

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PRO-SET® LAM-135
PRODUCT CODE: LAM-135
CHEMICAL FAMILY: Epoxy Resin.
CHEMICAL NAME: Bisphenol-A based epoxy resin.
FORMULA: Not applicable.

MANUFACTURER:
Gougeon Brothers, Inc.
100 Patterson Avenue
Bay City, MI 48706, U.S.A.
Phone: 888-377-6738 or 989-684-7286
www.prosetepoxy.com

EMERGENCY TELEPHONE NUMBERS:
Transportation
CHEMTREC: 800-424-9300 (U.S.)
703-527-3887 (International)
Non-transportation
Poison Hotline: 800-222-1222

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS Hazard Rating: Health - 2 Flammability - 1 Physical Hazards - 0

WARNING May cause skin irritation. May cause eye irritation. May cause allergic reaction and sensitization. Clear liquid with mild odor.

PRIMARY ROUTE(S) OF ENTRY: Skin contact.

POTENTIAL HEALTH EFFECTS:

ACUTE INHALATION: if product is heated, vapors generated can cause headache, nausea, dizziness and possible respiratory irritation if inhaled in high concentrations.

CHRONIC INHALATION: Repeated exposure to high vapor concentrations may cause irritation of pre-existing lung allergies and increase the chance of developing allergy symptoms to this product.

ACUTE SKIN CONTACT: May cause allergic skin response in certain individuals. May cause moderate irritation to the skin such as redness and itching.

CHRONIC SKIN CONTACT: May cause sensitization in susceptible individuals. May cause moderate irritation to the skin.

EYE CONTACT: May cause irritation.

INGESTION: Low acute oral toxicity.

SYMPTOMS OF OVEREXPOSURE: Possible sensitization and subsequent allergic reactions usually seen as redness and rashes.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing skin and respiratory disorders may be aggravated by exposure to this product. Pre-existing lung and skin allergies may increase the chance of developing allergic symptoms to this product.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS #	CONCENTRATION (%)
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	25085-99-8	60-100
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer	30499-70-8	10-30

4. FIRST AID MEASURES

FIRST AID FOR EYES: Flush immediately with water for at least 15 minutes. Consult a physician.

FIRST AID FOR SKIN: Remove contaminated clothing. Wipe excess from skin. Lather with waterless skin cleaner and then wash with warm soap and water. If irritation occurs, get medical attention.

FIRST AID FOR INHALATION: Remove to fresh air and rest if effects occur.

FIRST AID FOR INGESTION No adverse health effects expected from amounts ingested under normal conditions of use. Seek medical attention if a significant amount is ingested.

5. FIRE FIGHTING MEASURES

FLASH POINT: > 260°F (PMCC)

EXTINGUISHING MEDIA: Foam, carbon dioxide (CO₂) or dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Wear complete fire fighting gear and self-contained breathing apparatus. Cool fire-exposed containers with water spray. Material is not readily combustible unless preheated.

FIRE AND EXPLOSION HAZARDS: During a fire, smoke may contain the original materials in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include, but are not limited to: phenolics, carbon monoxide, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Stop leak without additional risk. Dike and absorb with inert material (e.g., sand) and collect in a suitable, closed container. Warm, soapy water or non-flammable, safe solvent may be used to clean residual.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE (MIN./MAX.): 40°F (4°C) / 90°F (32°C)

STORAGE: Store in tightly closed containers to prevent moisture absorption and loss of volatiles. Store away from heat and open flame.

HANDLING PRECAUTIONS: Ventilate work area. Avoid skin contact. Wash skin thoroughly after handling. Launder contaminated clothing before reuse or discard. Precautionary steps should be taken when curing product in large quantities. When mixed with epoxy curing agents this product causes an exothermic, which in large masses, can produce enough heat to damage or ignite surrounding materials and emit fumes and vapors that vary widely in composition and toxicity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION REQUIREMENTS: Wear safety glasses with side shields or chemical splash goggles when exposure is more likely.

SKIN PROTECTION GUIDELINES: Wear liquid-proof, chemical resistant gloves (nitrile-butyl rubber, neoprene, butyl rubber or natural rubber) and full body-covering clothing.

RESPIRATORY/VENTILATION REQUIREMENTS: Good room ventilation is usually adequate for most operations. Use respirators when exposure to vapors from heated material or mist is likely, unless determined to be below applicable limits. Use a NIOSH/MSHA approved respirator with organic vapor cartridge.

Note: Gougeon Brothers, Inc. has conducted an air sampling study using this product or similarly formulated products. The results indicate that the components sampled for (epichlorohydrin) were either so low that they were not detected at all or they were well below OSHA's permissible exposure levels.

ADDITIONAL PROTECTIVE MEASURES: Wash thoroughly after handling. Avoid breathing vapors from heated material. Protective skin cream barriers can be applied to hands in addition to gloves for added protection. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions.

OCCUPATIONAL EXPOSURE LIMITS: Not established for product as whole. Refer to OSHA's Permissible Exposure Level (PEL) or the ACGIH Guidelines for information on specific ingredients.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM Liquid.
COLOR Clear.
ODOR Mild.
BOILING POINT No data.
MELTING POINT/FREEZE POINT No data.
VISCOSITY 6890 (cP.)

pH No data.
 SOLUBILITY IN WATER Insoluble.
 SPECIFIC GRAVITY 1.16
 BULK DENSITY 9.71 (pounds/gallon.)
 VAPOR PRESSURE < 1 mmHg @ 20°C.
 VAPOR DENSITY Heavier than air.
 % VOLATILE BY WEIGHT: ASTM D 2369-07 was used to determine the Volatile Content of mixed epoxy resin and hardener. Refer to the hardener's MSDS for information about the total volatile content of the resin/hardener system.

