

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:..... PRO-SET[®] M2012 Hardener
APPLICABLE PRODUCT CODES: M2012, M2012-1, M2012-2, M2012-4
CHEMICAL FAMILY:..... Mercaptan polymer-amine mixture.
INTENDED PRODUCT USES:..... Curing agent for epoxy resins.
PRODUCT RESTRICTIONS:..... None identified.
SDS VERSION: M2012-2016b

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

EMERGENCY TELEPHONE NUMBERS (24 HRS):
Transportation
CHEMTREC: 800-424-9300 (U.S.)
703-527-3887 (International)
Non-transportation
Poison Hotline: 800-222-1222

2. HAZARDS IDENTIFICATION

Classification of Substance or Mixture

Skin corrosion/irritation, Category 2
Skin sensitizer, Category 1
Eye damage/irritation, Category 1

Label Elements

Hazard Pictogram(s):



Signal Word:
DANGER

Hazard Statements:

H315 Causes skin irritation
H317 May cause an allergic skin reaction
H318 Causes serious eye damage

Precautionary Statements:

Prevention

P261 Avoid breathing dust/fumes/gas/mists/vapors/spray
P264 Wash hands thoroughly after handling
P272 Contaminated work clothing should not be allowed out of the workplace
P280 Wear protective gloves/protective clothing/eye protection/face protection

Response

P302 + P352 IF ON SKIN: Wash with plenty of water and soap.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical attention/advice
P337 + P313 If eye irritation persists: Get medical attention/advice
P362 + P364 Take off contaminated clothing and wash it before reuse

Disposal

P501 Dispose of contents and container according to local, state, national and International regulations

Other Hazards

None known.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS #	CONCENTRATION (%)
Mercaptan terminated polymer (non-hazardous)	Not Available	90-100
Tris-2, 4, 6-(dimethylamineomethyl) phenol	90-72-2	5-10
Bis(dimethylaminomethyl)phenol	71074-89-0	1-5

The exact chemical identity and/or exact percentage (concentration) of each ingredient may be held as a trade secret. Ingredient ranges provided may represent actual concentration ranges. Any ingredient not disclosed may have been determined not to pose a health or environmental hazard, or may only be present in concentrations that do not require disclosure. Refer to Section 15 for additional information regarding a WHMIS CBI claim.

4. FIRST AID MEASURES

FIRST AID FOR EYES:..... SYMPTOMS: Causes eye burns and eye damage. RESPONSE: Flush immediately with water for at least 15 minutes. Remove contact lenses if present and easy to do. Immediately call a POISON CONTROL CENTER or doctor.

FIRST AID FOR SKIN:..... SYMPTOMS: May cause skin burns, redness and irritation. May cause allergic skin reaction and sensitization. RESPONSE: Immediately wash skin with soap and water. Seek medical advice if effects develop and persist.

FIRST AID FOR INHALATION:..... SYMPTOMS: Can cause respiratory irritation. RESPONSE: Remove to fresh air if effects occur and keep comfortable for breathing. Seek medical assistance if effects develop and persist.

FIRST AID FOR INGESTION:..... SYMPTOMS: May cause gastrointestinal irritation or ulceration. May cause burns of the mouth and throat. RESPONSE: Rinse mouth with water. DO NOT induce vomiting. If vomiting should occur, keep airway clear. Immediately call POISON CONTROL CENTER or doctor.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: SUITABLE: Foam, carbon dioxide (CO₂), dry chemical. NON-SUITABLE: Direct water stream.

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: oxides of nitrogen, oxides of carbon, volatile amines, ammonia, nitric acid, nitrosamines. When mixed with sawdust, wood chips, or other cellulosic material, spontaneous combustion can occur under certain conditions. Heat is generated as the air oxidizes the amine. If the heat is not dissipated quickly enough, it can ignite the sawdust.

