

PRO-SET® SBE-262 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: 12/05/2016

Revision date: 02/17/2017

Version: SBE-262-2017a

SECTION 1: Identification

Identification

Product form : Mixture
Product name : PRO-SET® SBE-262 Hardener
Product code : SBE-262, SBE-262-1, SBE-262-2, SBE-262-4, SBE-262-G

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

Recommended use : Curing agent for epoxy resins

Details of the supplier of the safety data sheet

Manufacturer

Gougeon Brothers, Inc
100 Patterson Ave.
Bay City, MI 48706 - U.S.A.
T 866-937-8797 or 989-684-7286
www.westsystem.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

Acute Tox. 4 (Oral)
Skin Corr. 1B
Eye Dam. 1
Skin Sens. 1
Aquatic Acute 3
Aquatic Chronic 3

Label elements

Hazard pictograms (GHS)



GHS05

GHS07

Signal word (GHS)

Danger

Hazard statements (GHS)

Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

Precautionary statements (GHS)

Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands, forearms and face thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. If swallowed: rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. 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. Immediately call a poison center/doctor. 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.

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Unknown acute toxicity

No additional information available.

SECTION 3: Composition/information on ingredients

Substances

Not applicable

Mixtures

Name	Product identifier	%
Trimethylhexamethylenediamine	(CAS-No.) 25620-58-0	20 - 40
Benzyl alcohol	(CAS-No.) 100-51-6	10 - 30
1,3-Cyclohexanedimethanamine	(CAS-No.) 2579-20-6	10 - 30
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane and 1,3-cyclohexanedimethanamine	(CAS-No.) 60112-98-3	10 - 30
Diethylene glycol bis(3-aminopropyl) ether	(CAS-No.) 4246-51-9	1 - 10
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, reaction products with 2,2,4(or 2,4,4)-trimethyl-1,6-hexanediamine	(CAS-No.) 111850-23-8	1 - 10
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	(CAS-No.) 41556-26-7	0.1 - 2

The exact chemical identity and/or exact percentage (concentration) of each ingredient may be held as confidential business information (CBI). Any ingredient not disclosed in this section may have been determined not to be hazardous to health or the environment, or it may be present at a level below its disclosure threshold. Refer to Section 15 for additional information regarding this CBI claim.

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** : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor/physician.

Most important symptoms and effects, both acute and delayed

- Symptoms/effects after inhalation** : May cause respiratory tract irritation.
- Symptoms/effects after skin contact** : Harmful in contact with skin. Causes severe burns. Symptoms may include redness, pain, blisters. Repeated exposure to this material can result in absorption through skin causing significant health hazard. May cause an allergic skin reaction.
- 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** : Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. May cause stomach distress, nausea or vomiting.

Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS 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. Nitric acid. Aldehydes. Nitrosamines. Phenolics. 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 reactions known under normal conditions of use.

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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

For emergency responders

No additional information available

Environmental precautions

No additional information available

Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so. 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). Do not absorb in sawdust, paper, cloth or other combustible absorbents.

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

Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling : 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. Use personal protective equipment as required. 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

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) - 90°F (32°C).

SECTION 8: Exposure controls/personal protection

Control parameters

Trimethylhexamethylenediamine (25620-58-0)		
Not applicable		
Benzyl alcohol (100-51-6)		
AIHA	WEEL TWA (ppm)	10 ppm
1,3-Cyclohexanedimethanamine (2579-20-6)		
Not applicable		
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, reaction products with 2,2,4(or 2,4,4)-trimethyl-1,6-hexanediamine (111850-23-8)		
Not applicable		
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate (41556-26-7)		
ACGIH	ACGIH Ceiling (mg/m ³)	1 mg/m ³
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane and 1,3-cyclohexanedimethanamine (60112-98-3)		
Not applicable		

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Diethylene glycol bis(3-aminopropyl) ether (4246-51-9)

Not applicable

Exposure controls

- Appropriate engineering controls** : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
- 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 in accordance with good industrial hygiene and safety procedures.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

- Physical state** : Liquid
- Appearance** : No data available
- Colour** : Clear
- Odour** : Ammonia-like
- Odour threshold** : No data available
- pH** : 12.28
- Melting point** : No data available
- Freezing point** : No data available
- Boiling point** : > 400 °F (204 °C)
- Flash point** : > 200 °F (93 °C) Estimated based 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** : 0.99
- 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** : 108 mm²/s @ 68 °F (20 °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** : SBE-160 / SBE-262: 10.38 g/L (0.09 lbs/gal)
SBE-163 / SBE-262: 10.38 g/L (0.09 lbs/gal)
SBE-166 / SBE-262: 11.03 g/L (0.09 lbs/gal)
- Bulk density** : 825 lb/gal (0.99 kg/L)

SECTION 10: Stability and reactivity

- Reactivity** : No dangerous reactions known under normal conditions of use.
- Chemical stability** : Stable under normal conditions.

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Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use. A mass of more than one pound of product plus an epoxy resin will cause irreversible polymerization with significant heat buildup and pressure.
Conditions to avoid	: Heat. Incompatible materials.
Incompatible materials	: Acids. Oxidizing materials. Halogenated compounds.
Hazardous decomposition products	: May include, and are not limited to: oxides of carbon. Nitrogen oxides. Amines. Ammonia. Nitric acid. Aldehydes. Nitrosamines. Phenolics.

