



## MATERIAL SAFETY DATA SHEET

### SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BUEHLER CASTOLITE, CASTOGLAS HARDENER  
 IDENTIFICATION NUMBER: 20-8122-001,20-8122-002,20-8122-009, 20-8126-001,20-8126-002,20-8126-009  
 PRODUCT USE/CLASS: Casting

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:

### SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT%			
01	Methyl ethyl ketone	78-93-3	1.0-5.0			
02	Dimethyl phthalate	131-11-3	30.0-60.0			
03	Hydrogen peroxide	7722-84-1	1.0-5.0			
04	Methyl ethyl ketone peroxide	1338-23-4	30.0-60.0			
ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL – CEILING	COMPANY TLV-TWA	SKIN
01	200 ppm	300 ppm	200 ppm	N.E.	200 ppm	NO
02	5 mg/m <sup>3</sup>	N.E.	5 mg/m <sup>3</sup>	N.E.	5 mg/m <sup>3</sup>	NO
03	1 ppm	N.E.	1 ppm	N.E.	1 ppm	NO
04	0.2 ppm (C)	N.E.	0.7 ppm (C)	N.E.	0.2 ppm (C)	NO

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

### SECTION 3 – HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Harmful if swallowed, inhaled or absorbed through skin. Causes skin irritation. Contents may develop pressure on prolonged exposure to heat. Contact may cause eye injury. Contains a substance that may cause target organ effects. See chronic effects section.

**ACUTE EFFECTS – EYE CONTACT:** Severely irritating to the eyes. If not removed promptly, may cause permanent corneal injury.

**ACUTE EFFECTS - SKIN CONTACT:** Moderate irritant. Prolonged contact may cause dermatitis.

**ACUTE EFFECTS – INHALATION:** Vapors may have a strong offensive odor which may cause headaches, nausea and vomiting. Prolonged inhalation may be harmful with headache, coughing, dizziness and confusion leading to coma.

**ACUTE EFFECTS - INGESTION:** Irritating to mouth, throat and stomach, with nausea. Swallowing may cause damage to the optic nerve from the metabolism of methyl ethyl ketone to methanol.

**CHRONIC OVEREXPOSURE EFFECTS:** \*Preexisting pulmonary and dermatological disorders may be aggravated by exposure to hazardous components. \*Embryotoxic/fetotoxic effects have been observed in laboratory rats exposed to methyl ethyl ketone by inhalation at levels greater than 1000 ppm for most of the gestation period. Methyl ethyl ketone may shorten the time of onset of peripheral polyneuropathy caused by methyl n-butyl ketone or n-hexane. Methyl ethyl ketone by itself has not been shown to cause peripheral polyneuropathy. Animal studies suggest that repeated or prolonged overexposure may cause injury to the kidneys, liver, eyes, or central nervous system.

**OTHER INFORMATION:** Not Applicable.

**PRIMARY ROUTE(S) OF ENTRY:** SKIN CONTACT, SKIN ABSORPTION, INHALATION, 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:** Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. If symptoms occur, remove to fresh air. Medical personnel may administer oxygen if breathing is difficult. Seek medical attention if symptoms persist.

**INGESTION:** If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**NOTES TO PHYSICIAN:** Not Applicable.

### SECTION 5 – FIRE FIGHTING MEASURES

**FLASH POINT:** 180 ° F (SETAFLASH CLOSED CUP)

**LOWER EXPLOSIVE LIMIT:** 1.8 %

**UPPER EXPLOSIVE LIMIT:** 11.5 %

**AUTOIGNITION TEMPERATURE:** No data

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

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Closed containers may rupture or explode (due to pressure build-up) when exposed to extreme heat. Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion.

**SPECIAL FIREFIGHTING PROCEDURES:** Use NIOSH-approved self-contained breathing apparatus and full protective clothing. Use water to cool exposed containers. Water stream directed into fire may cause frothing with subsequent spread of flame.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear appropriate protective equipment during cleanup. Absorb with inert material, such as clay. Sweep or shovel into loosely-covered waste container and remove to appropriate waste area. Dispose of in accordance with federal, state, and local regulations. Do not use vermiculite. Wash spill area with copious amounts of water.

