MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: GC Adhesive

November 28, 2005

MSDS # MGM070A

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

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	%
409-21-2	Silicone Carbide	50.0
7732-18-5	Water	25.0
7784-30-7	Aluminum Phosphate	13.0
1344-28-1	Aluminum Oxide	1.0
7631-86-9	Silicon Oxide	4.0
10043-35-3	Boric Acid	2.0
64-17-5	Ethyl Alcohol	5.0

NOTE: Aluminum Phosphate contains 2-44% phosphoric acid (CAS# 7664-38-2).

SECTION 3: HEALTH HAZARD DATA

Routes of Entry:

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

Health Hazards (Acute and Chronic): Corrosive to the eyes on contact and irritating to the skin on prolonged contact. Mist from the paint when air-sprayed is irritating to the upper respiratory system. Excessive inhalation of dust above TLV of dried material over long periods of time may cause industrial bronchitis, reduced breathing capacity and lead to increased susceptibility to lung diseases.

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

Signs and Symptoms of Exposure:

INHALATION: May cause irritation to upper respiratory system.

EYE CONTACT: Corrosive. May cause burns.

SKIN CONTACT: May cause skin irritation with prolonged contact.

INGESTION: May cause irritation to gastrointestinal tract.

Conditions Generally Aggravated by Exposure: None known.

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Seek medical attention if symptoms persist.

EYE CONTACT: Flush eyes, including under the eyelids, with large amounts of water. If irritation persists, seek medical attention.

SKIN CONTACT: Wash thoroughly with mild soap and water.

INGESTION: Give copious amounts of water or preferably milk, and seek medical attention.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): 90°F (32.2°C) Closed Cup (See Note)

NOTE: This material is a water-based formulation that contains 5% alcohol. When the liquid component separates from the solids, the liquid has a closed-cup flash point of 90°F.

Flammable limits: **LEL**: NA **UEL**: NA

Extinguishing Media: Dry chemical, foam, carbon dioxide.

Special Firefighting Procedures: Suggest wearing of full bunker gear with positive self-contained breathing apparatus in closed space.

Unusual Fire and Explosion Hazards: When heated, mostly water vapor is evolved. The ethyl alcohol at 5% level co-produces either or both carbon monoxide and carbon dioxide depending upon oxygen levels present.

NOTE: This material is a water-based formulation that contains 5% alcohol. When the liquid component separates from the solids, the liquid has a closed-cup flash point of 90°F.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Contain the spill by using a mineral absorbent. It can be readily neutralized using any basic neutralization agent such as lime or sodium carbonate. Clean-up personnel should wear rubber gloves and goggles to prevent irritation from contact.

SECTION 7: EXPOSURE CONTROLS -- PERSONAL PROTECTION

Respiratory Protection: Recommended if TLV is exceeded.

Ventilation: Provide adequate general ventilation and local ventilation to control mist/dust below TLV.

Protective Gloves: Recommended to prevent contact.

Eye Protection: Safety glasses or goggles recommended.

Other Protective Clothing or Equipment: Long sleeve clothing.

Work / Hygienic Practices: Wash thoroughly after handling.

SECTION 8: HANDLING AND STORAGE

Precautions to be taken in handling and storing: Store in original container. Do not store in metal containers since the acidic nature of the paint may be corrosive to the container.

Other Precautions: None known.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	≈ 200°F (93.3°C)
Vapor Pressure (mmHg):	10-20
Vapor Density (Air = 1):	Not established
Specific Gravity (H_2O = 1):	1.8
Melting Point:	Not known
Evaporation Rate (BuAc = 1):	Slightly greater than water
Volatile Organic Compounds:	170 g/l (less water)
Solubility in Water:	Dilutable

Appearance and Odor: Black-gray paint slurry with slight fruity odor.

SECTION 10: STABILITY AND REACTIVITY DATA

Stability: Stable under normal conditions of storage.

Conditions to Avoid: None known.

Incompatibility (Materials to Avoid): As a good practice, do not mix with any other materials.

Hazardous Decomposition or By-products: Thermal decomposition of the aluminum phosphate component of this material in combination with trimethylol propane, trimethylol propane derived products or their corresponding trimethylol alkane homologs may cause formation of bicyclic phosphates or phosphites. Upon initial heating to 1112°F (600°C), the ethyl alcohol will decompose to form either or both carbon monoxide or carbon dioxide depending upon amount of oxygen present.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Silicone Carbide

OSHA PEL:	15 mg/m^3 Total Dust 5 mg/m^3 Respirable Dust
ACGIH TLV:	10 mg/m^3 Total Dust 5 mg/m^3 Respirable Dust
OTHER:	ORAL 5000 mg/kg Body Weight

Aluminum Phosphate

OSHA PEL:	Not established
ACGIH TLV:	Not established
OTHER:	Suggested TLV is 5 mg/m^3

Boric Acid

OSHA PEL:	None listed
ACGIH TLV:	None listed
OTHER:	ORAL LD_{50} 3.5 – 4.1 g/kg Body Weight Acute Dermal LD_{50} >2 g/kg Body Weight Inhalation 10 mg/m^3

Aluminum Oxide

OSHA PEL:	15 mg/m^3 Total Dust 5 mg/m^3 Respirable Dust
ACGIH TLV:	10 mg/m^3 Total Dust 5 mg/m^3 Respirable Dust
OTHER:	None known

Silicon Oxide

OSHA PEL:	6 mg/m^3
ACGIH TLV:	10 mg/m^3
OTHER:	None known

Ethyl Alcohol

OSHA PEL:	1000 ppm
ACGIH TLV:	1000 ppm
OTHER:	1880 mg/m^3

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
Paint	3	II	1263

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
1344-28-1	Aluminum Oxide	1.0

TSCA NOTIFICATION:

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

OTHER:

May contain a chemical known to the State of California to cause cancer or birth defects or other reproductive harm. All phosphorous compounds may be expected to contain arsenic and possibly cadmium and/or lead in concentrations ranging from a few parts per billion to a few parts per million. Contains Boric Acid which may contain trace amounts of arsenic, a chemical known to the State of California to cause cancer.

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.