

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:..... PRO-SET® M2010 Hardener
APPLICABLE PRODUCT CODES: M2010, M2010-1, M2010-2, M2010-4
CHEMICAL FAMILY:..... Cycloaliphatic amine
INTENDED PRODUCT USES:..... Curing agent for epoxy coatings, laminations or adhesives.
PRODUCT RESTRICTIONS:..... None identified.
SDS VERSION: M2010-2016b

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

Acute Toxicity, Oral, Category 4
Skin corrosion/irritation, Category 1B
Serious eye damage, Category 1
Skin sensitizer, Category 1
Specific target organ toxicity – single exposure, Category 3
Specific target organ toxicity - repeated exposure, Category 2
Acute aquatic toxicity, Category 2
Chronic aquatic toxicity, Category 2

Label Elements

Hazard Pictogram(s):



Signal Word:
DANGER

Hazard Statements:

H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H317 May cause an allergic skin reaction
H335 May cause respiratory irritation
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention

P260 Do not breathe dust/fumes/mists/vapors or spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse or wash skin with soap and water (or shower).
P304 + P340 IF INHALED: Removed victim to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical attention/advice
P310 Immediately call a POISON CENTER or doctor.
P313 + P333 If irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse
P391 Collect spillage.

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Storage

P403 + 233 Store in a well-ventilated area. Keep container tightly closed.

P405 Store locked up.

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 (%)
Methylenebiscyclohexanamine, 4,4'	1761-71-3	70-100

The exact chemical identity and/or exact percentage (concentration) of each ingredient has been held as confidential business information (CBI). Refer to Section 15 for additional information regarding this 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 CENTER or doctor.

FIRST AID FOR SKIN:..... SYMPTOMS: Causes skin burns, redness and irritation. May cause allergic skin reaction and sensitization. RESPONSE: Immediately wash skin with soap and water. Immediately call a POISON CENTER or doctor.

FIRST AID FOR INHALATION:..... SYMPTOMS: Can cause respiratory irritation, shortness of breath or cough. RESPONSE: Remove to fresh air if effects occur and keep comfortable for breathing. Immediately contact physician if symptoms develop and persist.

FIRST AID FOR INGESTION:..... SYMPTOMS: May cause gastrointestinal irritation or ulceration. May cause burns of the mouth and throat. Aspiration hazard. Can enter the lungs and cause damage. RESPONSE: Rinse mouth with water. DO NOT induce vomiting. If vomiting should occur, keep airway clear. Immediately call POISON 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, carbon monoxide, carbon dioxide, 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, non-combustible 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 or non-flammable, safe solvent 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. Avoid storing near incompatible materials listed in Section 10. 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 all skin and eye contact. Wash skin thoroughly after handling. When mixed with epoxy

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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. Do not breathe fumes generated from uncontrolled exothermic reaction.

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 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
Methylenebiscyclohexanamine, 4,4'-	1761-71-3	No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: Liquid.
COLOR: Colorless
ODOR: Ammonia-like
ODOR THRESHOLD: No data available
pH: 12
MELTING POINT / FREEZING POINT: No data.
BOILING POINT (760mm/Hg): > 608°F (320°C)
FLASH POINT: Estimated > 200°F (93°C) estimated based on ingredient data.
AUTO IGNITION TEMPERATURE: No data.
LOWER EXPLOSIVE LIMIT (LEL): No data.
UPPER EXPLOSIVE LIMIT (UEL): No data.
VAPOR PRESSURE: <0.1 mmHg at 70°F (21°C).
SPECIFIC GRAVITY/DENSITY (water = 1): 0.96
BULK DENSITY: 7.80 lbs./gal. (0.93 kg/L)
VAPOR DENSITY (air = 1): 7.24.
EVAPORATION RATE (Butyl Acetate = 1): No data.
WATER SOLUBILITY (% BY WT.): Insoluble.
PARTITION COEFFICIENT, n-OCTANOL/WATER (log Pow): No data.
KINEMATIC VISCOSITY: 83.3 mm²/s @ 77°F (25°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.

Resin/Hardener
No data

VOC Content
(g/L) (lbs/gal)

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, bases, amines and mercaptans can cause polymerization.

INCOMPATIBILITIES: Avoid excessive heat. 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.

