

MATERIAL SAFETY DATA SHEET

BORON NITRIDE POWDER BASED BLEND Grade FPD

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Momentive Performance Materials
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EMERGENCY TELEPHONE NO.:
24 hr. CHEMTREC: 1-800-424-9300

TRADE NAME:
Boron Nitride Powder Based Blend
Grade FPD

MSDS NUMBER: 409

CHEMICAL NAME:
Boron Nitride, Aluminum Oxide, and Modified
Bentonite Clay

SYNONYMS: Not Applicable

PREPARED BY:
Momentive Performance Materials

DATE OF ISSUE / LATEST REVISION:
July 25, 2001 / July 8 2007

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION! Dusts may cause skin and eye irritation. Odorless white powder.

POTENTIAL HEALTH EFFECTS:

Eye: Direct contact with product or dusts may cause mechanical irritation.

Skin Contact: Dusts may cause mechanical irritation.

Skin Absorption: Not absorbed through intact skin.

Ingestion: Not an expected route of exposure. Non-toxic by ingestion. May cause gastrointestinal irritation.

Inhalation: Not an expected route of exposure. Inhalation of dusts may cause respiratory tract irritation.

Medical Conditions Aggravated by Exposure: Pre-existing skin or respiratory disorders.

Chronic & Carcinogenicity: Repeated or prolonged inhalation of high concentrations of boron nitride may cause a benign pneumoconiosis. Boron nitride is not a known or suspected carcinogen. Dusts may possibly aggravate pre-existing lung and skin disorders. This product contains See Section 11 Toxicological Information for more information.

Routes of Exposure: Skin, respiratory tract (dusts).

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS #	Percent	ACGIH (TLV)	OSHA (PEL)	Units
Aluminum oxide	1344-28-1	0 – 60	10 (T)	15 (T) 5 (R)	mg/M ³ mg/M ³
Boron nitride	10043-11-5	10 – 90	10 (T) 3 (R)	15 (T) 5 (R)	mg/M ³ mg/M ³
Modified Bentonite clay	68953-58-2	0 – 15	10 (T) 3 (R)	15 (T) 5 (R)	mg/M ³ mg/M ³

T = Total Dust

R = Respirable Dust

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average
OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

4. FIRST AID MEASURES

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention if irritation persists.

Eyes: Do not rub eyes. Flush with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.

Skin: Wash skin gently with soap and water and remove contaminated clothing. Get medical attention if irritation persists. Remove any contaminated clothing and launder thoroughly before reuse.

Ingestion: Do not induce vomiting. If large amounts of the product are ingested, give 2 glasses of water. Never give anything by mouth to an unconscious person. Seek medical attention.

5. FIRE FIGHTING MEASURES

FLASH POINT: NA **LEL:** NA **UEL:** NA **AUTO IGN. TEMP.:** NA

Product is non-flammable. Product in or near fires should be cooled with a water spray or fog. Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus (SCBA) with full face mask and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Dike area with earth, sand, or other non-reactive material to prevent spread of release. Do not walk through spilled material. Wet mopping or vacuuming with a unit that contains a HEPA filter is recommended. Shovel or wipe up into a container for later disposal. Avoid cleanup procedures that may result in water pollution. Personal safety and exposure recommendations described elsewhere in this data sheet apply to exposure during clean up of spilled material. See Section 13.

7. HANDLING AND STORAGE

Storage: Store in original containers away from incompatibles.

Handling: Avoid contact with the eyes and skin. Avoid generating and breathing dust. Use with adequate local exhaust ventilation. Wear protective clothing to minimize skin contact. Remove contaminated clothing and clean before reuse. Wash thoroughly after work using soap and water. Keep away from children.

Empty Containers: Product packaging may contain product residue. Do not reuse.

8. EXPOSURE CONTROL - PERSONAL PROTECTION

Engineering Controls: Ventilation and other forms of engineering controls are the preferred means for controlling exposures. The need for local exhaust ventilation should be evaluated by a professional industrial hygienist. Local exhaust ventilation systems should be designed by a professional engineer.