SECTION 11: Toxicological information

Information on toxicological effects

Trimethylhexamethylenediamine (25620-58-0)	
LD50 oral rat	910 mg/kg

Benzyl alcohol (100-51-6)	
LD50 oral rat	1620 mg/kg
LC50 inhalation rat	> 4.18 mg/l/4h

1,3-Cyclohexanedimethanamine (2579-20-6)	
LD50 oral rat	700 - 780 mg/kg
LD50 dermal rabbit	1700 mg/kg

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane and 1,3-cyclohexanedimethanamine (60112-98-3)	
LD50 oral rat	700 - 780 mg/kg
LD50 dermal rabbit	1700 mg/kg

Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate (41556-26-7)	
LD50 oral rat	2615 mg/kg

Diethylene glycol bis(3-aminopropyl) ether (4246-51-9)	
LD50 oral rat	4290 mg/kg

Acute toxicity (oral)	: Oral: Harmful if swallowed.
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	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified.
Carcinogenicity	: Not classified.
Reproductive toxicity	: Not classified.
STOT-single exposure	: Not classified.
STOT-repeated exposure	: Not classified.
Aspiration hazard	: Not classified.

PRO-SET® SBE-262 Hardener	
Viscosity, kinematic (calculated value) (40 °C)	108 mm ² /s @ 68 °F (20 °C)

Symptoms/effects after inhalation	: May cause respiratory tract irritation.
Symptoms/effects after skin contact	: Harmful in contact with skin. Causes severe burns. Symptoms may include redness, pain, blisters. Repeated exposure to this material can result in absorption through skin causing significant health hazard. May cause an allergic skin reaction.
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	: Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. May cause stomach distress, nausea or vomiting.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

Toxicity

Ecology - general	: Harmful to aquatic life with long lasting effects.
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Benzyl alcohol (100-51-6)	
LC50 fish 1	460 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	23 mg/l (Exposure time: 48 h - Species: water flea)
LC50 fish 2	10 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate (41556-26-7)	
LC50 fish 1	0.97 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Persistence and degradability

PRO-SET® SBE-262 Hardener	
Persistence and degradability	Not established.

Bioaccumulative potential

PRO-SET® SBE-262 Hardener	
Bioaccumulative potential	Not established.

Trimethylhexamethylenediamine (25620-58-0)	
Partition coefficient n-octanol/water	0.77 (at 23 °C)

Benzyl alcohol (100-51-6)	
Partition coefficient n-octanol/water	1.1

Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate (41556-26-7)	
Partition coefficient n-octanol/water	0.37 (at 25 °C)

Mobility in soil

PRO-SET® SBE-262 Hardener	
Ecology - soil	No additional information available.

Other adverse effects

Effect on the global warming : No known effects from this product.

Name	CAS#	Ecotoxicity Classification Information
Trimethylhexane-1,6-diamine	25620-58-0	Acute Aquatic Cat. 3; Chronic Aquatic Cat. 3
Benzyl alcohol	100-51-6	Not classified
1,3-cyclohexanedimethanamine	2579-20-6	Acute Aquatic Cat. 3; Chronic Aquatic Cat. 3
Phenol, 4,4'-(1-methylethylidene) bis-, polymer with 2-(chromethyl) oxirane and 1,3-cyclohexanedimethanamine	60112-98-3	Acute Aquatic Cat. 3; Chronic Aquatic Cat. 3
Polymer of epichlorohydrin, bisphenol A, and trimethylhexane-1,6-diamine	111850-23-8	Acute Aquatic Cat. 3; Chronic Aquatic Cat. 3
3,3'-(Oxybis(2,1-ethane-diyloxy))bis-1-propanamine	4246-51-9	No data available
Decanedioic acid, 1, 10-bis(1,2,2,6,6-pentamethyl-4-piperidiny) ester	41556-26-7	No data available

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

Waste treatment methods

Product/Packaging disposal recommendations : 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.

SECTION 14: Transport information

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

In accordance with DOT/TDG

UN-No.(DOT/TDG)	: UN2735
Proper Shipping Name (DOT/TDG)	: Polyamines, liquid, corrosive, n.o.s. (1,3-cyclohexanedimethanamine)
Class (DOT/TDG)	: 8
Packing group (DOT/TDG)	: III
Marine Pollutant	No

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Transport by sea

In accordance with IMDG

UN-No. (IMDG)	: 2735
Proper Shipping Name (IMDG)	: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (1,3-cyclohexanedimethanamine)
Class (IMDG)	: 8
EmS Number	: F-A, S-B
Packing group (IMDG)	: III
Marine Pollutant	No

Transport by air

In accordance with IATA

UN-No. (IATA)	: 2735
Proper Shipping Name (IATA)	: Polyamines, liquid, corrosive, n.o.s. (1,3-cyclohexanedimethanamine)
Class (IATA)	: 8
Packing group (IATA)	: III
Marine Pollutant	No

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.

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, reaction products with 2,2,4(or 2,4,4)-trimethyl-1,6-hexanediamine (111850-23-8)

EPA TSCA Regulatory Flag

N - N - indicates a polymeric substance containing no free-radical initiator in its Inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
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)).

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane and 1,3-cyclohexanedimethanamine (60112-98-3)

EPA TSCA Regulatory Flag

P - P - indicates a commenced PMN substance.
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)).

International regulations

No additional information available

US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Trimethylhexamethylenediamine (25620-58-0)

U.S. - New Jersey - Right to Know Hazardous Substance List

Benzyl alcohol (100-51-6)

U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

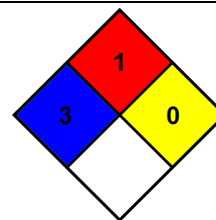
Date of issue	: 12/05/2016
Revision date	: 02/17/2017
Other information	: None.

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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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