

Bent Tree Industries Europe GmbH - BTBN Boron Nitride Powder

Safety Data Sheet – BTBN006-UW

1 – Section 1 Identification

1.1 Product Identifier

Boron Nitride BTBN006-UW

1.2 Recommended Use: Release Agent, Additive to Coatings, Polymers, Lubricants etc.

1.3 Manufacturer's details:

Bent Tree Industries Europe GmbH
Pruehler Muehle 1
91483 Oberscheinfeld
Deutschland
Telefon: +49 9167 1301
Fax: +49 9167 1302
E-Mail: rdamasch@bnmaterials.com

1.4 Emergency telephone number: +49 91671301
Emergency telephone number 24 hours: +49 551 192 40

2 – Hazard Identification

2.1 Hazard Classification

Reproductive Toxicity: Category 1B

2.2 Label Elements

Signal word

Danger

Symbols

Health Hazard

Pictograms



Hazard Statements

May damage fertility or the unborn child

Prevention:

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves

Response:

If exposed or concerned: Get medical advice/attention

Storage:

Store locked up

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations

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3 – Composition/information on ingredients

Ingredient (INCI)	CAS	EINECS	%	Symbol	Risc
Boron Nitride	10043-11-5	233-136-6	Min. 98%	BN	n.a.
Boron Oxide	1303-86-2	215-125-8	0-1%	B2O3	See section 2

4 – First aid measures

4.1 Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention

Skin Contact:

Wash with soap and water. If signs/symptoms develop, get medical attention

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention

If Swallowed:

Rinse mouth. If you are concerned, get medical advice

4.2 Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects

4.3 Indication of any immediate medical attention and special treatment required

Not applicable.

5 – Fire Fighting Measures

5.1 Suitable extinguishing media in case of fire

Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish

5.2 Special hazards arising from the substance or mixture

None inherent in this product

Hazardous Decomposition or By-Products

Substance	Condition
Oxides of Nitrogen	During Combustion
Toxic Vapor/Gas	During Combustion

5.3 Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head

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6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment

6.2 Environmental precautions

Avoid release to the environment

6.3 Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations

7 - Handling and Storage

7.1 Precautions for safe handling

For industrial/occupational use only

Not for consumer sale or use

Do not handle until all safety precautions have been read and understood

Do not breathe dust/fume/gas/mist/vapors/spray

Do not get in eyes, on skin, or on clothing

Do not eat, drink or smoke when using this product

Wash thoroughly after handling

Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

Use personal protective equipment (gloves, respirators, etc.) as required

7.2. Conditions for safe storage including any incompatibilities

Store away from acids

Store away from oxidizing agents

8 - Exposure Controls/Personal Protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component

Ingredient	C.A.S. No.	Agency Limit type	Additional Comments
BORON OXIDE	1303-86-2	ACGIH	TWA:10 mg/m ³
BORON OXIDE	1303-86-2	OSHA	TWA(as total dust):15 mg/m ³

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

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STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment

8.2.2 Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended: Safety Glasses with side shields

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Gloves made from the following material(s) are recommended: Nitrile Rubber

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure: Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer

9 - Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Specific Physical Form:	Fine Powder (less than 10 microns)
Odor, Color, Grade:	odourless, white, powder
Odor threshold	No Data Available
pH	Not Applicable
Melting point	Not Applicable
Boiling Point	No Data Available
Flash Point	No Data Available
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	≥ 3000 g/m ³ [Details: EN 14034-3]
Flammable Limits(UEL)	No Data Available
Vapor Pressure	Not Applicable
Vapor Density	No Data Available
Density	2.25 g/cm ³ [@ 20 °C] [Details: reference pressure 1013 hPa]
Specific Gravity	No Data Available
Solubility In Water	≤ 0.162 mg/l [Test Method: UN Method]
Solubility- non-water	≤ 0.000162 g/l
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	2730 °C
Viscosity	Not Applicable

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10 - Stability and Reactivity

10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur

10.4 Conditions to avoid

None known

10.5 Incompatible materials

Strong acids Strong oxidizing agents

10.6 Hazardous decomposition products

Substance	Condition
None known	

Refer to section 5.2 for hazardous decomposition products during combustion

11 - Toxicological Information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:

Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye Contact:

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion

Ingestion:

May cause additional health effects (see below)

Additional Health Effects:

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm

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Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/k
Boron Nitride (BN)	Dermal	Rabbit	LD50 > 20,000 mg/kg
Boron Nitride (BN)	Ingestion	Rat	LD50 > 50,000 mg/kg
BORON OXIDE	Dermal		estimated to be > 5,000 mg/kg
BORON OXIDE	Inhalation-Dust/Mist		estimated to be > 12.5 mg/l
BORON OXIDE	Ingestion		estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

For the component/components, either no data are currently available or the data are not sufficient for classification

Serious Eye Damage/Irritation

For the component/components, either no data are currently available or the data are not sufficient for classification

Skin Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification

Germ Cell Mutagenicity

For the component/components, either no data are currently available or the data are not sufficient for classification

Carcinogenicity

For the component/components, either no data are currently available or the data are not sufficient for classification

Reproductive Toxicity/Reproductive and/or Developmental Effects

Contains a chemical or chemicals which can cause birth defects or other reproductive harm

Target Organ(s)

Specific Target Organ Toxicity - single exposure

For the component/components, either no data are currently available or the data are not sufficient for classification

Specific Target Organ Toxicity - repeated exposure

For the component/components, either no data are currently available or the data are not sufficient for classification

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information

12 - Ecological Information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components

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13 – Disposal Considerations

13.1 Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities

EPA Hazardous Waste Number (RCRA): Not regulated

14 – Transport Information

14.1 UN number (not subject to transport regulations)

14.2 UN proper shipping name not relevant

14.3 Transport hazard class(es) not relevant

14.4 Packaging group not relevant, not assigned to a packaging group

14.5 Environmental hazards none (non-environmentally hazardous acc. To the dangerous goods regulation)

14.6 Special precautions for user
There is no additional information

14.7 Transportation in bulk according to Annex II of MARPOL and the IBC Code
The cargo is not intended to be carried in bulk

14.8 Information for each of the UN Model Regulations

Transportation of dangerous goods by road, rail and inland water (ADR/RID/ADN)
Not subject to ADR, RID and ADN

International Maritime Dangerous Goods Code (IMDG)
Not subject to IMDG

International Civil Aviation Organization (ICAO-IATA/DGR)
Not subject to ICAO-IATA

15 – Regulatory Information

15.1 US Federal Regulations

Contact Bent Tree Industries Europe for more information

EPCRA 311/312 Hazard Classifications:
Physical Hazards

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Not applicable

Health Hazards

Reproductive toxicity

15.2 State Regulations

Contact Bent Tree Industries Europe for more information.

15.3 Chemical Inventories

The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information

The components of this product are in compliance with the new substance notification requirements of CEPA

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information

The components of this material are in compliance with the provisions of Japan Industrial Safety and Health Law. Certain restrictions may apply. Contact the selling division for additional information

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information

The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information

The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact Bent Tree Industries Europe for more information

15.4 International Regulations

Contact Bent Tree Industries Europe for more information

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200

16 – Other Information

NFPA Hazard Classification

Health:1 **Flammability:**1 **Instability:**0 **Special Hazards:**None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities

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