Respiratory: If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29 CFR 1910.134).

Eye Protection: Chemical splash goggles or safety glasses with side shields.

Protective Gloves: Polymeric gloves.

General: Avoid unnecessary skin contact with this material. Polymeric coated apron or other body covering is recommended. All soiled or dirty clothing and personal protective equipment should be thoroughly cleaned before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE & PHYSICAL STATE: White powder

MELT POINT: At >2200° F (>1204°C) boron nitride oxidizes to a complex mixture of borates

VAPOR DENSITY (AIR=1): Not Applicable

OCTANOL/WATER PARTITION COEFFICIENT: Not Determined

VAPOR PRESSURE: Not Applicable

EVAPORATION RATE BuOAC = 1: NA

ODOR: None

SPECIFIC GRAVITY/BULK DENSITY:
SG = 2.1 – 2.2 g/cc

% VOLATILE BY VOLUME: Not volatile

BOILING POINT: Not Determined

% SOLUBILITY (H₂O): Insoluble

pH: Not Determined

OTHER: Not Applicable

10. STABILITY AND REACTIVITY

Stability & Polymerization: Product is stable. Hazardous polymerization will not occur.

Incompatibility (conditions to avoid): Strong oxidizing and reducing agents.

Hazardous Decomposition Products: Decomposition products may include oxides of boron and nitrogen, carbon monoxide, and carbon dioxide. Product is stable to >2200°F.

Conditions to Avoid: None known.

11. TOXICOLOGICAL INFORMATION

Boron nitride is physiologically inert and is considered a "nuisance" dust. Other boron compounds may be highly toxic and considered poisonous. Free boron will not be liberated under normal operating conditions or thermal decomposition of boron nitride. Exposure to boron nitride will not result in boron poisoning. Bentonite clays have a very low order of acute toxicity.

12. ECOLOGICAL INFORMATION

No ecotoxicity data is available. Product is inert. It is not expected to present an environmental hazard.

13. DISPOSAL CONSIDERATIONS

As prepared, product is considered non-hazardous. Dispose in accordance with all local, state, and federal or provincial regulations. If used or waste product is disposed of testing should be conducted to determine hazard characteristics. Empty containers will have product residues. Do not reuse.

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation (DOT)

Proper Shipping Name: Not Regulated

Hazard Class: Not applicable

UN/NA Code: Not applicable

Packing Group: Not applicable

15. REGULATORY INFORMATION

U.S. Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA) Reportable Quantity:

This product is not subject to CERCLA reporting requirements. Report spills required under federal, state and local regulations.

Clean Water Act (CWA):

This product, as supplied, contains the following substances which are regulated pollutants under the Clean Water Act (40 CFR 122.21 and 122.42 with reference to Appendix D, Tables II-V). Facilities must notify the appropriate permitting agency prior to introducing this product into its storm water and process waste water discharges.

Chemical Name

Boron, total (as boron nitride)

Aluminum, total (as aluminum oxide)

Toxic Substances Control Act (TSCA): All components of this product are listed or exempt from listing on the TSCA inventory.

OSHA Hazard Communication Categories: None

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 311/312 Hazard Categories: None

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313: None

California Proposition 65:

This product contains no chemicals known to the State of California to cause cancer.

16. OTHER INFORMATION

Not Est. = Not Established

NA = Not Applicable

NFPA Ratings:

Health: 1 Flammability: 1 Reactivity: 0

HMIS Ratings:

Health: 1 Flammability: 1 Reactivity: 0

Revision Indication

This MSDS has been revised in the following section(s):

March 28, 2005

Section 2 – Addition to Ingestion information; Addition to Chronic Information
Section 15 – Revision of OSHA and SARA Hazard categories

June 4, 2007

Section 1- Company name updated
Document footer- Company name updated
Disclaimer- Company name updated

July 8, 2007

Section 1- Latest revision date corrected
Document footer- Page numbers corrected, date corrected, and trademark note removed
Various- Grammar and spelling errors corrected

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