## SECTION 7 – HANDLING AND STORAGE

HANDLING: Wash thoroughly after handling. Avoid contact with skin and eyes. FOR INDUSTRIAL USE ONLY.  
STORAGE: Store in a cool place in original container and protect from sunlight. Refrigeration recommended. KEEP OUT OF THE REACH OF CHILDREN.

## 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, if use is performed in a poorly-ventilated space, or if inhalation effects occur, use NIOSH-approved vapor cartridge respirator in accordance with applicable health and safety regulations and manufacturer's recommendations.  
SKIN PROTECTION: Clean clothing to cover skin. Butyl rubber gloves. PVA gloves. Teflon gloves. Supported PVA gloves.  
EYE PROTECTION: Safety glasses. Chemical splash goggles.  
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. Follow all MSDS/label precautions even after container is emptied.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE:	decomposes >155 ° F	VAPOR DENSITY:	Is heavier than air
ODOR:	Mild plastic	ODOR THRESHOLD:	No data
APPEARANCE:	Clear	EVAPORATION RATE:	Is slower than Butyl Acetate
SOLUBILITY IN H <sub>2</sub> O:	Negligible		
FREEZE POINT:	No data	SPECIFIC GRAVITY:	1.1101
VAPOR PRESSURE:	No data	pH @ 0.0%:	N.A.
PHYSICAL STATE:	Liquid	VISCOSITY:	Low
COEFFICIENT OF WATER/OIL DISTRIBUTION:	No data		

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

## SECTION 10 – STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Exposure to heat, sunlight  
INCOMPATIBILITY: Strong Lewis or mineral acids. Strong bases or oxidants. Metals. Amines. Metal alloys. Sulfur compounds.  
HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon. Toxic monomers. Aromatic and aliphatic hydrocarbons. Water.  
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 -----
Methyl ethyl ketone	Derm rbt 6480 mg/m	Not Applicable
Dimethyl phthalate	oral(rat)6800mg/kg	Not Applicable
Hydrogen peroxide	Not Applicable	Not Applicable
Methyl ethyl ketone peroxide	oral(rat)=484mg/kg	Inh-rat=200ppm/4H

## SECTION 12 – ECOLOGICAL INFORMATION

ECOLOGICAL TEST DATA: Not Available

## SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Review all current federal, state, and local regulations regarding health and disposal for appropriate disposal procedures.

## SECTION 14 – TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Organic Peroxide, Type E, Liquid	
DOT TECHNICAL NAME: (Methyl ethyl ketone peroxide, 37%-40%)	
DOT HAZARD CLASS: 5.2	HAZARD SUBCLASS: N.A.
DOT UN/NA CLASS: UN3107	PACKAGING GROUP: II
	RESP. GUIDE PAGE: 147
INTERNATIONAL SHIPPING NAME: Organic peroxide type E, liquid (methyl ethyl ketone peroxide, 37%-40%)	
INTERNATIONAL ID NUMBER: UN3107	
IMDG CLASS (1°, 2°): 5.2	PACKING GROUP: II
IMDG EMS: n/d	IATA CLASS (1°, 2°): 5.2

## 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 REACTION 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
Methyl ethyl ketone	78-93-3	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: NONE KNOWN

PENNSYLVANIA RIGHT-TO-KNOW: THE FOLLOWING NON-HAZARDOUS INGREDIENTS ARE PRESENT IN THE PRODUCT AT GREATER THAN 3%: NONE KNOWN

CALIFORNIA PROPOSTION 65: No Proposition 65 chemicals known to exist in this product.

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

CANADIAN WHMIS CLASS: D2A, C

COMPONENT RCRA CLASSIFICATIONS: Toxic, Reactive

COMPONENT RCRA CODES: D035 U159

CERCLA RQ VALUE (MINIMUM) (LBS): 100 (as waste) 5000 (as product)

## SECTION 16 – OTHER INFORMATION

### HMIS RATINGS

HEALTH: 2\*

FLAMMABILITY: 2

REACTIVITY: 2

PREVIOUS MSDS REVISION DATE: October 14, 2005 (10-14-05)

REASON FOR REVISION: Administrative change for new format.

VOLATILE ORGANIC COMPOUNDS: 22 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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