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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

Although reasonable care has been taken in the preparation of the information contained herein, the manufacturer extends no warranties, makes no representation and assumes no responsibility as to the accuracy or suitability of such information for the application to purchaser's intended purposes or for consequences of its use.

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****Caution: HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS ratings are not required on SDS's under 29 CFR §1910.1200 the preparer may choose to provide them. HMIS ratings are to be used only in conjunction with a fully implemented HMIS program by workers who have received appropriate HMIS training. HMIS is a registered trade and service mark of the NPCA. HMIS materials may be purchased exclusively from J.J. Keller (800) 327-6868.

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Isobutane	75-28-5
Propane	74-98-6

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)

HEALTH	2
FLAMMABILITY	4
REACTIVITY	0
PERSONAL PROTECTION	E

NFPA (USA)

Health
Flammability
Reactivity
Specific Hazard

Protective Equipment

16. OTHER INFORMATION

SDS Number:	1287
SDS Revision Number:	2.1.0
SDS Preparation or Revision Date:	November 4, 2021
SDS Prepared By:	C. Holcombe
Date Printed	November 4, 2021
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

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usual trash removal. Consult state, local or national regulations to ensure proper disposal. Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

UN Number	UN1950
DOT, IMDG, IATA	Ltd. Qty.
Proper Shipping Name	Aerosols, Flammable, Limited Quantity
DOT, IMDG, IATA	n. ap.
Hazard Class(es)	DOT –Regulated Class 2.1
DOT, IMDG, IATA	ICAO/IATA –Dangerous, hazardous goods restricted for transport by air. IMDG – Regulated
Packaging Group	DOT –Regulated Ltd. Qty.
DOT, IMDG, IATA	ICAO/IATA –Dangerous, hazardous goods restricted for transport by air. IMDG Regulated
Environmental Hazards	
DOT, IMDG, IATA	n. ap.
Special Precautions	
DOT, IMDG, IATA	n. ap.

15. OTHER REGULATORY INFORMATION

	Component	CAS No
SARA 302	Ethanol	64-17-5
	Acetone	67-64-1
SARA 313	Ethanol	64-17-5
	Acetone	67-64-1
SARA 311/312	Ethanol	64-17-5
	Acetone	67-64-1
CERCLA	Ethanol	64-17-5
	Acetone	67-64-1
CERCLA – Hazardous Substance	Ethanol	64-17-5
	Acetone	67-64-1
Clean Water Act Section 311	Ethanol	64-17-5
	Acetone	67-64-1
OSHA	Ethanol	64-17-5
	Acetone	67-64-1
WHIMIS	Ethanol	64-17-5
	Acetone	67-64-1
Massachusetts Right to Know	Ethanol	64-17-5
	Acetone	67-64-1
Pennsylvania Right to Know	Ethanol	64-17-5
	Acetone	67-64-1
New Jersey Right to Know	Ethanol	64-17-5
	Acetone	67-64-1
	N-Butane	106-97-8

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	for mixtures.
Ingestion	LD_{50} Oral - rat: 3718 mg/kg
Skin Absorption	LD_{50} Dermal – rat: 2853 mg/kg
Inhalation	LC_{50} Inhalation – rat (per 4 hours): 17.35 mg/kg
Eye Contact	Redness, burning, tearing, or swelling. Irritation will occur.
Skin Contact	Prolong/repeated contact with skin may cause redness, irritation, burning, drying, or cracking.
Effects of Acute Exposure	See sections above for eye contact, skin contact, ingestion, and inhalation.
Effects of Chronic Exposure	CAUTION! Exposure to dust from dried paint may be irritating to eyes, nose and throat.
Exposure Limits	
NTP	Ethanol is listed as A3 (Confirmed animal carcinogen with unknown relevance to humans).
IARC	Ethanol is listed as Group 1 (Carcinogenic to humans) for ethanol in alcoholic beverages. But, some doubt has been expressed regarding whether developmental toxicity can be caused by occupational exposure to ethyl alcohol. Inhalation and dermal exposure in the workplace result in low blood alcohol concentrations.
ACGIH	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.
OSHA	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.
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	Do not incinerate aerosol cans. Allow solvents on cleaning rags, papers, etc. to evaporate, and then dispose of in safety containers. Use and store to prevent accidental rupture of aerosol cans.
Methods of Disposal	Empty cans completely and then puncture it with the approved devices made for this purpose. The aerosol canisters may then be disposed in the

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		15 mg/m^3 (total dust) 5 mg/m^3 (respirable fraction)
Ethanol	Guideline ACGIH (TLV): Guideline OSHA (PEL):	1000 ppm (or 1,880 mg/m^3) 1000 ppm (or 1,900 mg/m^3)
Acetone	Guideline ACGIH (TLV): Guideline OSHA (PEL):	250 ppm (600 mg/m^3) 1000 ppm (2,400 mg/m^3)
Propane	Guideline ACGIH (TLV): Guideline OSHA (PEL):	2500 ppm (4,508 mg/m^3) 1000 ppm (1800 mg/m^3)
N-Butane	Guideline ACGIH (TLV): Guideline OSHA (PEL):	1000 ppm 800 ppm
Isobutane	Guideline ACGIH (TLV): Guideline OSHA (PEL):	1000 ppm None established
Proprietary-Trade Secret	Guideline ACGIH (TLV): Guideline OSHA (PEL):	10 mg/m^3 (total dust) 1 mg/m^3 (respirable fraction) 15 mg/m^3 (total dust) 5 mg/m^3 (respirable fraction)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid Aerosol	**Odor**	Alcohol/Acetone
Color	White	**Vapor Pressure**	Not determined
Specific Gravity	Not determined	**Vapor Density**	Heavier than air
pH	n. ap.	**Solubility in Water**	NIL
Viscosity	Not determined	**Freezing Point**	Not determined
Melting Point	n. ap.	**Boiling Point**	Not determined
VOC Content	599 g/L (Regulatory) 313 g/L (Actual)	**Percent Volatile**	90%
Molecular Weight	n. ap.	**Flash Point**	<2° C (<36° F) for liquid portion
Evaporation Rate	Rapid	**Flash Point Method**	Closed cup

