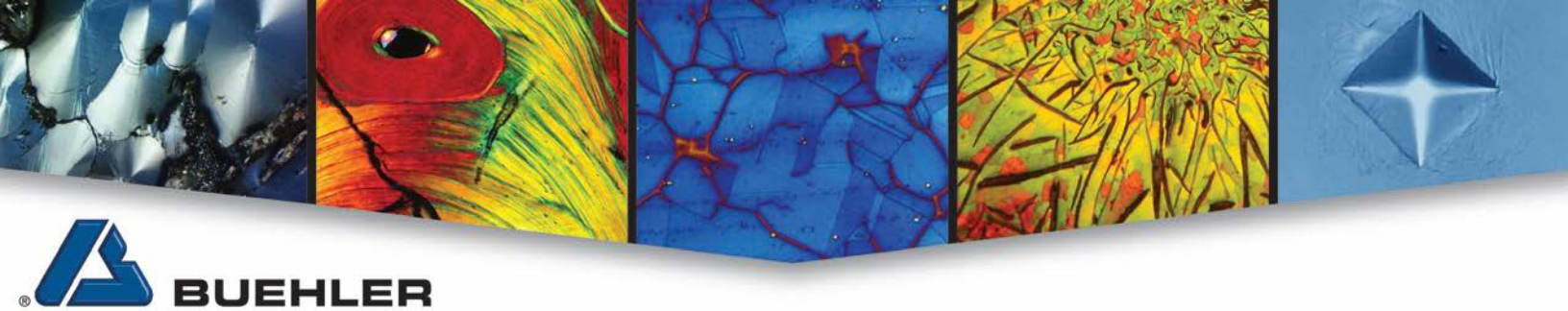

BUEHLER
An ITW Company

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BUEHLER VARIDUR 3000 LIQUID

IDENTIFICATION NUMBER: 20-3582

PRODUCT USE/CLASS: Acrylic hardener for castable (cold) mounting

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: 11/15/2010, 15 November 2010

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT%
01	Methyl methacrylate	80-62-6	60 - <80
02	Styrene	100-42-5	12.5 - <20
03	(1-Methylethylidene) bis	56744-60-6	1 - <5
04	2-Hydroxyethyl methacrylate	868-77-9	1 - <5
05	N,N-Dimethylaniline	121-69-7	0.1 - <1
06	N,N-dimethyl-p-toluidine	99-97-8	0.1 - <1
07	1,4-Dihydroxybenzene	123-31-9	0.1 - <1

MSDS NUMBER: 9115205

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL – CEILING	COMPANY TLV-TWA	SKIN
01-07	N.E	N.E.	N.E	N.E	N.E	NO

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Harmful if inhaled or swallowed. Causes skin and eye irritation. Flammable liquid and vapor. Inhalation of vapors may cause respiratory irritation and intoxication. Repeated and prolonged overexposure may cause target organ effects – see chronic overexposure effects.

ACUTE EFFECTS – EYE CONTACT: Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.

ACUTE EFFECTS - SKIN CONTACT: Contact causes skin irritation. May cause allergic skin reaction. Prolonged contact may cause dermatitis.

ACUTE EFFECTS – INHALATION: Liquid aspirated into lungs may cause chemical Pneumonitis with serious injury or death. High concentrations in immediate area can displace oxygen and can cause dizziness, unconsciousness, and even death with longer exposure. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

ACUTE EFFECTS - INGESTION: This material may be harmful or fatal if swallowed. Irritating to mouth, throat and stomach, with nausea.

CHRONIC OVEREXPOSURE EFFECTS: *Preexisting pulmonary and dermatological disorders may be aggravated by exposure to hazardous components. *Studies suggest that chronic overexposure and/or systemic toxicity effects are targeted at the liver and kidneys. *In laboratory tests, animals exposed to high levels of solvent during pregnancy experienced fetal malformations and fetotoxicity. *Styrene has been listed as a potential carcinogen by IARC. Evidence of carcinogenicity has not been seen in the epidemiology of workers exposed to styrene. Repeated excessive exposures may cause central nervous system effects. Styrene is reported to have caused hearing loss in animals exposed to levels 16 x TLV and higher. The significance of this finding to humans is unknown.

OTHER INFORMATION: No information.

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

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention if irritation persists.

SKIN CONTACT: Remove contaminated clothing. Wash with soap and water. Get medical attention if irritation develops or persists.