SPECIAL FIRE FIGHTING PROCEDURES: Use full-body protective gear and a self-contained breathing apparatus. Use of water may generate toxic aqueous solutions. Do not allow water run-off from fighting fire to enter drains or other water courses.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS AND PROTECTIVE EQUIPMENT: Keep unnecessary and unprotected personnel from entering area. Use appropriate safety and personal protective equipment as indicated in Section 8.

MITIGATION AND CLEAN UP PROCEDURES: Stop leak without additional risk. Isolate area. Dike and absorb with inert material (e.g., sand) and collect in a suitable, closed container. Do not use sawdust, wood chips or other cellulosic materials to absorb the spill, as the possibility for spontaneous combustion exists. Warm, soapy water may be used to clean residual.

ENVIRONMENTAL PRECAUTIONS: Prevent from entering into soil, ditches, sewers, waterways and groundwater. See Section 12 for environmental impact information.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE (min./max.): 40°F (4°C) / 90°F (32°C).

STORAGE: Store in cool, dry place away from high temperatures and moisture. Keep container tightly closed. Store in a secure location with restricted access or store locked up.

HANDLING PRECAUTIONS: Use with adequate ventilation. Do not breathe vapors or mists from heated material. Avoid exposure to concentrated vapors. Avoid skin and eye contact. Wash thoroughly after handling. When mixed with epoxy resin this product causes an exothermic reaction, 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 GUIDELINES: Chemical splash-proof goggles or face shield.

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 GUIDELINES: Use with adequate general ventilation and/or local ventilation to keep exposures below established limits. When ventilation cannot be made adequate enough to keep exposures below established limits, use a NIOSH approved respirator with an organic vapor cartridge, organic vapor cartridge + P100, or a multi-contaminant cartridge, depending on specific workplace conditions. Consult with your respirator and cartridge supplier to ensure proper selection of respirator and cartridge based on

PRO-SET[®] M2012 Hardener

ingredients listed in Section 3 and specific workplace conditions. Use and select a respirator according to the guidelines established in OSHA 1910.134 or other applicable respiratory protection standard.

ADDITIONAL PROTECTIVE MEASURES:..... Use where there is immediate access to safety shower and emergency eye wash. Wash thoroughly after use. Contact lens should not be worn when working with this material. 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:..... Exposure limits may not be established for this product as a whole. For established exposure limits of specific ingredients in this product, or other available exposure limit information, refer to the table below.

Ingredient Name	CAS#	Exposure Limit Information
(Mercaptan-terminated polymer (non-hazardous))	Not Available	No data available
Tris-2, 4, 6-(dimethylamineomethyl) phenol	90-72-2	No data available
Bis(dimethylaminomethyl)phenol	71074-89-0	No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM:..... Viscous liquid.
COLOR:..... Caramel colored.
ODOR:..... Mercaptan-like, pungent odor
ODOR THRESHOLD:..... No data available.
pH:..... 9.23
MELTING POINT / FREEZING POINT..... No data available.
BOILING POINT (760mm/Hg):..... No data available.
FLASH POINT:..... > 300°F(149°C) estimated based similar product.
AUTO IGNITION TEMPERATURE..... No data available.
LOWER EXPLOSIVE LIMIT (LEL)..... No data available.
UPPER EXPLOSIVE LIMIT (UEL)..... No data available.
VAPOR PRESSURE..... No data available.
SPECIFIC GRAVITY/DENSITY (water = 1)..... 1.14
BULK DENSITY..... 9.5 lbs./gal. (1.14 kg/L)
VAPOR DENSITY (air = 1)..... No data available.
EVAPORATION RATE (Butyl Acetate = 1)..... No data available.
WATER SOLUBILITY (% BY WT.)..... No data available.
PARTITION COEFFICIENT, n-OCTANOL/WATER (log Pow)..... No data available.
KINEMATIC VISCOSITY:..... No data available. (mm²/s @ 40°C)
DECOMPOSITION TEMPERATURE:..... No data available
% VOLATILE BY WEIGHT:..... ASTM 2369-07 was used to determine the Volatile Matter Content of mixed epoxy resin and hardener. The combined VOC content for the resin and hardener system is listed below.

