

MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS, AND RELATED MATERIALS

This MSDS sheet meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION I

Product Name:	PG-100E (PART A)	Date of Preparation:	November 20, 2012
Manufacturer's Name:	Umaco, Inc.	City, State, Zip:	Lowell, MA 01852
Street Address:	60 Rear Newhall Street	Chemical Family:	EPOXY
Emergency Phone No:	800-424-9300: Chemtrec	Chemical Name:	DIGLYCIDYLETHER OF BISPHENOL-A
Information Phone No:	978-453-8881		

SECTION II HAZARDOUS INGREDIENTS

Ingredient	% (optional)	CAS Number	OSHA PEL mg/m ³	ACGIH TLV-TWA mg/m ³
EPOXY RESIN	90-100	025085-99-8		NOT ESTABLISHED

SECTION III PHYSICAL DATA

Boiling Point (DEG F):	N/A	Specific Gravity (Water=1):	1.135-1.145
Vapor Pressure (mm Hg):	N/A	Percent Volatile by Volume:	0.0
Vapor Density (Air=1):	N/A	Evaporation Rate Vs Ether:	N/A
Solubility in Water:	NO		
Appearance and Order:	WATER CLEAR or PIGMENTED LIQUID; SWEET CHARACTERISTIC ODOR		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): 485 Deg F (PMCC) **Flammable Limits:** NOT DETERMINED

Extinguishing Media: USE SPRAY, DRY CHEMICAL, FOAM OR CARBON DIOXIDE.

Special Fire Fighting Procedures: TREAT AS A CLASS B FIRE.

Unusual Fire and Explosion Hazards: NONE

SECTION V HEALTH HAZARD DATA

Effects of Overexposure:

Ingestion: LOW ACUTE ORAL TOXICITY; LD50 (RAT) GREATER THAN 2000 MG/KG
Eye Contact: MINOR TRANSIENT IRRITATION. NO CORNEAL INJURY LIKELY.
Skin Contact: ONLY MINOR IRRITATION. MAY BE A SKIN SENSITIZER.
Skin Absorption: NOT LIKELY TO BE A ABSORBED THROUGH SKIN IN TOXIC AMOUNTS.
Inhalation: NOT CONSIDERED A PROBLEM UNLESS HEATED TO HIGH TEMPERATURE.

Emergency First Aid Procedure:

Skin Contact: WASH WITH SOAP AND WATER; WASH CLOTHES BEFORE REUSE.
Eye Contact: IRRIGATE WITH WATER FOR FIVE MINUTES; CONSULT PHYSICIAN.
Inhalation: REMOVE TO FRESH AIR IF EFFECTS OCCUR; CONSULT PHYSICIAN.
Ingestion: IF SWALLOWED, CALL PHYSICIAN IMMEDIATELY. NOTE TO PHYSICIANS: REMOVE STOMACH CONTENTS BY GASTRIC SUCTION OR INDUCE VOMITING ONLY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONCIOUS PERSON.

SECTION VI REACTIVITY DATA

Stability: STABLE

Incompatibility with Other Materials: AVOID CONTACT WITH OXIDIZING MATERIALS, ACIDS AND BASES. AVOID UNINTENDED CONTACT WITH AMINES. KEEP AWAY FROM OPEN FLAME. PRIOR TO CURE.

Hazardous Decomposition Products:

THERMAL DECOMPOSITION MAY PRODUCE CARBON MONOXIDE AND/OR CARBON DIOXIDE.

Hazardous Polymerization: WILL NOT OCCUR.

Conditions to Avoid: STRONG ACIDS, AMINES, MERCAPTANS, BASES (IN UNCONTROLLABLE AMOUNTS)

SECTION VII SPILL OR LEAK PROCEDURE

Steps to be taken if Release or Spilled: ABSORB WITH INERT MATERIAL (SAND, VERMICULITE, ETC.), SWEEP OR SCOOP UP AND PUT IN DISPOSAL CONTAINER. FLUSH ARE IMMEDIATELY WITH PLENTY OF WATER; PREVENT WASHINGS FROM ENTERING WATERWAYS.

Waste Disposal Method: INCINERATE IN FURNACE OR BURY IN LANDFILL IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiratory Protection: NIOSH APPROVED ORGANIC VAPOR RESPIRATORS ARE ONLY REQUIRED WHEN VENTILATION IS INADEQUATE. NIOSH APPROVED AIR-LINE RESPIRATORS WITH AUXILIARY ESCAPE AIR TANKS OR SELF-CONTAINED BREATHING APPARATUS SHOULD BE USE DIN CONFINED SPACES.

Ventilation: LOCAL MECHANICAL EXHAUST.

Protective Gloves: IMPERVIOUS GLOVES.

Eye Protection: SAFETY GLASSES WITH SIDE SHIELDS.

Other Protective Equipment: SAFETY SHOWER AND EYE BATH SHOULD BE PROVIDED. USE COVERALLS OR APRON TO PROTECT AGAINST SKIN AND CLOTHING CONTAMINATION.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Storage and Handling: PRACTICE REASONABLE CARE AND CLEANLINESS.

Other Precautions: AVOID GROSS CONTAMINATION OF SKIN. WASH SKIN WITH PLENTY OF SOAP AND WATER. USE WITH ADEQUATE VENTILATION. AVOID BREATHING VAPORS.

