



MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: M-Coat J Curing Agent

November 29, 2005

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

MSDS # MGM029K

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	%
127-19-5	Dimethylacetamide	30-60
14307-33-6	Calcium Dichromate	10-30
1332-58-7	Kaolin	1-10
9036-19-5	Triton X100	<5.0
1333-86-4	Carbon Black	<2.0

SECTION 3: HEALTH HAZARD DATA

Routes of Entry:

Inhalation: YES **Skin:** YES **Ingestion:** Accidental

Health Hazards (Acute and Chronic): Repeated overexposure may cause kidney/liver damage.

Carcinogenicity:
NTP: Yes
IARC Monographs: Yes
OSHA Regulated: Yes

NOTE: Based on an IARC conclusion that there is sufficient evidence in experimental animals for the carcinogenicity of Carbon Black and inadequate evidence of carcinogenicity in humans. IARC's overall evaluation is that Carbon Black is possibly carcinogenic to humans (Group 2B).

Carbon Black has not been listed as a carcinogen by National Toxicology Program (NTP) or the Occupational Safety & Health Administration (OSHA). The National Institute of Occupational Safety & Health (NIOSH) criteria document on Carbon Black recommends that only Carbon Blacks with PAH levels greater than 0.1% be considered suspect carcinogens.

NTP and IARC have determined that there is sufficient evidence for the carcinogenicity of hexavalent chromium compounds both in humans and experimental animals.

Prolonged or repeated eye contact may cause conjunctivitis. Prolonged or repeated skin contact, especially with broken skin, may cause "chrome sores". Prolonged or repeated inhalation of mist or fume may cause ulceration and perforation of nasal septum. Prolonged inhalation may cause liver damage.

Signs and Symptoms of Exposure:

INHALATION: Vapor will irritate nose, throat and respiratory tract. High vapor concentration may cause dizziness, drowsiness and fatigue.

EYE CONTACT: Vapor or substance is severely irritating to eyes and may cause redness and tearing.

SKIN CONTACT: Substance can cause severe skin irritation with drying, defatting, splitting and cracking on repeated contact.

INGESTION: Substance can cause irritation of gastro-intestinal tract followed by nausea, vomiting and abdominal discomfort.

Conditions Generally Aggravated by Exposure: None known.

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If inhaled, remove from area to fresh air. If not breathing, give artificial respiration. Get immediate medical attention. If breathing is difficult, transport to medical facility and, if available, give oxygen.

EYE CONTACT: For eye contact, immediately flush eyes for at least 15 minutes with running water. Hold eyelids apart to ensure rinsing of the entire eye surface and lids with water. Get immediate medical attention.

SKIN CONTACT: For skin contact, wipe excess material with dry towel. Then wash exposed areas with plenty of water, and soap if available, for several minutes. Get medical attention if irritation occurs.

INGESTION: If swallowed dilute by giving two glasses of water to drink. Get immediate medical attention. Never give anything by mouth to an unconscious person.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): NA

Flammable limits: LEL: Not known UEL: Not known

Extinguishing Media: Carbon dioxide, dry chemical, foam, water fog.

Special Firefighting Procedures: Use complete personal protection. Use water to cool heat exposed containers.

Unusual Fire and Explosion Hazards: Decomposition and combustion products may be hazardous. No unusual hazards known.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Dike and cover the spill with a non-oxidizable absorbent. Scoop into container. Sprinkle sodium thiosulfate on residue. Work into residue. Scoop into disposal container. Clean area with water. Wear appropriate personal protective equipment.

SECTION 7: EXPOSURE CONTROLS -- PERSONAL PROTECTION

Respiratory Protection: Not normally required.

Ventilation: Good general mechanical ventilation recommended.

Protective Gloves: Chemically resistant gloves.

Eye Protection: Safety glasses.

Other Protective Clothing or Equipment: When using in circumstances where skin contact is likely, use complete protective garments.

Work / Hygienic Practices: Safety shower, eye wash station and washing facilities should be available.

SECTION 8: HANDLING AND STORAGE

Precautions to be taken in handling and storing: Store in closed container in a dry location. Avoid moisture contamination, which may cause carbon dioxide build-up. If moisture contamination is suspected, do not reseal containers. Wear proper personal protective equipment.

Other Precautions: Wash thoroughly after handling and before smoking or eating.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	212 - 520°F (100 - 271°C)
Vapor Pressure (mmHg):	Not known
Vapor Density (Air = 1):	>1
Specific Gravity (H₂O = 1):	1.38
Melting Point:	Not known
Evaporation Rate (BuAc = 1):	Non-volatile
Volatile Organic Compounds:	82%
Solubility in Water:	Negligible

Appearance and Odor: Black paste.

SECTION 10: STABILITY AND REACTIVITY DATA

Stability: Stable.

Conditions to Avoid: Not known.

Incompatibility (Materials to Avoid): Strong oxidizing agents, strong acids.

Hazardous Decomposition or By-products: Oxides of carbon and nitrogen, chromium compounds.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Dimethylacetamide

OSHA PEL:	10 ppm
ACGIH TLV:	10 ppm
OTHER:	LD ₅₀ ORAL RAT 5680 mg/kg

Calcium Dichromate

OSHA PEL:	0.5 mg/m ³
ACGIH TLV:	0.5 mg/m ³
OTHER:	LD ₅₀ 5000 mg/kg

Carbon Black

OSHA PEL:	3.5 mg/m ³
ACGIH TLV:	3.5 mg/m ³
OTHER:	LD ₅₀ ORAL RAT 440 mg/kg LC ₅₀ INHALATION RAT 6750 mg/m ³ 4 Hour

Kaolin

OSHA PEL: 10 mg/m³
 ACGIH TLV: 2 mg/m³
 OTHER: NE

Triton X100

OSHA PEL: NE
 ACGIH TLV: NE
 OTHER: LD₅₀ ORAL RAT 5000 mg/kg

SECTION 12: DISPOSAL CONSIDERATIONS
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Waste Disposal Method: When disposing of this material, ensure that it is packaged, stored, transported, and otherwise handled in accordance with local, state, and federal regulations. EPA Waste Number: D007 (Chromium).

SECTION 13: TRANSPORTATION INFORMATION

SHIPPING NAME	CLASS	UN NUMBER
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Not Required -- Non-hazardous for transportation.

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
14307-33-6	Calcium Dichromate	10-30

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.