



## MATERIAL SAFETY DATA SHEET

### SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BUEHLER PROBE-MET

IDENTIFICATION NUMBER: 20-3385

PRODUCT USE/CLASS: Modified epoxy

**SUPPLIER:**

BUEHLER, a division of Illinois Tool Works Inc.

41 WAUKEGAN ROAD

LAKE BLUFF, IL 60044

EMERGENCY: 800-424-9300

INFORMATION: 847-295-6500

PREPARER: Technical Department, 847-295-6500

PREPARE DATE: 03/23/09, 23 March 2009

### SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

| ITEM | CHEMICAL NAME            | CAS NUMBER | WT/WT%    |
|------|--------------------------|------------|-----------|
| 01   | Epoxy resin blend        | UNKNOWN    | 10.0-30.0 |
| 02   | Amin                     | UNKNOWN    | 1.0-5.0   |
| 03   | Carbon Black             | 1333-86-4  | 0.1-1.0   |
| 04   | Silicon dioxide (quartz) | 14808-60-7 | 1.0-5.0   |
| 05   | Antimony oxide           | 1309-64-4  | 1.0-5.0   |

| ITEM | ACGIH TLV-TWA         | ACGIH TLV-STEL | OSHA PEL-TWA          | OSHA PEL – CEILING | COMPANY TLV-TWA       | SKIN |
|------|-----------------------|----------------|-----------------------|--------------------|-----------------------|------|
| 01   | N.E.                  | N.E.           | N.E.                  | N.E.               | N.E.                  | NO   |
| 02   | N.E.                  | N.E.           | N.E.                  | N.E.               | N.E.                  | NO   |
| 03   | 3.5 mg/m <sup>3</sup> | N.E.           | 3.5 mg/m <sup>3</sup> | N.E.               | 3.5 mg/m <sup>3</sup> | NO   |
| 04   | 0.1 mg/m <sup>3</sup> | N.E.           | 0.1 mg/m <sup>3</sup> | N.E.               | 0.1 mg/m <sup>3</sup> | NO   |
| 05   | N.E.                  | N.E.           | N.E.                  | N.E.               | 0.5 mg/m <sup>3</sup> | NO   |

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

### SECTION 3 – HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Vapors from heated material may be irritating. Contact with heated material can cause thermal burns. Potential skin sensitizer. Repeated and prolonged inhalation of dust may be harmful. Harmful if swallowed.

**ACUTE EFFECTS – EYE CONTACT:** Contact may cause eye irritation. Exposure to hot material may cause thermal burns.

**ACUTE EFFECTS - SKIN CONTACT:** Prolonged or repeated skin contact may cause irritation. May cause allergic skin reaction. Contact with product at elevated temperatures can result in thermal burns.

**ACUTE EFFECTS – INHALATION:** Dust or vapors may be slightly irritating to respiratory tract.

**ACUTE EFFECTS - INGESTION:** Irritating to mouth, throat and stomach, with nausea. Harmful if swallowed.

**CHRONIC OVEREXPOSURE EFFECTS:** \*Repeated and prolonged inhalation of graphite or carbon dusts may cause pulmonary fibrosis, emphysema, and pneumoconiosis. the severity of these effects is greatly influenced by the presence of other harmful mineral dusts, most notably crystalline silica. \*This product contains encapsulated silicon dioxide (quartz, silica). No exposure to free respirable silica is anticipated during normal use of this product. It should be noted, however, that free respirable silica may be released by grinding or machining of cured compound and has been listed as a confirmed human carcinogen by NTP and IARC. Inhalation of free respirable silica may cause silicosis or other serious delayed lung injury. Recent studies have also suggested that individuals with silicosis are at increased risk of developing tuberculosis, scleroderma, and/or increased incidence of kidney lesions. \*This product contains encapsulated antimony trioxide. Repeated and prolonged inhalation of antimony trioxide may cause benign pneumoconiosis. Such pneumoconiosis may exist with or without decrease in lung function. Long-term inhalation studies indicate commercial grade antimony oxide causes malignant lung tumors in rats. No exposure to free respirable antimony oxide is anticipated during normal use of this product. Antimony oxide may be released, however, by grinding or machining coated parts. Use NIOSH-approved dust/mist respirator when grinding or machining on coated parts. \*Component(s) in this product showed adverse reproductive effects in animal feeding studies.