N/A INDICATE THAT THIS SPECIFICATION DOES NOT APPLY TO THIS PRODUCT

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FOR COATINGS, RESINS, AND RELATED MATERIALS

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SECTION I

Product Name: PG-100E (PART B) **Date of Preparation:** May 26, 2011
Manufacturer's Name: Umaco, Inc. **City, State, Zip:** Lowell, MA 01852
Street Address: 60 Rear Newhall Street **Chemical Family:** Amines Curing Agent
Emergency Phone No: 800-424-9300: Chemtrec **Chemical Name:** Mixture
Information Phone No: 978-453-8881

SECTION II HAZARDOUS INGREDIENTS

Ingredient	% (optional)	CAS Number	OSHA PEL mg/m ³	ACGIH TLV-TWA mg/m ³
CYCLOHEXYLAMINE	>50	2855-13-2	NOT ESTABLISHED	
EPOXY POLYAMINE ADDUCT	>60		NOT ESTABLISHED	

THE REMAINING COMPONENT IS A TRADE SECRET

SECTION III PHYSICAL DATA

Boiling Point (DEG F):	325 Deg F	Specific Gravity (Water=1):	0.99-1.0
Vapor Pressure (mm Hg):	N/A	Percent Volatile by Volume:	0.0
Vapor Density (Air=1):	N/A	Evaporation Rate Vs Ether:	LESS THAN
Solubility in Water:	MODERATE		
Appearance and Order:	CLEAR COLORLESS LIQUID	AMONIACAL ODOR	

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): 325 Deg F (PMCC) **Flammable Limits:** NOT DETERMINED
Extinguishing Media: USE WATER SPRAY, DRY CHEMICAL, FOAM OR CARBON DIOXIDE.
Special Fire Fighting Procedures: TREAT AS A CLASS B FIRE. USE WATER TO COOL CONTAINERS
Unusual Fire and Explosion Hazards: NONE

SECTION V HEALTH HAZARD DATA

Effects of Overexposure:

Ingestion: LOW ACUTE ORAL TOXICITY.

Eye Contact: EXTREMELY IRRITATING WITH POSSIBLE EYE INJURY.

Skin Contact: OVEREXPOSURE COULD CAUSE BURNS AND BLISTERING.

Skin Absorption: NOT LIKELY TO BE ABSORBED THROUGH SKIN IN TOXIC AMOUNTS.

Inhalation: NOT CONSIDERED A PROBLEM UNLESS HEATED TO HIGH TEMPERATURE.

Emergency First Aid Procedure:

Skin Contact: WASH WITH SOAP AND WATER; WASH CLOTHES BEFORE REUSE.

Eye Contact: IRRIGATE WITH WATER FOR FIFTEEN MINUTES; CONSULT PHYSICIAN.

Inhalation: REMOVE TO FRESH AIR IF EFFECTS OCCUR; CONSULT PHYSICIAN.

Ingestion: DO NOT INDUCE VOMITING. GIVE ONE GLASS OF WATER UNLESS VICTIM IS DROWSY, CONVULSING, OR UNCONCIOUS. SEEK MEDICAL ATTENTION IMMEDIATELY.

SECTION VI REACTIVITY DATA

Stability: STABLE

Incompatibility (Materials to Avoid): KEEP AWAY FROM OPEN FLAME. PRIOR TO CURE, AVOID CONTACT WITH OXIDIZING AGENTS.

Hazardous Decomposition Products:

DECOMPOSITION MAY PRODUCE CARBON MONOXIDE AND/OR CARBON DIOXIDE

Hazardous Polymerization: WILL NOT OCCUR

Conditions to Avoid: OXIDIZING MATERIALS

SECTION VII SPILL OR LEAK PROCEDURE

Steps to be taken if Release or Spilled: ABSORB WITH INERT MATERIAL (SAND, VERMICULITE, ETC.), SWEEP OR SCOOP UP AND PUT IN DISPOSAL CONTAINER. FLUSH AREA IMMEDIATELY WITH PLENTY OF WATER; PREVENT WASHINGS FROM ENTERING WATERWAYS.

Waste Disposal Method: INCINERATE IN FURNACE OR BURY IN LANDFILL IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiratory Protection: NIOSH APPROVED ORGANIC VAPOR RESPIRATORS ARE ONLY REQUIRED WHEN VENTILATION IS INADEQUATE. NIOSH APPROVED AIR-LINE RESPIRATORS WITH AUXILIARY ESCAPE AIR TANKS OR SELF-CONTAINED BREATHING APPARATUS SHOULD BE USED IN CONFINED SPACES.

Ventilation: LOCAL MECHANICAL EXHAUST.

Protective Gloves: IMPERVIOUS GLOVES.

Eye Protection: SAFETY GLASSES WITH SIDE SHIELDS.

Other Protective Equipment: SAFETY SHOWER AND EYE BATH SHOULD BE PROVIDED. USE COVERALLS OR APRON TO PROTECT AGAINST SKIN AND CLOTHING CONTAMINATION.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Storage and Handling: PRACTICE REASONABLE CARE AND CLEANLINESS.

Other Precautions: AVOID GROSS CONTAMINATION OF SKIN. WASH SKIN WITH PLENTY OF SOAP AND WATER. USE WITH ADEQUATE VENTILATION. AVOID BREATHING VAPORS.

N/A INDICATE THAT THIS SPECIFICATION DOES NOT APPLY TO THIS PRODUCT