



MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: Barrier J-2

November 29, 2005

Vishay Micro-Measurements
Post Office Box 27777
Raleigh, NC 27611

MSDS # MGM095A

919-365-3800

CHEMTREC 1-800-424-9300 (U.S.)
703-527-3887 (Outside U.S.)

NOTE: CHEMTREC numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

SECTION 2: HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

CAS NUMBER	CHEMICAL IDENTITY	%
N/A	Dimethyl Siloxane, Trimethoxysilyl-Terminated	>60
1185-55-3	Methyltrimethoxysilane	10.0-30.0
556-67-2	Octamethylcyclotetrasiloxana	7.0-13.0
27585-32-8	Diisopropoxy Di(ethoxyacetoacetyl) Titanate	1.0-5.0
541-02-6	Decamethylcyclopentasiloxane	1.0-5.0
146519-62-2	Aminopropyl Glycidoxypopyl Trimethoxysilane	<1.0
2768-02-7	Vinyl Trimethoxysilane	<1.0
67-56-1	Methyl Alcohol	<1.0
1112-39-6	Dimethyldimethoxysilane	<1.0

SECTION 3: HEALTH HAZARD DATA

Routes of Entry:

Inhalation: Yes **Skin:** Yes **Ingestion:** Accidental

Health Hazards (Acute and Chronic): May cause irritation of eyes, nose and throat.

Carcinogenicity: NTP: Not listed
IARC Monographs: Not listed
OSHA Regulated: Not listed

Signs and Symptoms of Exposure:

INHALATION: Vapor may irritate nose and throat. Vapor over-exposure may cause drowsiness. Product generates methyl alcohol which may cause blindness and damage to nervous system.

EYE CONTACT: Direct contact may cause mild irritation.

SKIN CONTACT: No significant irritation expected from a single short-term exposure. Repeated or prolonged exposure may cause irritation.

INGESTION: Product generates methyl alcohol which may cause blindness and possibly death if swallowed.

Conditions Generally Aggravated by Exposure: None known.

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES
--

INHALATION: Remove to fresh air. Get medical attention if ill effects persist.

EYE CONTACT: Immediately flush with water for 15 minutes.

SKIN CONTACT: No first aid should be needed.

INGESTION: Get medical attention. Treat as methyl alcohol poisoning.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA
--

Flash Point (Method Used): 66°F (18.9°C) Closed Cup

Flammable limits: LEL: Not determined UEL: Not determined

Extinguishing Media: Carbon dioxide, dry chemical, foam, water spray. Water can be used to cool fire exposed containers.

Special Firefighting Procedures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Evacuate area in case of over heating or fires. Use water spray to keep fire exposed containers cool. Do not allow any extinguishing media to enter container.

Unusual Fire and Explosion Hazards: Vapors are heavier than air and may travel to a source of ignition and flash back. Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Remove possible ignition sources. Clean up with suitable absorbent. Clean area as appropriate since some silicone materials, even in small quantities, may present slip hazard. Dispose of saturated absorbent or cleaning materials appropriately since spontaneous heating may occur.

SECTION 7: EXPOSURE CONTROLS -- PERSONAL PROTECTION

Respiratory Protection: Where concentrations are above recommended limits as determined by air sampling or are unknown, appropriate respiratory protection should be worn.

Ventilation: Use with adequate ventilation. General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits.

Protective Gloves: No special protection is needed.

Eye Protection: Use safety glasses.

Other Protective Clothing or Equipment: No special protection is needed.

Work / Hygienic Practices: Wash hands thoroughly after use and before eating, drinking or smoking.

SECTION 8: HANDLING AND STORAGE

Precautions to be taken in handling and storing: Use with adequate ventilation. Provide engineering controls to ensure exposure levels are maintained. Product evolves isopropyl alcohol when exposed to water or humid air.

