



SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name BN Powder ZG™
Product Code 5048

Safety Data Sheet Supplier Information:

Manufacturer ZYP Coatings, Inc.
120 Valley Court
Oak Ridge, TN 37830
www.zypcoatings.com
Telephone (General) (865) 482-5717 8:30 AM - 5:00 PM EST.
Emergency Telephone Number (800) 255-3924 – ChemTel
(813) 248-0585 Outside of US – Call Collect

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

SIGNAL WORD

Warning

SYMBOL(S)



PRIMARY ROUTES OF EXPOSURE

Inhalation of dust and contact to the eyes and skin.

HAZARD STATEMENTS

Eye Irritant	Category 2B	H320	Causes eye irritation.
STOT:SE	Category 3	H335	May cause respiratory irritation.

PRECAUTIONARY STATEMENT(S)

P261	Avoid breathing dust / fume / gas / mist / vapors / spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor / physician if you feel unwell.
P337 + P313	If eye irritation persists: Get medical advice / attention.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents / container in accordance with local / regional / national / international regulations.



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Health 1
Fire 0
Reactivity 0



3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Hazard Components		Wt. %
	Identifiers		
Boron Nitride	CAS No.	10043-11-5	>99%

4. FIRST AID MEASURES

EYES	Flush eyes, including under the eyelids, with large amounts of water. If irritation persists, seek medical attention.
SKIN	Wash thoroughly with mild soap and water, rinse thoroughly.
INGESTION	If ingested, the preferred method of elimination is through natural gastrointestinal elimination. Drink extra water. Seek medical attention if gastrointestinal symptoms develop.
INHALATION	Remove to fresh air, seek medical attention if irritation results.

5. FIRE FIGHTING MEASURES

Extinguishing media	Non-combustible material. Use the extinguishing media appropriate to the surrounding fire.
Flammability Classification	Non-flammable.
Special Hazards Arising from the Chemical	Data lacking.
Hazardous Combustion Products	None known.
Specific Protective Equipment and Precautions (Firefighters)	As in any fire, wear self-contained breathing apparatus (SCBA), NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures	Clean-up personnel should wear protective gloves and goggles to prevent possible irritation from prolonged contact. Contain the spilled powder and dispose of according to local/regional/national/international regulations.
Environmental Precautions	Do not allow product to reach sewage system or any water course.
Methods And Materials For Containment And Cleaning Up	No special measures are required; refer to environmental and personal precautions, and other sections of this document.

7. HANDLING AND STORAGE

SAFE HANDLING PRECAUTIONS	Boron Nitride is slippery, and is considered a slip hazard if spilt on a walkway. Practice good housekeeping.
SAFE STORAGE PRECAUTIONS	Store in original container.



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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits/Guidelines

Engineering Measures/Controls	Provide adequate ventilation to control dust below the regulated exposure limits (PEL and TLV).
Personal Protective Equipment	Protective clothing should be selected specifically for the workplace, depending on concentration and quality of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired from the respective supplier.
Respiratory	Provide adequate ventilation to control dust below the TLV. Use protection required for nuisance dusts. If ventilation is not sufficient to effectively prevent buildup of dusts, appropriate NIOSH respiratory protection must be provided. An appropriate NIOSH-approved respirator must be worn if exposure is likely to exceed the lowest TLV/PEL rated regulations. Consult the NIOSH web site: http://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/ for a list of dust respirators types and approved suppliers.
Eye/Face	Safety goggles or side shielded safety glasses are recommended for any industrial handling.
Hands	Use impervious gloves.
Skin/Body	Normal work clothing (long-sleeved shirt, long pants, and gloves) are recommended.

Exposure Guidelines

Boron Nitride:	Guideline ACGIH (TLV):	None established (treat as nuisance dust) 10 mg/m ³ (Total dust) 5 mg/m ³ (Respirable fraction)
	Guideline OSHA (PEL):	None established (treat as nuisance dust) 10 mg/m ³ (Total dust) 5 mg/m ³ (Respirable fraction)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Powder	Odor	None
Color	White	Vapor Pressure	n. ap.
Specific Gravity	n. ap.	Vapor Density	n. ap.
pH	n. ap.	Solubility in Water	Not soluble
Viscosity	n. ap.	Freezing Point	n. ap.
Melting Point	Not determined	Boiling Point	Not determined.
VOC Content	n. ap.	Percent Volatile	n. ap.
Molecular Weight	25 g/mol.	Flash Point	n. ap.
Evaporation Rate	n. ap.	Flash Point Method	n. ap.