10. STABILITY AND REACTIVITY

STABILITY:..... Stable.
HAZARDOUS POLYMERIZATION: Will not occur by itself, but masses of more than one pound of product plus an aliphatic amine will cause irreversible polymerization with considerable heat buildup.
INCOMPATIBILITIES:..... Strong acids and oxidizing agents.
DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and phenolics may be produced during uncontrolled exothermic reactions or when otherwise heated to decomposition.

11. TOXICOLOGICAL INFORMATION

No specific oral, inhalation or dermal toxicology data is known for this product. Specific toxicology information for a bisphenol-A based epoxy resin present in this product is indicated below:

Oral: LD₅₀ >5000 mg/kg (rats)
 Inhalation:..... No Data.
 Dermal:..... LD₅₀ = 20,000 mg/kg (skin absorption in rabbits)

TERATOLOGY:..... Diglycidyl ether of bisphenol-A (DGEBA) did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.

REPRODUCTIVE EFFECTS: DGEBA, in animal studies, has been shown not to interfere with reproduction.

MUTAGENICITY: DGEBA in animal mutagenicity studies were negative. In vitro mutagenicity studies were negative in some cases and positive in others.

CARCINOGENICITY:

NTP Product not listed.
 IARC Product not listed.
 OSHA Product not listed.

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA, NTP or IARC.

Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol-A. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBA is carcinogenic. Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBA is not classified as a carcinogen.

Epichlorohydrin, an impurity in this product (<5 ppm) has been reported to produce cancer in laboratory animals and to produce mutagenic changes in bacteria and cultured human cells. It has been established by the International Agency for Research on Cancer (IARC) as a probable human carcinogen (Group 2A) based on the following conclusions: human evidence – inadequate; animal evidence – sufficient. It has been classified as an anticipated human carcinogen by the National Toxicology Program (NTP).
 Note: It is unlikely that normal use of this product would result in measurable exposure concentrations to this substance.

12. ECOLOGICAL INFORMATION

Prevent entry into sewers and natural waters. May cause localized fish kill.

Movement and Partitioning:
 Bioconcentration potential is low (BCF less than 100 or Log Kow less than 3).

Degradation and Transformation:
 Biodegradation under aerobic static laboratory conditions is below detectable limits (i.e., BOD less than 2.5% of theoretical) in 20 days.

Ecotoxicology:

Material is moderately toxic to aquatic organisms on an acute basis. LC₅₀ between 0.1 and 1.0 mg/L in most sensitive species.

13. DISPOSAL CONSIDERATION

WASTE DISPOSAL METHOD: Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, either by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods.

Incinerate, recycle (fuel blending) or reclaim may be preferred methods when conducted in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION**DOT**

D.O.T. SHIPPING NAME: Not regulated by DOT.
 TECHNICAL SHIPPING NAME: Not applicable.
 D.O.T. HAZARD CLASS: Not applicable.
 U.N./N.A. NUMBER: Not applicable.
 PACKING GROUP: Not applicable.

IATA

SHIPPING NAME: Environmentally hazardous substance, liquid, n.o.s.
 TECHNICAL SHIPPING NAME: Epoxy Resin.
 HAZARD CLASS: Class 9.
 U.N. NUMBER: UN3082.
 PACKING GROUP: PG III.
 MARINE POLLUTANT Yes

IMDG

SHIPPING NAME: Environmentally hazardous substance, liquid, n.o.s.
 TECHNICAL SHIPPING NAME: Epoxy Resin.
 HAZARD CLASS: Class 9.
 U.N. NUMBER: UN3082.
 PACKING GROUP: PG III.
 EmS Number: F-A, S-F
 MARINE POLLUTANT Yes

15. REGULATORY INFORMATION

OSHA STATUS: Irritant. Possible sensitizer.
TSCA STATUS: All components are listed on TSCA Inventory or otherwise comply with TSCA requirements.

Canada WHMIS Classification: D2B

SARA TITLE III:
SECTION 313 TOXIC CHEMICALS None (de minimus).

STATE REGULATORY INFORMATION:

The following chemicals are specifically listed or otherwise regulated by individual states. For details on your regulatory requirements you should contact the appropriate agency in your state.

<u>COMPONENT NAME</u> <u>/CAS NUMBER</u>	<u>CONCENTRATION</u>	<u>STATE CODE</u>
Epichlorohydrin 106-89-8	< 5ppm	¹ CA, MA, PA, RI

¹ These substances are known to the state of California to cause cancer or reproductive harm, or both.

16. OTHER INFORMATION

REASON FOR ISSUE: New product.
PREPARED BY: G. M. House
APPROVED BY: G. M. House

TITLE:Health, Safety & Environmental Manager
APPROVAL DATE:October 24, 2012
SUPERSEDES DATE:NA
MSDS NUMBER:LAM-135-12a

Note: The Hazardous Material Indexing System (HMIS), cited in the Emergency Overview of Section 3, uses the following index to assess hazard rating: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; and 4 = Severe.

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