Other Precautions: Avoid eye contact. Do not breathe vapor, mist, dust or fumes. Keep container closed. Do not take internally.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	>95°F (35°C)
Vapor Pressure (mmHg):	Not determined
Vapor Density (Air = 1):	Not determined
Specific Gravity (H₂O = 1):	0.97
Melting Point:	Not determined
Evaporation Rate (BuAc = 1):	Not determined
Volatile Organic Compounds:	Not determined
Solubility in Water:	Not determined

Appearance and Odor: Straw colored liquid with some odor.

SECTION 10: STABILITY AND REACTIVITY DATA
--

Stability: Stable.

Conditions to Avoid: None.

Incompatibility (Materials to Avoid): Water, moisture, or humid air can cause hazardous vapors to form. Oxidizing material can cause a reaction.

Hazardous Decomposition or By-products: Thermal breakdown of this product during fire or very high heat conditions may evolve carbon oxides and traces of incompletely burned carbon compounds, silicon dioxide, formaldehyde, nitrogen oxides and metal oxides.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION
--

Dimethyl Siloxane, Trimethoxysilyl-Terminated

OSHA PEL:	Not Established
ACGIH TLV:	Not Established
OTHER:	Not Established

Methoxytrimethoxysilane

OSHA PEL:	Not Established
ACGIH TLV:	Not Established
OTHER:	Oral (Rat) LD ₅₀ 12500 mg/kg

Octamethylcyclotetrasiloxane

OSHA PEL:	Not Established
ACGIH TLV:	Not Established
OTHER:	10 ppm TWA Recommended by Dow Corning

Diisopropoxy Di(Ethoxyacetoacetyl) Titanate

OSHA PEL:	Not Established
ACGIH TLV:	Not Established
OTHER:	Not Established

Decamethylcyclopentasiloxane

OSHA PEL:	Not Established
ACGIH TLV:	Not Established
OTHER:	10 ppm TWA Recommended by Dow Corning

Aminopropyl Glycidoxypropyl Trimethoxysilane

OSHA PEL: Not Established
 ACGIH TLV: Not Established
 OTHER: Not Established

Vinyl Trimethoxysilane

OSHA PEL: Not Established
 ACGIH TLV: Not Established
 OTHER: Not Established

Methyl Alcohol

OSHA PEL: 200 ppm TWA
 ACGIH TLV: 200 ppm TWA (250 ppm STEL)
 OTHER: Oral (Rat) LD₅₀ 5628 mg/kg
 Inhalation (Rat) LC₅₀ 64000 ppm/4H

Dimethyldimethoxysilane

OSHA PEL: Not Established
 ACGIH TLV: Not Established
 OTHER: Not Established

SECTION 12: DISPOSAL CONSIDERATIONS
--

Waste Disposal Method: Dispose of in accordance with local, state, and federal environmental regulations.

SECTION 13: TRANSPORTATION INFORMATION

SHIPPING NAME	CLASS	PACKING GROUP	UN NUMBER
Resin Solution	3	II	1866

SECTION 14: REGULATORY INFORMATION

SECTION 313 SUPPLIER NOTIFICATION:

This product contains a toxic chemical or chemicals (as listed below) subject to the reporting requirements of Section 313 Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372.

CAS NUMBER	CHEMICAL NAME	% BY WEIGHT
67-56-1	Methyl Alcohol	<1.0

TSCA NOTIFICATION:

All components of this product are listed in the Toxic Substance Control Act Chemical Substance Inventory (TSCA).

SECTION 15: OTHER INFORMATION

To the best of our knowledge, the information provided above meets the requirements of the United States Occupational Safety and Health Act and regulations established under 29 CFR 1910.1200 (g)(2)(c)(1)-(4) for a mixture of hazardous chemicals which has not been tested as a whole. The data provided on this Material Safety Data Sheet is from manufacturers of the original components. Vishay Micro-Measurements specifically disclaims any and all form of liability and/or responsibility for the application of this product.