10. STABILITY AND REACTIVITY

Chemical Stability	This refractory powder is stable under normal conditions of storage. Hazardous polymerization will not occur.
Incompatible Materials	None known.



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Conditions To Avoid	None known.
Hazardous Decomposition Products	None.

11. TOXICOLOGICAL INFORMATION

Route(S) Of Entry/Exposure	Note all values are calculated in accordance with OSHA 29 C.F.R. § 1910 for mixtures.
Ingestion	LD50 Oral - rat: >2,000 mg/kg
Skin Absorption	LD50 Dermal – rat: >2,000 mg/kg
Inhalation	LC50 Inhalation – rat: 5.19 mg/L
Eye Contact	No data.
Skin Contact	No data.
Effects of Acute Exposure	See section above for eye contact, skin contact, ingestion, and inhalation.
Effects of Chronic Exposure	CAUTION! Exposure to dust may be irritating to eyes, nose and throat.
Exposure limits	
NTP	No ingredient(s) of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
IARC	No ingredient(s) 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 ingredient(s) of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
OSHA	No ingredient(s) of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
Reproductive Effects	No adverse effect.
Further Information	Quantitative data on this product is not available. No toxic effects are to be expected when this product is handled appropriately.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Data is lacking and inconclusive for this product.
Persistence/Degradability	Data is lacking and inconclusive for this product.
Bio Accumulative Potential	Data is lacking and inconclusive for this product.
Mobility in Soil	Data is lacking and inconclusive for this product.
Other Adverse Effects	Data is lacking and inconclusive for this product.

13. DISPOSAL CONSIDERATIONS

Description of Waste	None.
Methods of Disposal	Disposal must be made according to official regulations. Consult local/regional/national/international regulations to ensure proper disposal.






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14. TRANSPORT INFORMATION

UN Number	
DOT, IMDG, IATA	n. ap.
Proper Shipping Name	
DOT, IMDG, IATA	n. ap.
Hazard Class(es)	DOT – Not Regulated
DOT, IMDG, IATA	ICAO/IATA – Not Dangerous or not hazardous goods not restricted for transport by air.
	IMDG – Not Regulated
Packaging Group	DOT – Not Regulated
DOT, IMDG, IATA	ICAO/IATA – Not Dangerous or not hazardous goods not restricted for transport by air.
	IMDG – Not Regulated
Environmental Hazards	
DOT, IMDG, IATA	n. ap.
Special Precautions	
DOT, IMDG, IATA	n. ap.

15. OTHER REGULATORY INFORMATION

California Proposition 65 Warnings	This product does not contain any material or ingredient that the State of California has found to cause cancer which would require a warning under the statute.							
TSCA Inventory	All substances contained in this product are listed in the Toxic Substances Control Act Chemical Substance Inventory.							
HMIS (USA)	<table> <tr> <td>HEALTH</td> <td>1</td> </tr> <tr> <td>FLAMMABILITY</td> <td>0</td> </tr> <tr> <td>REACTIVITY</td> <td>0</td> </tr> </table>	HEALTH	1	FLAMMABILITY	0	REACTIVITY	0	
HEALTH	1							
FLAMMABILITY	0							
REACTIVITY	0							
NFPA (USA)	<table> <tr> <td>PERSONAL PROTECTION</td> <td>E</td> </tr> </table>	PERSONAL PROTECTION	E	Health Flammability Reactivity Specific Hazard				
PERSONAL PROTECTION	E							
Protective Equipment	  							

16. OTHER INFORMATION

SDS Number:	5048
SDS Revision Number:	2.1.0
SDS Preparation or Revision Date:	January 6, 2020



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SDS Prepared By: T. Greene
Date Printed January 6, 2020
Telephone Number 865-482-5717

Abbreviations

Not Available	n. av.
Not Applicable	n. ap.
DOT	US Department of Transportation
IATA	International Air Transportation Association
IMDG	International Maritime Code for Dangerous Goods
ICAO	International Civilian Aviation Organization
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
CAS	Chemical Abstract Service
HMIS	Hazardous Materials Identification System (US)
NFPA	National Fire Protection Association (US)
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
STOT	Specific Target Organ Toxicity
RQ	Reportable Quantity
TPQ	Threshold Planning Quantity
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
SARA	Superfund Amendments and Reauthorization Act
TSCA	Toxic Substances Control Act
RTK	Right to Know
EPCRA	Emergency Planning and Community Right to Know Act
TLV	Threshold Limit Values
PEL	Permissible Exposure Limits

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