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Incompatible Materials	Caustics and oxidizing materials and liquids. Strong acids and bases.
Conditions To Avoid	Heat, sparks, flame, and/or red hot metal.
Hazardous Decomposition Products	Will not occur.

11. TOXICOLOGICAL INFORMATION

Route(s) Of Entry/Exposure	Note all values are calculated in accordance with OSHA 29 C.F.R. § 1910

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Personal Precautions, Protective Equipment and Emergency Procedures	Clean up personnel should wear rubber gloves and goggles to prevent irritation from contact. In case of spill or rupture, avoid breathing vapors and ventilate area well. Remove all sources of ignition and use non-sparking equipment. Soak up with inert absorbents. Allow absorbents to dry and dispose in accordance with 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	Personnel should wear the appropriate equipment when handling the paint in order to minimize the chance of contact/exposure. Boron Nitride is slippery, and is considered a slip hazard if spilt on a walkway. Practice good housekeeping.
SAFE STORAGE PRECAUTIONS	Do not store in heat over 122° F (50° C). Do not spray into open flame or on hot surfaces. High temperatures may cause bursting. Do not puncture or incinerate. Keep out of reach of children. For warehouse storage, pallets, and cases should be placed to avoid damage or rupture from material handling equipment. With use, spray aerosol carefully and cap after each use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

	Exposure Limits/Guidelines
Engineering Measures/Controls	Provide adequate ventilation to control dust or vapors below the regulated exposure limits (PEL and TLV).
Personal Protective Equipment	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.
Respiratory	An appropriate NIOSH-approved respirator must be worn if exposure is likely to exceed the lowest TLV/PEL rated regulations.
Eye/Face	Safety goggles or side shielded safety glasses are recommended for any type of industrial handling.
Hands	Use impervious gloves.
Skin/Body	Normal work clothing. Note that long sleeved shirts, 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)

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P403	Store in a well-ventilated place.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50° C / 122 °F
P501	Dispose of contents / container in accordance with local / regional / national / international regulations.

Health	2
Fire	4
Reactivity	0

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Hazard Components Identifiers		Wt.%
Boron Nitride	CAS No.	10043-11-5	5-10
Ethanol	CAS No.	64-17-5	10-30
2-Propanone (Acetone)	CAS No.	67-64-1	30-60
Propane	CAS No.	74-98-6	10-30
Butane	CAS No.	106-97-8	10-30
Isobutane	CAS No.	75-28-5	5-10
Proprietary-Trade Secret	CAS No.		1-5

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.
INGESTION	In the event of swallowing, drink 1 or 2 glasses of water to dilute.
INHALATION	Remove from exposure. Restore breathing, keep warm, and quiet.
General	Never give anything by mouth to an unconscious person. Do not induce vomiting. Call a poison center or a doctor if you feel unwell.

5. FIRE FIGHTING MEASURES

Extinguishing Media	Water spray or fog, dry chemical, or carbon dioxide.
Flammability Classification	Flammable aerosol.
Special Hazards Arising from the Chemical	None known.
Hazardous Combustion Products	Oxides of carbon.
Specific Protective Equipment and Precautions (Firefighters)	As in any fire, wear self-contained breathing apparatus (SCBA), NIOSH (approved or equivalent) and full protective gear. Extremely flammable liquid packaged in an aerosol spray canister using a flammable gas propellant. Vapors are heavier than air and may travel to sources of ignition and flash back. Avoid high temperatures and static charges.

6. ACCIDENTAL RELEASE MEASURES

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name	Boron Nitride Aerosol Lubricoat®
Product Code	1047

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

Danger

SYMBOL(S)

PRIMARY ROUTES OF EXPOSURE Inhalation, contact to eyes, and skin.

HAZARD STATEMENTS

Flammable Gas under pressure	Category 1	H222 H280	Extremely flammable aerosol. Contains gas under pressure; may explode if heated.
Eye Irritant	Category 2A	H319	Causes serious eye irritation.
STOT:SE	Category 3	H336	May cause drowsiness or dizziness.

PRECAUTIONARY STATEMENT(S)

P210	Keep away from heat / sparks / open flames / hot surfaces. - No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container: Do not pierce or burn, even after use.
P261	Avoid breathing dust / fumes / gas / mist / vapors / spray.
P264	Wash hands thoroughly after handling.
P271	Use outdoors or in a well-ventilated area.
P280	Wear protective gloves and eye protection.
P304 + P340	IF INHALED: Remove the 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.