



# SAFETY DATA SHEET

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier**  
**Product Name** BN Lubricoat® Paste  
**Product Code** 1077  
**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 and contact to the eyes.

#### HAZARD STATEMENTS

Eye irritation	Category 2B	H320	Causes eye irritation.
Inhalation	Category 4	H332	Harmful if inhaled.
STOT:SE	Category 3	H335	May cause respiratory irritation.

#### PRECAUTIONARY STATEMENT(S)

P261	Avoid breathing dust / fumes / gas / mists / vapors / spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in 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.

Health 1  
 Fire 0  
 Reactivity 0





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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Hazard Components		Wt.%
	Identifiers		
Water	CAS No.	7732-18-5	65-70
Boron Nitride	CAS No.	10043-11-5	23-28
Aluminum Oxide	CAS No.	1318-23-6	3-5
Nitric acid	CAS No.	7697-37-2	1-3

### 4. FIRST AID MEASURES

<b>EYES</b>	Flush eyes, including under the eyelids, with large amounts of water. If irritation persists, seek medical attention.
<b>SKIN</b>	Wash thoroughly with mild soap and water.
<b>INGESTION</b>	Give copious amounts of water and seek medical attention.
<b>INHALATION</b>	Remove to fresh air. Seek medical attention if symptoms persist.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing Media</b>	This water-based coating is non-combustible. Use extinguishing media appropriate to the surrounding fire.
<b>Flammability Classification</b>	Non-combustible.
<b>Special Hazards Arising from the Chemical</b>	Initial exposure to high temperatures evolves, in small amounts, fumes that may be irritating or corrosive to the upper respiratory system.
<b>Hazardous Combustion Products</b>	Nitrogen oxides.
<b>Specific Protective Equipment and Precautions (Firefighters)</b>	As in any fire, wear self-contained breathing apparatus (SCBA), NIOSH (approved or equivalent) and full protective gear.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions, Protective Equipment and Emergency Procedures</b>	Clean up personnel should wear rubber gloves and goggles to prevent irritation from contact. Contain the spill using a mineral absorbent. It can be readily neutralized using any basic neutralization agent, such as lime or sodium bicarbonate.
<b>Environmental Precautions Methods and Materials For Containment and Cleaning Up</b>	Do not allow product to reach sewage system or any water course. No special measures are required; refer to environmental and personal precautions, and other sections of this document.

### 7. HANDLING AND STORAGE

<b>SAFE HANDLING PRECAUTIONS</b>	Boron Nitride is slippery, and is considered a slip hazard if spilt on a walkway. Practice good housekeeping.
<b>SAFE STORAGE PRECAUTIONS</b>	Store in original container. Do not store in metal containers since it may be corrosive to the container.



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### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Exposure Limits/Guidelines

<b>Engineering Measures/Controls</b>	Provide adequate ventilation to control dust or vapors below the regulated exposure limits (PEL and TLV).
<b>Personal Protective Equipment</b>	Protective clothing should be selected specifically for the workplace, depending on the concentration and quality of the hazardous substances handled. The chemical resistance of the protective gear should be inquired from the respective supplier.
<b>Respiratory</b>	An appropriate NIOSH-approved respirator must be worn if exposure is likely to exceed the lowest TLV/PEL rated regulations.
<b>Eye/Face</b>	Safety goggles or side shielded safety glasses are recommended for any type of industrial handling.
<b>Hands</b>	Use impervious gloves.
<b>Skin/Body</b>	Normal work clothing. Note that long sleeved shirts, long pants and gloves are recommended.
<b>Exposure Guidelines</b>	
<b>Boron Nitride</b>	Guideline ACGIH (TLV): None established (treat as nuisance dust) 10 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction) Guideline OSHA (PEL): None established (treat as nuisance dust) 15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)
<b>Aluminum Oxide</b>	Guideline ACGIH (TLV): 10 mg/m <sup>3</sup> (total dust) Guideline OSHA (PEL): 5 mg/m <sup>3</sup> (respirable fraction) 15 mg/m <sup>3</sup> (total dust) 1 mg/m <sup>3</sup> (respirable fraction)
<b>Nitric Acid</b>	Guideline ACGIH (TLV): 2 ppm (or 5.2 mg/m <sup>3</sup> ) Guideline OSHA (PEL): 2 ppm (or 5 mg/m <sup>3</sup> )

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid	<b>Odor</b>	Nearly odorless
<b>Color</b>	White	<b>Vapor Pressure</b>	10-20 mmHg
<b>Specific Gravity</b>	1.2-2	<b>Vapor Density</b>	Greater than air (Air=1)
<b>pH</b>	2-3	<b>Solubility in Water</b>	n. ap.
<b>Viscosity</b>	35,000-46,000 cps	<b>Freezing Point</b>	0° C (32° F)
<b>Melting Point</b>	n. ap.	<b>Boiling Point</b>	100° C (212° F)
<b>VOC Content</b>	0 g/L	<b>Percent Volatile</b>	65% - 70%
<b>Molecular Weight</b>	n. ap.	<b>Flash Point</b>	n. ap.
<b>Evaporation Rate</b>	Similar to water	<b>Flash Point Method</b>	n. ap.