<u>Resin/Hardener</u>	VOC Content	
	(g/L)	(lbs/gal)
M1007 / M2012.....	0.41	0.00

10. STABILITY AND REACTIVITY

STABILITY:..... Product is stable at normal temperatures and pressures.
REACTIVITY/HAZARDOUS REACTIONS:..... Product will not react by itself. A mass of more than one pound of product mixed with an epoxy resin will cause irreversible polymerization with significant heat buildup. Strong acids can cause polymerization.
INCOMPATIBILITIES:..... Avoid acids, oxidizing materials, halogenated organic compounds (e.g., methylene chloride). External heating or self-heating could result in rapid temperature increase and pressure build up. If such a condition were to occur in a drum, the drum could expand and rupture violently.
CONDITIONS TO AVOID:..... Avoid excessive heat.
DECOMPOSITION PRODUCTS:..... Very toxic fumes and gases when burned or otherwise heated to decomposition. Decomposition products may include, but not limited to: oxides of carbon, oxides of nitrogen, volatile amines, ammonia, nitric acid, cyanides, nitrosamines.

11. TOXICOLOGICAL INFORMATION

Ingredient Name	CAS#	LD ₅₀ Oral	LD ₅₀ Dermal	LC ₅₀ Inhalation
(Mercaptan-terminated polymer (non-hazardous))	Not Available	No data	No data	No data
Tris-2, 4, 6-(dimethylamineomethyl) phenol	90-72-2	2169 mg/kg	No data	No data
Bis(dimethylaminomethyl)phenol	71074-89-0	No data. Cat. 4	No data. Cat. 4 (ATPE 1100)	

		(ATPE 500 mg/kg)	mg/kg)	No data
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ACUTE TOXICITY:..... No specific toxicity data exists for this mixture. Classification is based on acute toxicity estimation methods using ingredient data.
 Oral: Not classified. Does not meet acute dermal toxicity classification criteria. May result in gastrointestinal tract discomfort.
 Dermal: Not classified. Does not meet acute dermal toxicity classification criteria.
 Inhalation:..... Not classified. Does not meet acute inhalation toxicity classification criteria.

SKIN CORROSION / IRRITATION:..... Category 2. Causes skin irritation. In vivo tests indicate this product is not corrosive to skin tissue; however, a component in this product is classified as a 1B corrosive.

SERIOUS EYE DAMAGE / IRRITATION:..... Category 1. Causes serious eye damage.

RESPIRATORY SENSITIZATION:..... Not classified. Based on available data this product does not meet classification criteria.

SKIN SENSITIZATION:..... Category 1. May cause allergic skin reaction.

REPRODUCTIVE TOXICITY:..... Not classified. Based on available data this product does not meet classification criteria.

MUTAGENICITY:..... Not classified. Based on available data this product does not meet classification criteria.

CARCINOGENICITY:..... Not classified. Based on available data this product does not meet classification criteria.

SPECIFIC TARGET ORGAN TOXICITY (Single Exposure):..... No classified. Based on available data this product does not meet classification criteria.

SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure): Not classified. Based on available data this product does not meet classification criteria.

ASPIRATION HAZARD: Not classified. Based on available data this product does not meet classification criteria.

OTHER HEALTH HAZARD INFORMATION:..... None known.

12. ECOLOGICAL INFORMATION

ACUTE AQUATIC TOXICITY:..... No specific test data available for the mixture. Calculated Estimate: Not classified. Does not meet acute aquatic toxicity classification criteria. Avoid release to the environment.

CHRONIC AQUATIC TOXICITY: No specific test data available for the mixture. Calculated Estimate: Not classified. Does not meet chronic aquatic toxicity classification criteria. Avoid release to the environment.

PERSISTANCE AND BIODEGRADABILITY: No specific test data available for the mixture.

MOBILITY IN SOIL: No specific test data available for the mixture.

ADDITIONAL ECOTOXICITY INFORMATION:..... In the liquid, uncured state, this product may be harmful to aquatic life. Prevent release to the environment, sewers and natural waters.

