



MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BUEHLER TEM EPOXY RESIN

IDENTIFICATION NUMBER: TEM EPOXY Part A 20-8151

PRODUCT USE/CLASS: Epoxy resin

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: 3/29/2011, 29 March 2011

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT%
01	Epoxy Phenol Novolac	28064-14-4	>75

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

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Causes skin and eye irritation. May cause allergic skin reaction.

ACUTE EFFECTS – EYE CONTACT: Contact may cause injury to eye tissue if not removed promptly.

ACUTE EFFECTS - SKIN CONTACT: Contact causes skin irritation. May cause allergic skin reaction.

ACUTE EFFECTS – INHALATION: Vapors and/or aerosols formed at elevated temperatures can be irritating.

ACUTE EFFECTS - INGESTION: Moderately toxic. May cause nausea and vomiting.

CHRONIC OVEREXPOSURE EFFECTS: Delayed and chronic effects: Allergic eczema.

Acute: Causes serious eye irritation. Causes skin irritation. Allergic contact dermatitis. Ingestion may cause irritation of the gastrointestinal tract.

OTHER INFORMATION: No information.

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

SECTION 4 – FIRST AID MEASURES

EYE CONTACT: Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.

SKIN CONTACT: Remove contaminated clothing immediately and drench affected skin with plenty of water. If irritation (redness, rash, blistering) develops, get medical attention

INHALATION: Remove patient from exposure. Keep patient at rest and give oxygen if breathing difficult. If symptoms develop, obtain medical attention.

INGESTION: Ingestion may cause irritation of the gastrointestinal tract. If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting. Make victim drink plenty of water. Get immediate medical attention

NOTES TO PHYSICIAN: Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

FLASH POINT: > 93.3° C / 200° F.

LOWER EXPLOSIVE LIMIT: N.A.

UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: No data

EXTINGUISHING MEDIA: CO₂, 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: Wear a NIOSH approved positive pressure self-contained breathing apparatus with full protective clothing. Do not release runoff from fire control methods to sewers or waterways. 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 protective gloves and goggles during cleanup. Wipe up with damp rag. Wash spill area thoroughly with soap or mild detergent and water. Dispose of rag in appropriate manner to limit potential contact.

SECTION 7 – HANDLING AND STORAGE

HANDLING: Use only in well-ventilated areas. Avoid inhalation of high concentrations of vapors. Keep away from oxidizing agents. Keep away from fire, sparks and heated surfaces - no smoking.

STORAGE: Protect from sunlight. Store in a well-ventilated place. Do not use or store near heat or open flame. Do not store and transport with oxidizers etc.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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. Rubber or synthetic 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 smoke or eat 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:	244 - 244 F	VAPOR DENSITY:	Is heavier than air
ODOR:	No appreciable	ODOR THRESHOLD:	No data
APPEARANCE:	Clear liquid	EVAPORATION RATE:	Is slower than Butyl Acetate
SOLUBILITY IN H₂O:	Negligible		
FREEZE POINT:	No data	SPECIFIC GRAVITY:	1.2008
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: Avoid contact with heat and ignition sources.

INCOMPATIBILITY: Bleaching products and comparable oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 – TOXICOLOGICAL PROPERTIES

Acute toxicity May be harmful if swallowed.

Irritation Causes skin and eye irritation. May cause transient irritation.

Corrosivity Not to be expected.

Sensitization May cause sensitization by skin contact.

Repeated dose toxicity No data.

Carcinogenicity No data.

Mutagenicity No data.

Toxicity for reproduction No data.

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity Harmful to aquatic life. Harmful to algae.

Persistence and degradability Biodegradable. Not persistent.

Bioaccumulative potential The product has low potential for bioaccumulation.

Mobility in soil The product has high mobility in soil.

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. When cured, product is non-hazardous, and may be placed in industrial or municipal landfill if local regulations permit. Containers must not be punctured or destroyed by burning, even when empty.

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 considered a dangerous good for transport	
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

<p><u>OSHA</u>: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)</p> <p><u>CERCLA – SARA HAZARD CATEGORY</u>: THIS PRODUCT HAS BEEN REVIEWED, AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES: IMMEDIATE HEALTH HAZARD CHRONIC HEALTH HAZARD</p> <p><u>SARA SECTION 313</u>: THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 AND 40 CFR PART 372: NONE</p> <p><u>CALIFORNIA PROPOSITION 65</u>: No Proposition 65 chemicals known to exist in this product.</p> <p><u>CANADIAN WHMIS</u>: THIS MSDS HAS BEEN PREPARED IN COMPLIANCE WITH CONTROLLED PRODUCT REGULATIONS EXCEPT FOR USE OF THE 16 HEADINGS. CANADIAN WHMIS CLASS: D2B</p> <p><u>COMPONENT RCRA CLASSIFICATIONS</u>: Not regulated</p> <p><u>COMPONENT RCRA CODES</u>: No information.</p> <p><u>CERCLA RQ VALUE (MINIMUM)</u>: None known</p>

SECTION 16 – OTHER INFORMATION

HMIS RATINGS

HEALTH: 2

FLAMMABILITY: 1

REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 3/23/2009, 23 March 2009

REASON FOR REVISION: Administrative change for new format. Revised section(s): 2, 3, 4, 7, 11, 12 ,13

VOLATILE ORGANIC COMPOUNDS: 0 grams/ltr (calculated)

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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