**OTHER INFORMATION:** No information.

**PRIMARY ROUTE(S) OF ENTRY:** SKIN CONTACT, INHALATION

### SECTION 4 – FIRST AID MEASURES

**EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**SKIN CONTACT:** For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention. No attempt should be made to remove material from skin or to remove contaminated clothing as the damaged flesh can be easily torn. Immediately flush affected area(s) thoroughly with water at least 15 minutes. Remove and wash contaminated clothing. Contaminated leather articles should be disposed of. Obtain medical attention.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**INGESTION:** If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**NOTES TO PHYSICIAN:** Treat symptomatically.

## SECTION 5 – FIRE FIGHTING MEASURES

FLASH POINT: 200 F (PENSKY-MARTENS C.C.)

LOWER EXPLOSIVE LIMIT: N.A.

UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: No data

EXTINGUISHING MEDIA: CO<sub>2</sub>, DRY CHEMICAL, FOAM, WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: Finely divided dust in air may present explosion hazard. Prevent dust buildup.

SPECIAL FIREFIGHTING PROCEDURES: Does not burn. Treat as petroleum fire. Wear appropriate approved protective equipment. Avoid directing water stream directly into flame; it may cause frothing with subsequent spread of flame.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Reclaim clean material. Sweep or shovel into loosely-covered waste container and remove to appropriate waste area. Dispose of in accordance with federal, state, and local regulations. Prevent washings from entering waterways.

## SECTION 7 – HANDLING AND STORAGE

HANDLING: Wash thoroughly after handling. Minimize dust generation and accumulation. Avoid breathing dust, vapor, mist or gas. Do not get in eyes, on skin or clothing. DO NOT take internally. FOR INDUSTRIAL USE ONLY.

STORAGE: Keep away from heat and flame.

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: General ventilation usually adequate.

RESPIRATORY PROTECTION: None normally required under general ventilation. If TLV/PEL is exceeded or if inhalation effects occur, use NIOSH-approved dust/mist respirator in accordance with applicable regulations and manufacturer's recommendations.

SKIN PROTECTION: Clean clothing to cover skin. Butyl rubber gloves. Nitrile gloves. Supported PVA gloves. Thermal gloves when handling hot material.

EYE PROTECTION: Safety glasses.

OTHER PROTECTIVE EQUIPMENT: Accessible eye wash and safety shower.

HYGIENIC PRACTICES: Follow good general industrial safety practices during use. Do not smoke or eat during use.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

|  |                |                   |                              |
|--|----------------|-------------------|------------------------------|
| BOILING RANGE:                         | 500 - 500 F    | VAPOR DENSITY:    | Is heavier than air          |
| ODOR:                                  | Faint phenolic | ODOR THRESHOLD:   | N.A.                         |
| APPEARANCE:                            | Black          | EVAPORATION RATE: | Is slower than Butyl Acetate |
| SOLUBILITY IN H <sub>2</sub> O:        | N.A.           |                   |                              |
| FREEZE POINT:                          | N.A.           | SPECIFIC GRAVITY: | 2.0931                       |
| VAPOR PRESSURE:                        | N.A.           | pH @ 0.0%:        | N.A.                         |
| PHYSICAL STATE:                        | Solid          | VISCOSITY:        | N.A.                         |
| COEFFICIENT OF WATER/OIL DISTRIBUTION: | No data        |                   |                              |

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

## SECTION 10 – STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Prolonged exposure to heat

INCOMPATIBILITY: Strong Lewis or mineral acids. Strong bases or oxidants. Reaction with amines and mercaptans in large amounts or under uncontrolled conditions releases considerable heat and may release acrid fumes.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon. Aromatic and aliphatic hydrocarbons. Aldehydes and acids from incomplete combustion. Phenolic compounds. In the presence of nascent hydrogen, highly toxic stibine gas may be evolved.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

## SECTION 11 – TOXICOLOGICAL PROPERTIES

### COMPONENT TOXICOLOGICAL INFORMATION:

----- CHEMICAL NAME -----

----- LD50 -----

----- LC50 -----

Epoxy resin blend

No information

No information

Amine

No information

No information

Carbon Black

Oral-rat=>8 g/kg

No information

Silicon dioxide (quartz)

No information

No information

Antimony oxide

No information

No information

## SECTION 12 – ECOLOGICAL INFORMATION

ECOLOGICAL TEST DATA: No information.

## SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Material as sold may be disposed of in landfill if local regulations permit. If material becomes contaminated, follow disposal instructions for contaminant.

## SECTION 14 – TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not regulated

DOT TECHNICAL NAME: N.A.

DOT HAZARD CLASS: N.A.

HAZARD SUBCLASS: N.A.

DOT UN/NA CLASS: N.A.

PACKAGING GROUP: N.A.

RESP. GUIDE PAGE:

INTERNATIONAL SHIPPING NAME: Not regulated

INTERNATIONAL ID NUMBER: N.A.

IMDG CLASS (1°, 2°): N.A.

IMDG PAGE NUMBER: N.A.

IMDG EMS: N.A.

IATA CLASS (1°, 2°): N.A.

ADR ITEM NO.: N.A.

ADR TREMCARD: N.A.

SUPPLEMENTAL INFORMATION: No information

## SECTION 15 – REGULATORY INFORMATION

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

CERCLA – SARA HAZARD CATEGORY: THIS PRODUCT HAS BEEN REVIEWED, AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES: IMMEDIATE HEALTH HAZARD  
CHRONIC HEALTH HAZARD

SARA SECTION 313: THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 AND 40 CFR PART 372:

| ----- CHEMICAL NAME ----- | CAS NUMBER | WT/WT % IS LESS THAN |
|---------------------------|------------|----------------------|
| Antimony oxide            | 1309-64-4  | 1.0-5.0              |

TOXIC SUBSTANCE CONTROL ACT: THE CHEMICAL SUBSTANCES IN THIS PRODUCT ARE ON THE TSCA SECTION 8 INVENTORY. THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF TSCA 12(B) IF EXPORTED FROM THE UNITED STATES:

| ----- CHEMICAL NAME ----- | CAS NUMBER |
|---------------------------|------------|
| No components found.      |            |

NEW JERSEY RIGHT-TO-KNOW: THE FOLLOWING MATERIALS ARE NON-HAZARDOUS, BUT ARE AMONG THE TOP 5 COMPONENTS IN THIS PRODUCT:

| ----- CHEMICAL NAME -----       | CAS NUMBER |
|---------------------------------|------------|
| Fused amorphous silicon dioxide | 60676-86-0 |

PENNSYLVANIA RIGHT-TO-KNOW: THE FOLLOWING NON-HAZARDOUS INGREDIENTS ARE PRESENT IN THE PRODUCT AT GREATER THAN 3%:

| ----- CHEMICAL NAME -----       | CAS NUMBER |
|---------------------------------|------------|
| Fused amorphous silicon dioxide | 60676-86-0 |

CALIFORNIA PROPOSTION 65: WARNING: This product contains a chemical(s) known to the state of California to cause cancer. (silicon dioxide)

CANADIAN WHMIS: THIS MSDS HAS BEEN PREPARED IN COMPLIANCE WITH CONTROLLED PRODUCT REGULATIONS EXCEPT FOR USE OF THE 16 HEADINGS.

CANADIAN WHMIS CLASS: D2B

COMPONENT RCRA CLASSIFICATIONS: Not regulated

COMPONENT RCRA CODES: No information.

CERCLA RQ VALUE (MINIMUM): 1,000

## SECTION 16 – OTHER INFORMATION

### HMIS RATINGS

HEALTH: 1

FLAMMABILITY: 1

REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 05/22/06; 22 May 06

REASON FOR REVISION: Administrative change for new format.

VOLATILE ORGANIC COMPOUNDS: 0 grams/ltr

### LEGEND:

N.A. – NO INFORMATION

N.E. – NOT ESTABLISHED

N.D. – NOT DETERMINED

ABBREVIATIONS: ACGIH = AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS; OSHA = OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION; TLV-TWA = THRESHOLD LIMIT VALUE – TIME WEIGHTED AVERAGE (8 HOURS); STEL = SHORT-TERM EXPOSURE LIMIT (15 MINUTES); C = CEILING VALUE; PEL = PERMISSIBLE EXPOSURE LIMIT

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