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DECOMPOSITION PRODUCTS: Very toxic fumes and gases when burned or otherwise heated to decomposition. Decomposition products may include, but not limited to: oxides of nitrogen, volatile amines, ammonia, nitric acid, aldehydes, nitrosamines.

11. TOXICOLOGICAL INFORMATION

Ingredient Name	CAS#	LD ₅₀ Oral	LD ₅₀ Dermal	LC ₅₀ Inhalation
Methylenebiscyclohexanamine, 4,4'-	1761-71-3	380-625 mg/kg	2,110 mg/kg	No data

ACUTE TOXICITY: Classification is based on data for this substance.
Oral: Category 4 - Harmful if swallowed. May result in severe burns of the mouth, throat, as well as danger of perforation of the esophagus and the stomach.
Dermal: Not classified. Does not meet acute dermal toxicity criteria.
Inhalation: Not classified. Does not meet acute inhalation toxicity criteria.

SKIN CORROSION / IRRITATION: Category 1B. Causes severe skin burns.

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

RESPIRATORY SENSITIZATION: No data available.

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

REPRODUCTIVE TOXICITY: No data available.

TERATOGENICITY: No data available.

MUTAGENICITY: No data available.

CARCINOGENICITY: No data available.

SPECIFIC TARGET ORGAN TOXICITY (Single Exposure): Category 3. May cause respiratory irritation.

SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure): Category 2. May cause damage to organs (liver, musculo-skeletal system) through prolonged or repeated exposure if swallowed.

ASPIRATION HAZARD: No data available.

OTHER HEALTH HAZARD INFORMATION: No data available.

12. ECOLOGICAL INFORMATION

ACUTE AQUATIC TOXICITY: No specific test data available for the mixture. Calculated Estimate: Aquatic Acute Category 2.

CHRONIC AQUATIC TOXICITY: No specific test data available for the mixture. Calculated Estimate: Aquatic Chronic Category 2.

PERSISTENCE 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 with long lasting effects. Prevent release to the environment, sewers and natural waters.

Ingredient	CAS#	Ecotoxicity Classification Information
Methylenebiscyclohexanamine, 4,4'-	1761-71-3	Aquatic Chronic Cat. 2

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

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SHIPPING NAME:..... Polyamines, liquid, corrosive, n.o.s.
 TECHNICAL SHIPPING NAME:..... Methylenebiscyclohexanamine, 4,4'-
 HAZARD CLASS:..... Class 8.
 U.N./N.A. NUMBER:..... UN 2735.
 PACKING GROUP:..... PG II.
 MARINE POLLUTANT:..... No

CANADA TDG

SHIPPING NAME:..... Polyamines, liquid, corrosive, n.o.s.
 TECHNICAL SHIPPING NAME:..... Methylenebiscyclohexanamine, 4,4'-
 HAZARD CLASS:..... Class 8.
 U.N./N.A. NUMBER:..... UN 2735.
 PACKING GROUP:..... PG II.
 MARINE POLLUTANT:..... No

IMDG

SHIPPING NAME:..... Polyamines, liquid, corrosive, n.o.s.
 TECHNICAL SHIPPING NAME:..... Methylenebiscyclohexanamine, 4,4'-
 HAZARD CLASS:..... Class 8..
 U.N. NUMBER:..... UN 2735.
 PACKING GROUP:..... PG II.
 EmS Number:..... F-A, S-B
 MARINE POLLUTANT..... Yes

ICAO/IATA

SHIPPING NAME:..... Polyamines, liquid, corrosive, n.o.s.
 TECHNICAL SHIPPING NAME:..... Methylenebiscyclohexanamine, 4,4'-
 HAZARD CLASS:..... Class 8.
 U.N. NUMBER:..... UN 2735.
 PACKING GROUP:..... PG II.
 MARINE POLLUTANT:..... Yes

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 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.
 Subject to Section 313..... No data available.

Canada WHMIS Confidential Business Information (CBI):..... The HMIRA number issued for this CBI claim is #10309. The date of filing is 2016-08-09.

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

None known.

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

16. OTHER INFORMATION

REASON FOR ISSUE:..... Update to Sections 3 and 15 to meet 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:..... August 24, 2016

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SUPERSEDES DATE: May 23, 2016
SDS VERSION: M2010-2016b

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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