

PRO-SET® M2053 Hardener

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 05/18/2017

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Version: M2053-2019a

SECTION 1: Identification

Identification

Product form : Mixtures
Product name : PRO-SET® M2053 Hardener
Product code : M2053

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Curing agent for epoxy resin.

Details of the supplier of the safety data sheet

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

Emergency telephone number

Emergency number : CHEMTREC 1 (800) 424-9300
CHEMTREC International +1 (703) 527-3887 24 hr

SECTION 2: Hazard(s) identification

Classification of the substance or mixture

Skin Corr. 1B
Eye Dam. 1
Repr. 2
Aquatic Acute 1
Aquatic Chronic 1

Label elements

Hazard pictograms (GHS)



Signal word (GHS)

Danger

Hazard statements (GHS)

Causes severe skin burns and eye damage. Suspected of damaging fertility or the unborn child. Very toxic to aquatic life with long lasting effects.

Precautionary statements (GHS)

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust, fume, gas, spray, vapours. Wash hands thoroughly after handling. Avoid release to the environment. Wear eye protection, face protection, protective gloves, protective clothing. If swallowed: rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Collect spillage. Store locked up. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Other hazards

No additional information available

Unknown acute toxicity

No additional information available.

PRO-SET® M2053 Hardener

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

SECTION 3: Composition/information on ingredients

Substances

Not applicable

Mixtures

Name	Product identifier	HPR %
Phenol, 4-nonyl-, branched	(CAS-No.) 84852-15-3	30 - 60
Propylene glycol diamine, 2-amino-, diether with Propylene	(CAS-No.) 9046-10-0	30 - 60
Phenol, 2-nonyl-, branched	(CAS No) 91672-41-2	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.

SECTION 4: First aid measures

Description of first aid measures

- First-aid measures after inhalation** : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
- First-aid measures after skin contact** : IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after eye contact** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.
- First-aid measures after ingestion** : Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

- Symptoms/effects after inhalation** : May cause irritation to the respiratory tract.
- Symptoms/effects after skin contact** : Causes severe skin burns. Symptoms may include redness, pain, blisters.
- Symptoms/effects after eye contact** : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
- Symptoms/effects after ingestion** : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Indication of any immediate medical attention and special treatment needed

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media : Foam. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media : Do not use a heavy water stream.

Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon. Nitrogen oxides. Amines. Ammonia. 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.

Reactivity : No dangerous reaction known under conditions of normal use.

Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

For non-emergency personnel

No additional information available

PRO-SET® M2053 Hardener

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

For emergency responders

No additional information available

Environmental precautions

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation.

Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. Do not eat, drink or smoke when using this product. 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.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking. Contaminated work clothing should not be allowed out of the workplace.

Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in dry, cool, well-ventilated area. Protect from moisture. Storage temperature :40°F (4°C) - 120°F (49°C).

SECTION 8: Exposure controls/personal protection

Control parameters

Phenol, 4-nonyl-, branched (84852-15-3)
Not applicable
Propylene glycol diamine, 2-amino-, diether with Propylene (9046-10-0)
Not applicable
Phenol, 2-nonyl-, branched (91672-41-2)
Not applicable

Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield).

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state : Liquid

Appearance : No data available

Colour : Colourless

PRO-SET® M2053 Hardener

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Odour	: ammonia-like
Odour threshold	: No data available
pH	: 11.46
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 449 °F (232 °C)
Flash point	: > 262 °F (128 °C) estimated based on similar product
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 0.95
Solubility	: No data available
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: 175.2 mm ² /s @ 104°F / 40 °C
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Other information	
VOC content	: M1047/M2053: 12.95 g/l 0.11 (lbs./gal)
Bulk density	: 7.92 lb/gal (0.95 kg/L)

SECTION 10: Stability and reactivity

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal storage conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Heat. Incompatible materials.
Incompatible materials	: None known.
Hazardous decomposition products	: May include, and are not limited to: oxides of carbon. Nitrogen oxides. Amines. Ammonia. Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

Information on toxicological effects

Phenol, 4-nonyl-, branched (84852-15-3)	
LD50 oral rat	1412 mg/kg
LD50 dermal rabbit	2031 mg/kg

Propylene glycol diamine, 2-amino-, diether with Propylene (9046-10-0)	
LD50 oral rat	2855 mg/kg
LD50 dermal rabbit	2980 mg/kg
LC50 inhalation rat	> 0.74 mg/l/8h mist

Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified.
Acute toxicity (inhalation)	: Not classified.
Skin corrosion/irritation	: Causes severe skin burns
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified.
Germ cell mutagenicity	: Not classified.
Carcinogenicity	: Not classified.
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.