INHALATION: 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: Treat symptomatically. If swallowed, gastric lavage is indicated.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: +10 C

LOWER EXPLOSIVE LIMIT: 1.2 Vol %

UPPER EXPLOSIVE LIMIT: 12.5 Vol %

AUTOIGNITION TEMPERATURE: >400 deg F

EXTINGUISHING MEDIA: ALCOHOL FOAM,CO_2,DRY CHEMICAL,FOAM,WATER

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may rupture or explode (due to pressure build-up) when exposed to extreme heat. Vapors are heavier than air, and may travel along the ground to be reignited at locations distant from the source; flashback of flame may occur. Store full and empty containers away from heat, sparks, flame, and other sources of ignition. Observe all labeled precautions until containers are cleaned and/or reconditioned. 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: Remove sources of ignition. Dike or contain spill. 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.

SECTION 7 – HANDLING AND STORAGE

HANDLING: Use with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. FOR INDUSTRIAL USE ONLY.

STORAGE: Keep away from heat, sparks and flame. Keep container closed when not in use. KEEP OUT OF THE REACH OF CHILDREN.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust as needed to control vapor or dust levels to below lowest component TLV.

RESPIRATORY PROTECTION: If exposure levels are unknown, if levels exceed TLV/PEL, or if effects occur, use NIOSH-approved dust/mist respirator in accordance with applicable health and safety regulations and manufacturer's recommendations.

SKIN PROTECTION: Clean clothing to cover skin. Sranex gloves. Butyl rubber gloves. Viton gloves.

EYE PROTECTION: Eye protection (i.e., safety glasses, safety goggles and/or face shield) should be determined based on conditions of use.

OTHER PROTECTIVE EQUIPMENT: Accessible eye wash and safety shower.

HYGIENIC PRACTICES: Follow good general industrial safety practices during use. DO NOT reuse empty containers without commercial clean or recondition. Follow all MSDS/label precautions even after container is emptied.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE:	214 - 295 F	VAPOR DENSITY:	Is heavier than air
ODOR:	Unpleasant plstic	ODOR THRESHOLD:	No data
APPEARANCE:	Brown	EVAPORATION RATE:	Is slower than Butyl Acetate
SOLUBILITY IN H_2O:	Negligible		
FREEZE POINT:	No data	SPECIFIC GRAVITY:	0.9432
VAPOR PRESSURE:	No data low	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: Formation of explosive gas/air mixtures. Used empty vessels may contain product gases which can form explosive mixtures with air.

INCOMPATIBILITY: Reactions with strong oxidizing agents.

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

HAZARDOUS POLYMERIZATION: No hazardous decomposition products known.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 – TOXICOLOGICAL PROPERTIES

Not determined.

SECTION 12 – ECOLOGICAL INFORMATION

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Review all current federal, state, and local regulations regarding health and disposal for appropriate disposal procedures. Product is considered a “hazardous waste” if disposed of “as sold” per U.S. Federal RCRA regulations and Canadian National requlations. Fuels blending or incineration recommended if permitted.

SECTION 14 – TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Flammable liquid, n.o.s.	
DOT TECHNICAL NAME: (Methyl methacrylate, monomer stabilized, Styrene, monomer stabilized)	
DOT HAZARD CLASS: 3	HAZARD SUBCLASS: None
DOT UN/NA CLASS: UN1993	PACKAGING GROUP: II
	RESP. GUIDE PAGE: 128
INTERNATIONAL SHIPPING NAME: Flammable liquid, n.o.s. (Methyl methacrylate, monomer stabilized, Styrene, monomer stabilized)	
INTERNATIONAL ID NUMBER: UN1993	
IMDG CLASS (1°, 2°): 3, none	IMDG PAGE NUMBER: II
IMDG EMS: N.A.	IATA CLASS (1°, 2°): 3, none

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 FIRE 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 methacrylate.....80-62-6..... 60 - <80

.....Styrene.....100-42-5 .....12.5 - <20

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

.....N,N-dimethyl-p-toluidine.....99-97-8]

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

No non-hazardous materials greater than 1% are among the top five ingredients

SECTION 15 – REGULATORY INFORMATION

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

--- CHEMICAL NAME----------CAS NUMBER

No non-hazardous ingredients are present at greater than 3%

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, B2

COMPONENT RCRA CLASSIFICATIONS: Ignitable

COMPONENT RCRA CODES: D001

CERCLA RQ VALUE (MINIMUM): 100

SECTION 16 – OTHER INFORMATION

HMIS RATINGS

HEALTH: 2 FLAMMABILITY: 3 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 22 May 03

REASON FOR REVISION: Administrative change for new format. Revised section(s) 1, 2

VOLATILE ORGANIC COMPOUNDS: ~ 90%

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.