Ingredient	CAS#	Ecotoxicity Classification Information
(Mercaptan-terminated polymer (non-hazardous)	Not Available	No data available
Tris-2, 4, 6-(dimethylamineomethyl) phenol	90-72-2	Acute Aquatic 3; Chronic Aquatic Cat. 3
Bis(dimethylaminomethyl)phenol	71074-89-0	Not classified

13. DISPOSAL CONSIDERATIONS

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

US DOT

UN NUMBER: Not regulated.
 SHIPPING NAME: Not applicable.
 TECHNICAL SHIPPING NAME: Not applicable.
 HAZARD CLASS: Not applicable.
 PACKING GROUP: Not applicable.
 MARINE POLLUTANT: Not applicable.

CANADA TDG

UN NUMBER: Not regulated.
 SHIPPING NAME: Not applicable.
 TECHNICAL SHIPPING NAME: Not applicable.
 HAZARD CLASS: Not applicable.
 PACKING GROUP: Not applicable.
 MARINE POLLUTANT: Not applicable.

IMDG

UN NUMBER: Not regulated.
 SHIPPING NAME: Not applicable.
 TECHNICAL SHIPPING NAME: Not applicable.
 HAZARD CLASS: Not applicable.
 PACKING GROUP: Not applicable.
 EmS Number: Not applicable.
 MARINE POLLUTANT Not applicable.

ICAO/IATA

UN NUMBER: Not regulated.
 SHIPPING NAME: Not applicable.
 TECHNICAL SHIPPING NAME: Not applicable.
 HAZARD CLASS: Not applicable.
 PACKING GROUP: Not applicable.
 MARINE POLLUTANT: Not applicable.

15. REGULATORY INFORMATION

COUNTRY	INVENTORY LIST	STATUS
United States	TSCA	All ingredients are listed or otherwise compliant.
Europe	EINECS or ELINCS	All ingredients are listed or otherwise compliant.
Canada	CEPA (DSL/NDSL)	All ingredients are listed or otherwise compliant.
Australia	AICS	All ingredients are listed or otherwise compliant.
Japan	ENCS	All ingredients are listed or otherwise compliant.
South Korea	KECI	All ingredients are listed or otherwise compliant.
China	IECSC	All ingredients are listed or otherwise compliant.
Philippines	PICCS	All ingredients are listed or otherwise compliant.

US EPA TSCA Requirements:..... No data available.

Canada WHMIS Confidential Business Information (CBI):..... The HMIRA number issued for this CBI claim is #10445. The date of filing is 2016-10-13.

US EPA SARA TITLE III Reporting and Notification Requirements:

Subject to Section 302 (TPQ)..... No data available.
 Subject to Section 304 (RQ)..... No data available.
 Subject to Section 311 or 312 Immediate. Delayed.
 Subject to Section 313 No data available.

US STATE REGULATORY INFORMATION:

The following chemicals may be specifically regulated by individual states. For details on state regulatory requirements you should contact the appropriate state agency.

COMPONENT NAME

/CAS NUMBER

STATE CODE

Tris-2, 4, 6-(dimethylamineomethyl) phenol
 90-72-2

PA, NJ

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

16. OTHER INFORMATION

PRO-SET® M2012 Hardener

REASON FOR ISSUE:..... Compliant to the requirements of the US OSHA 1910.1200 HazCom 2012 standard. Updates to Sections 3 and 15 to comply with Canada WHMIS 2015 requirements.
PREPARED BY:..... G. M. House
APPROVED BY:..... G. M. House
SDS CONTACT:..... safety@gougeon.com
TITLE:..... Health, Safety & Environmental Manager
APPROVAL DATE:..... October 17, 2016
SUPERSEDES DATE:..... August 31, 2016
SDS VERSION:..... M2012-2016b

OTHER HAZARD INFORMATION AND RATING SYSTEMS:

HMIS® RATING

HEALTH:	3
FLAMMABILITY:	1
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	

NFPA® 704 CODES



Approximate HMIS and NFPA Risk Ratings Legend:
 0 = Low or None; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe

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