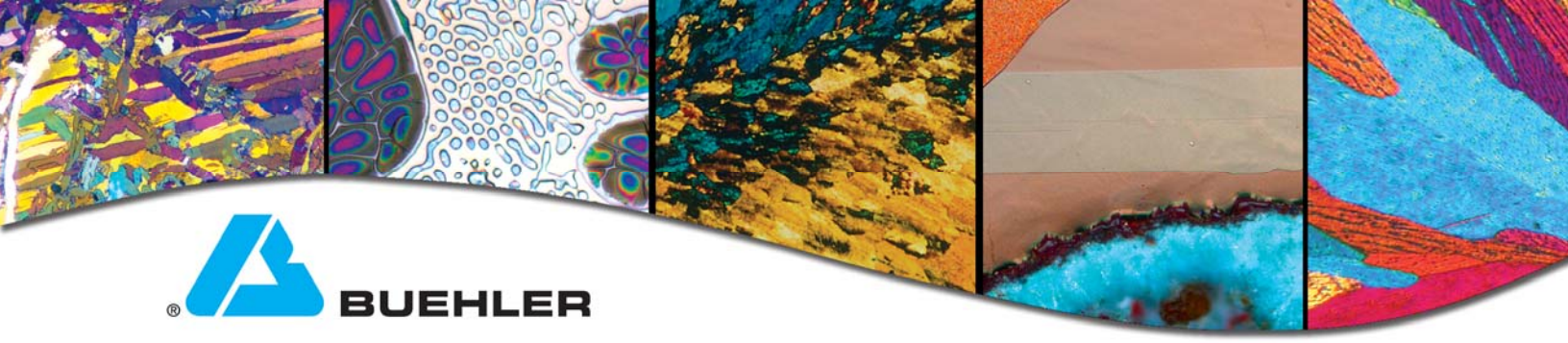

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BUEHLER KONDUCTOMET I
IDENTIFICATION NUMBER: 20-3375-016, 20-3375-400
PRODUCT USE/CLASS: Molding compound

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	Graphite	7782-42-5	20.0-40.0
02	Fibrous glass	65997-17-3	10.0-30.0
03	Hexamethylenetetramine	100-97-0	3.0-10.0
04	Phenol	108-95-2	0.1-1.0
05	Silicon dioxide (quartz)	14808-60-7	1.0-5.0

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL – CEILING	COMPANY TLV-TWA	SKIN
01	2.0 mg/m^3	N.E.	15 mppcf	N.E.	2.5 mg/mg^3	NO
02	1 fibers/cc*	N.E.	15 mg/m^3	N.E.	3 fibers/cc	NO
03	N.E.	N.E.	N.E.	N.E.	N.E.	NO
04	5 ppm	N.E.	5 ppm	N.E.	250 ppm IDLH	YES
05	0.1 mg/m^3	N.E.	0.05 mg/m^3*	N.E.	0.05 mg/m^3*	NO

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Harmful if swallowed. Causes skin and eye irritation. Vapors from heated material may be irritating. Contact with heated material can cause thermal burns.

ACUTE EFFECTS – EYE CONTACT: Moderately irritating to the eyes. Exposure to hot material may cause thermal burns.

ACUTE EFFECTS - SKIN CONTACT: Contact with product at elevated temperatures can result in thermal burns. Can be absorbed through the skin to cause kidney and liver damage. Prolonged contact may cause dermatitis.

ACUTE EFFECTS – INHALATION: Harmful if inhaled. High vapor concentrations from heated material are irritating to the eyes, nose, throat and lungs.

ACUTE EFFECTS - INGESTION: Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

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. *Repeated or prolonged overexposure to phenol via inhalation, ingestion, or skin absorption may cause damage to the liver, kidneys, pancreas, and spleen. Phenol is mutagenic "in-vitro." *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.

OTHER INFORMATION: No information.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT, EYE CONTACT

SECTION 4 – FIRST AID MEASURES

EYE CONTACT: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes immediately examined and tested by medical personnel.

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. For cold product, flush thoroughly with water. Obtain medical attention if irritation develops or persists.

INHALATION: If inhalation effects occur, remove to fresh air. Get medical attention if cough or other symptoms develop.

INGESTION: If swallowed, DO NOT induce vomiting. Give water or milk and activated charcoal if patient is conscious and not drowsy. 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: No data F (PENSKY-MARTENS C.C.)

LOWER EXPLOSIVE LIMIT: N.A.

UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: No data

EXTINGUISHING MEDIA: ALCOHOL FOAM, CO_2, 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: 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. Contaminated material should be swept or shoveled into appropriate waste container and disposed of in accordance with applicable federal, state and local regulations.

SECTION 7 – HANDLING AND STORAGE

HANDLING: Minimize dust generation and accumulation. Avoid breathing vapors from heated material.

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. For cold product: If dust levels exceed lowest component TLV/PEL, or if effects occur, use NIOSH-approved dust/mist respirator in accordance with OSHA regulations and manufacturer's recommendations. FOR HOT PRODUCT: If vapor levels are unknown, if lowest component TLV/PEL is exceeded, or if effects occur, use NIOSH-approved organic vapor cartridge respirator in accordance with OSHA regulations and manufacturer's recommendations.

SKIN PROTECTION: Clean clothing to cover skin. Butyl rubber 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:	181 - 500 F	VAPOR DENSITY:	Is heavier than air
ODOR:	Mild nondescript	ODOR THRESHOLD:	No data
APPEARANCE:	Black	EVAPORATION RATE:	Is slower than Butyl Acetate
SOLUBILITY IN H_2O:	Insoluble		
FREEZE POINT:	N.A.	SPECIFIC GRAVITY:	1.8831
VAPOR PRESSURE:	N.A.	pH @ 0.0%:	N.E.
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: No information.

INCOMPATIBILITY: Strong bases or oxidants. Aluminum chloride + nitromethane, Formaldehyde, peroxydisulfuric acid, peroxymonosulfuric acid, sodium nitrite + heat, Aluminum + nitrobenzene, sodium nitrate + trifluoroacetic acid, butadiene.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon. Oxides of nitrogen, ammonia. Aromatic and aliphatic hydrocarbons.

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 ------
Graphite	No information	No information
Fibrous glass	No information	No information
Hexamethylenetetramine	derm(rbt)750mg/kg	No information
Phenol	derm(rbt)500mg/24H	No information
Silicon dioxide	No data	No data

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.

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
Phenol	108-95-2	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
Phenol	108-95-2

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
Phenolic resin	9003-35-4

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

---------- CHEMICAL NAME ----------	CAS NUMBER
Phenolic resin	9003-35-4

CALIFORNIA PROPOSTION 65: WARNING: This product contains a chemical(s) known to the state of California to cause cancer. (phenol, 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: D2A

COMPONENT RCRA CLASSIFICATIONS: none

COMPONENT RCRA CODES: none

CERCLA RQ VALUE (MINIMUM): N.A.

SECTION 16 – OTHER INFORMATION

HMIS RATINGS

HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 08/22/06; 22 Aug 06

REASON FOR REVISION: Administrative change for new format.

VOLATILE ORGANIC COMPOUNDS: no data

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

DISCLAIMER: TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED IN THIS MSDS IS ACCURATE OR IS OBTAINED FROM SOURCES BELIEVED TO BE ACCURATE. HOWEVER, NO LIABILITY, EXPRESSED OR IMPLIED, IS ASSUMED FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN. BUYER ASSUMES LIABILITY IN ITS USE OF THE MATERIAL.