*

## Ecotoxicity

### A: General Product Information

No information available.

### B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No ecotoxicity data are available for this product's components.

## Environmental Fate

No information available.

### \*\*\* Section 13 - Disposal Considerations \*\*\*

## US EPA Waste Number & Descriptions

### A: General Product Information

Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

### B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

## Disposal Instructions

Waste must be handled in accordance with all federal, state, provincial, and local regulations.

### \*\*\* Section 14 - Transportation Information \*\*\*

## US DOT Information

**Shipping Name:** Not regulated as dangerous goods.

**Additional Info.:** None.

## International Transportation Regulations

No additional information available.

### \*\*\* Section 15 - Regulatory Information \*\*\*

## US Federal Regulations

### A: General Product Information

No information available.

### B: Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

## State Regulations

### A: General Product Information

Other state regulations may apply. Check individual state requirements.

### B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Boron oxide	1303-86-2	Yes	Yes	Yes	Yes	Yes	Yes

## Other Regulations

### A: General Product Information

No additional information available.

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## B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Boron nitride (BN)	10043-11-5	Yes	Yes	Yes
Boron oxide	1303-86-2	Yes	Yes	Yes

## C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Boron oxide	1303-86-2	1% item 205 (228)

### \*\*\* Section 16 - Other Information \*\*\*

#### Other Information

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

#### Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists. AICS = Australian Inventory of Chemical Substances. CAS = Chemical Abstract Service. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. CFR = Code of Federal Regulations. CHEMTREC = Chemical Transportation Emergency Center. DSL = Canadian Domestic Substance List. EINECS = European Inventory of New and Existing Chemical Substances. EPA = Environmental Protection Agency. HEPA = High Efficiency Particulate Air. HMIS = Hazardous Materials Identification System. IARC = International Agency for Research on Cancer. IDLH = Immediately Dangerous to Life and Health. NDSL = Canadian Non-Domestic Substance List. NFPA = National Fire Protection Association. NIOSH = National Institute of Occupational Safety and Health. NJTSR = New Jersey Trade Secret Registry. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. NA = Not available or Not Applicable. SARA = Superfund Amendments and Reauthorization Act. TDG = Transportation of Dangerous Goods. TLV = Threshold Limit Value. TSCA = Toxic Substances Control Act. WHMIS = Workplace Hazardous Materials Information System.

Contact: Technical Service

Contact Phone: (716) 691-2052

This is the end of MSDS # MSDS-100