### 10. STABILITY AND REACTIVITY

**Chemical Stability** This refractory coating is stable under all normal conditions of storage.



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<b>Incompatible Materials</b>	Hazardous polymerization will not occur. Do not mix with alcohols. As a good practice, do not mix with any other materials.
<b>Conditions To Avoid</b>	None known.
<b>Hazardous Decomposition Products</b>	Upon initial heating to 600° C, small amounts of nitric oxide fumes will be released.

### 11. TOXICOLOGICAL INFORMATION

<b>Route(s) Of Entry/Exposure</b>	Note all values are calculated in accordance with OSHA 29CFR§ 1910 for mixtures.
<b>Ingestion</b>	LD <sub>50</sub> Oral - rat: 3328 mg/kg
<b>Skin Absorption</b>	LD <sub>50</sub> Dermal – rat: 2044 mg/kg
<b>Inhalation</b>	LC <sub>50</sub> Inhalation – rat (per 4 hours):11.24 mg/L
<b>Eye Contact</b>	Corrosive burns with prolonged contact.
<b>Skin Contact</b>	Possible mild skin inflammation.
<b>Effects of Acute Exposure</b>	See sections above for eye contact, skin contact, ingestion, and inhalation.
<b>Effects of Chronic Exposure</b>	CAUTION! Exposure to dust may be irritating to eyes, nose and throat.
<b>Exposure Limits</b>	
<b>NTP</b>	No ingredient of this product is present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed carcinogen by NTP.
<b>IARC</b>	No ingredient of this product is present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed carcinogen by IARC.
<b>ACGIH</b>	No ingredient of this product is present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed carcinogen by ACGIH.
<b>OSHA</b>	No ingredient of this product is present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed carcinogen by OSHA.
<b>Reproductive Effects</b>	No adverse effect.
<b>Further Information</b>	Quantitative data on this product is not available. No toxic effects are to be expected when this product is handled appropriately.

### 12. ECOLOGICAL INFORMATION

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

### 13. DISPOSAL CONSIDERATIONS

<b>Description of Waste</b>	No data available.
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### Methods of Disposal

Consult local/regional/national/international regulations for compliance. Non-contaminated paint may be returned to the manufacturer for proper disposal. The dried paint generally does not exhibit any characteristics of a hazardous waste.

### 14. TRANSPORT INFORMATION

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

### 15. OTHER REGULATORY INFORMATION

This product contains 1-2% nitric acid CAS# 7697-37-2  
RQ = 1000 lbs.  
TPQ = 1000 lbs.

	Component	CAS No
<b>SARA 302</b>	Nitric Acid	7697-37-2
<b>SARA 313</b>	Nitric Acid	7697-37-2
<b>SARA 311/312</b>	Nitric Acid	7697-37-2
<b>CERCLA</b>	Nitric Acid	7697-37-2
<b>CERCLA – Hazardous Substance</b>	Nitric Acid	7697-37-2
<b>Clean Water Act Section 311</b>	Nitric Acid	7697-37-2
<b>OSHA</b>	Nitric Acid	7697-37-2
<b>WHIMIS</b>	Nitric Acid	7697-37-2
<b>Massachusetts Right to Know</b>	Nitric Acid	7697-37-2
<b>Pennsylvania Right to Know</b>	Nitric Acid	7697-37-2
<b>New Jersey Right to Know</b>	Nitric Acid	7697-37-2

### 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.



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HMIS (USA)

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0

NFPA (USA)

PERSONAL PROTECTION E



Health  
Flammability  
Reactivity  
Specific Hazard

Protective Equipment



### 16. OTHER INFORMATION

SDS Number:	1077
SDS Revision Number:	2.1.0
SDS Preparation or Revision Date:	May 29, 2015
SDS Prepared By:	T. Greene
Date Printed	May 29, 2015
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 Value
PEL	Permissible Exposure Limits



## SAFETY DATA SHEET

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