



## 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: 03/20/2012, 20 March 2012

### SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT%
01	Phenol*	108-95-2	<1
02	Black Pigment	8005-02-5	<2
03	Glass Fiber (Respirable Nuisance Dust)	65997-17-3	<30
04	Graphite (Respirable Nuisance Dust)	7782-42-5	<40
05	Silica* (Respirable Dust)	14808-60-7	<1.7
06	Phenolic Resin	9003-35-4	<40
07	Hexamethylenetetramine	100-97-0	<7

## SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL – CEILING	COMPANY TLV-TWA	SKIN
01	5 ppm		5 ppm			
02	N.E		N.E			
03	5 mg/m <sup>3</sup>		10 mg/m <sup>3</sup>			
04	2 mg/m <sup>3</sup>		2 mg/m <sup>3</sup>			
05	.1 mg/m <sup>3</sup>		.1 mg/m <sup>3</sup>			
06	N.E.		N.E.			
07	15 mg/m <sup>3</sup>		10 mg/m <sup>3</sup>			

(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:** Dusts and vapors may cause irritation.

**ACUTE EFFECTS - SKIN CONTACT:** May cause irritation and/or allergic reactions in sensitized individuals.

**ACUTE EFFECTS – INHALATION:** Dusts and vapors may cause irritation of the respiratory tract.

**ACUTE EFFECTS - INGESTION:** None known.

**CHRONIC OVEREXPOSURE EFFECTS:** Phenol, formaldehyde, and ammonia vapors may be released during molding processes. Overexposure to these vapors may cause irritation to eyes, nose, throat and skin. Sensitized individuals may experience allergic skin reactions. Exposure to dust from machining operations may cause nose and throat irritation. The glass fiber and mineral filler components are considered a mechanical irritants and nuisance dust.

\*Airborne crystalline silica can cause lung damage (silicosis) on repeated and prolonged contact and has been identified by IARC and NTP as a human carcinogen.

**OTHER INFORMATION:** PHYSICAL HAZARDS / WARNING: Airborne dust particles may form an explosive hazard.

**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. Immediately contact poison control center or hospital emergency room for any other treatment directions.

**NOTES TO PHYSICIAN:** Treat symptomatically.

## SECTION 5 – FIRE FIGHTING MEASURES

**FLASH POINT:** N.A.

**LOWER EXPLOSIVE LIMIT:** N.A.

**UPPER EXPLOSIVE LIMIT:** N.A.

**AUTOIGNITION TEMPERATURE:** Typically >550° C by Pinsky-Martens Method

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

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** CAUTION: high concentration of airborne dust may form an explosive mixture with air. Ensure that good housekeeping practices are followed, as well as applicable guidelines such as National Fire Protection Association (NFPA) 654, "Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids.

**SPECIAL FIREFIGHTING PROCEDURES:** Wear a NIOSH approved positive pressure self-contained breathing apparatus with full protective clothing as decomposition in a fire may produce toxic fumes. Do not release runoff from fire control methods to sewers or waterways.

**HAZARDOUS DECOMPOSITION PRODUCTS:** May include: phenol, formaldehyde, ammonia, carbon monoxide, carbon dioxide, hydrogen cyanide, particulate matter, and other organic compounds including benzo(a)pyrene.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Avoid breathing dust and vapors. PPE should be appropriate for the situation.

CLEANING METHODS: Sweep or vacuum spills. To minimize dust, vacuum cleaning is preferred.

ENVIRONMENTAL PRECAUTIONS: None needed.

## SECTION 7 – HANDLING AND STORAGE

HANDLING: Avoid breathing fumes from molding or other processes involving heat. Avoid breathing dusts from cutting, machining or deflashing operations. Avoid high concentrations of dust in the air and accumulation of dust on equipment. A fine dust of this material in heavy concentration can create an explosion hazard.

STORAGE: Keep container closed and sealed when not in use. Store in a cool, dry place below 25° C.

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Ventilation should be sufficient to effectively remove and prevent buildup of any vapors, dusts, or fumes that may be generated during handling or thermal processing.

RESPIRATORY PROTECTION: Use MSHA/NIOSH approved respiratory protection if level of air contaminants exceeds action levels set by OSHA.

SKIN PROTECTION: Wear appropriate protective clothing to minimize skin contact. Impervious gloves should be worn to prevent skin contact (neoprene, latex, rubber, milled nitrile, and butyl).

EYE PROTECTION: Wear safety glasses with side shields.

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:	N.E.	VAPOR DENSITY:	Is heavier than air
ODOR:	Mild & characteristic	ODOR THRESHOLD:	No data
APPEARANCE:	Black granules	EVAPORATION RATE:	N.A.
SOLUBILITY IN H <sub>2</sub> O:	Negligible		
FREEZE POINT:	N.A.	SPECIFIC GRAVITY:	1.70-1.90 g/cm <sup>3</sup>
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: High temperatures. Strong oxidizing agents, strong acids.

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: May occur during fire or at very high temperatures.

HAZARDOUS POLYMERIZATION: May Occur.

STABILITY: This product is stable under normal storage conditions.

## SECTION 11 – TOXICOLOGICAL PROPERTIES

CARCINOGENIC HAZARDS: \*Crystalline silica is considered a hazard by inhalation. IARC has classified crystalline silica as carcinogenic for humans (Group 1), and NTP has listed it as a known human carcinogen. Crystalline silica is also listed under California's Proposition 65 as a human carcinogen.

REPRODUCTIVE HAZARDS: None known.

## SECTION 12 – ECOLOGICAL INFORMATION

ECOLOGICAL TEST DATA: No information.

## SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: If product becomes contaminated, follow disposal instructions for contaminant. Dispose of in accordance with federal, state and local regulations.

## SECTION 14 – TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not regulated	
DOT TECHNICAL NAME: N.A.	HAZARD SUBCLASS: N.A.
DOT HAZARD CLASS: N.A.	PACKAGING GROUP: N.A.
DOT UN/NA CLASS: 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

## SECTION 15 – REGULATORY INFORMATION

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: 03/23/2009, 23 March 2009

REASON FOR REVISION: Administrative change for new format. Revised section(s): 1,3,4,5,6,7,8,9,10,11,

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

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