PRO-SET® M2053 Hardener

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

STOT-single exposure	: Not classified.
STOT-repeated exposure	: Not classified.
Aspiration hazard	: Not classified.

PRO-SET® M2053 Hardener	
Viscosity, kinematic (calculated value) (40 °C)	175.2 mm ² /s @ 104°F / 40 °C

Symptoms/effects after inhalation	: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: Causes severe skin burns. Symptoms may include redness, pain, blisters.
Symptoms/effects after eye contact	: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
Symptoms/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

Toxicity	
Ecology - general	: Very toxic to aquatic life with long lasting effects.

Phenol, 4-nonyl-, branched (84852-15-3)	
LC50 fish 1	0.135 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	0.14 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	0.1351 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])

Persistence and degradability

PRO-SET® M2053 Hardener	
Persistence and degradability	Not established.

Bioaccumulative potential

PRO-SET® M2053 Hardener	
Bioaccumulative potential	Not established.

Phenol, 4-nonyl-, branched (84852-15-3)	
BCF fish 1	271

Mobility in soil

PRO-SET® M2053 Hardener	
Ecology - soil	No additional information available.

Other adverse effects

Effect on the global warming	: No known effects from this product.
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Name	CAS#	Ecotoxicity Classification Information
Phenol, 4-nonyl-, branched	84852-15-3	Acute Aquatic Cat. 1; Chronic Aquatic Cat. 1
Propylene glycol diamine, 2-amino-, diether with Propylene	9046-10-0	Acute Aquatic 3; Chronic Aquatic Cat. 3
Phenol, 2-nonyl-, branched	91672-41-2	Acute Aquatic Cat. 1; Chronic Aquatic Cat. 1

Other information	: Avoid release to the environment.
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SECTION 13: Disposal considerations

Waste treatment methods

Product/Packaging disposal recommendations	: Avoid release to the environment. This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.
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SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

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In accordance with DOT/TDG

UN-No. (DOT/TDG) : UN1760
Proper Shipping Name (DOT/TDG) : Corrosive liquids, n.o.s. (Polyoxypropylenediamine, Nonylphenol)
Class (DOT/TDG) : Class 8 - Corrosive material 49 CFR 173.136
Packing group (DOT/TDG) : III
Dangerous for the environment : Yes (exceptions for non-bulk packages)
Marine pollutant : Yes



Transport by sea

In accordance with IMDG

UN-No. (IMDG) : 1760
Proper Shipping Name (IMDG) : CORROSIVE LIQUID, N.O.S. (Polyoxypropylenediamine, Nonylphenol)
Class (IMDG) : Corrosive substances
EmS Number : F-A, S-B
Packing group (IMDG) : III
Marine pollutant : Yes



Transport by air

In accordance with IATA

UN-No. (IATA) : 1760
Proper Shipping Name (IATA) : Corrosive liquid, n.o.s. (Polyoxypropylenediamine, Nonylphenol)
Class (IATA) : Corrosives
Packing group (IATA) : III
Marine pollutant : Yes



SECTION 15: Regulatory information

Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

Propylene glycol diamine, 2-amino-, diether with Propylene (9046-10-0)

EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Inventory Update Reporting Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(C)).
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Phenol, 4-nonyl-, branched (84852-15-3)

Subject to reporting requirements of United States SARA Section 313

EPA TSCA Regulatory Flag	SP - SP - indicates a substance that is identified in a proposed Significant New Uses Rule.
SARA Section 313 - Emission Reporting	1 %

Phenol, 2-nonyl-, branched (91672-41-2)

EPA TSCA Regulatory Flag	SP - SP - indicates a substance that is identified in a proposed Significant New Use Rule.
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US State regulations

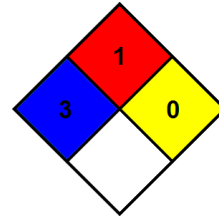
California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

Propylene oxide (75-56-9)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

SECTION 16: Other information

Date of issue : 05/18/2017
Revision date : 01/25/2019
Version : M2053-2019a
Other information : None.

NFPA health hazard : 3
NFPA fire hazard : 1
NFPA reactivity : 0



Hazard Rating
Health : 3 Serious Hazard
Flammability : 1 Slight Hazard
Physical : 0 Minimal Hazard

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