

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:..... WEST SYSTEM® SIX10® Part A Resin
APPLICABLE PRODUCT CODES:..... 610A
CHEMICAL FAMILY:..... Epoxy resin mixture.
INTENDED PRODUCT USES:..... Adhesive resin for composites.
PRODUCT RESTRICTIONS:..... None identified.
SDS VERSION: 610A-2022a

MANUFACTURER:
Gougeon Brothers, Inc.
100 Patterson Ave.
Bay City, MI 48706, U.S.A.
Phone: 866-937-8797 or 989-684-7286
www.westsystem.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 2A
Chronic aquatic toxicity, Category 2

Label Elements

Hazard Pictogram(s):



Signal Word:
WARNING

Hazard Statements:
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation
H411 Toxic to aquatic life with long lasting effects

Precautionary Statements:

Prevention

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
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

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
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 re-use.
P391 Collect spillage.

Disposal

P501 Dispose of contents/container in accordance with local, regional and international regulations.

Other Hazards

None known.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS #	CONCENTRATION (%)
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	25085-99-8	80-100
Oxirane, Mono[(C12-14-alkyloxy)methyl] Derivs.	68609-97-2	5-10

Synthetic Amorphous, Pyrogenic Silica	112945-52-5	5-10
Phenol-Formaldehyde Polymer Glycidyl Ether	28064-14-4	1-5
Oxirane, 2,2'[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis-	17557-23-2	1-5

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.

4. FIRST AID MEASURES

FIRST AID FOR EYES:..... SYMPTOMS: Causes serious irritation and redness. RESPONSE: Flush immediately with water for at least 15 minutes. Remove contact lenses if present and easy to do. Consult a physician as precautionary measure.

FIRST AID FOR SKIN:..... SYMPTOMS: Causes skin irritation. May cause allergic skin reaction and sensitization. RESPONSE: Remove contaminated clothing. Wipe excess from skin. Apply waterless skin cleaner and then wash with soap and water. Consult a physician if effects occur.

FIRST AID FOR INHALATION:..... SYMPTOMS: Not a likely route of exposure under normal conditions of use. RESPONSE: Remove to fresh air if respiratory irritation occurs and keep comfortable for breathing.

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

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: phenolics, carbon monoxide, and carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES: Wear a self-contained breathing apparatus and complete full-body personal protective equipment. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES: 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. 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) / 120°F (49°C)

STORAGE:..... Store in cool, dry place. Store in tightly sealed containers to prevent moisture absorption and loss of volatiles. Excessive heat over long periods of time will degrade the resin.

HANDLING PRECAUTIONS: Avoid all skin and eye contact. Wash thoroughly after handling. Launder contaminated clothing before reuse. Avoid inhalation of vapors from heated product. 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

ENGINEERING CONTROLS: Use with adequate general ventilation and/or local ventilation to keep exposures below established limits.

EYE PROTECTION GUIDELINES: Safety glasses with side shields or chemical splash goggles.

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

RESPIRATORY PROTECTION GUIDELINES: When ventilation cannot be made adequate enough to keep exposures below established limits, use a NIOSH approved respirator with an organic vapor cartridge, or organic vapor cartridge + P100 particulate filter,

WEST SYSTEM® SIX10® Part A Resin

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:..... Practice good caution and personal cleanliness to avoid skin and eye contact. Avoid skin contact when removing gloves and other protective equipment. Wash thoroughly after handling. 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
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	25085-99-8	No data available.
Oxirane, Mono[(C12-14-alkyloxy)methyl] Derivs.	68609-97-2	No data available.
Synthetic Amorphous, Pyrogenic Silica	112945-52-5	Amorphous silica: OSHA PEL 6 mg/m ³ Dust and PNOS: ACGIH 10mg/m ³ , TWA, Inhalable; 3 mg/m ³ , TWA, Respirable; OSHA PEL 15 mg/m ³ , TWA, total dust; 5 mg/m ³ , TWA, Respirable
Phenol-Formaldehyde Polymer Glycidyl Ether	28064-14-4	No data available.
Oxirane, 2,2'[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis-	17557-23-2	No data available.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: Gel-paste.
COLOR: Cloudy, off-white.
ODOR: Mild.
ODOR THRESHOLD: No data available
pH: No data available
MELTING POINT / FREEZING POINT No data available
BOILING POINT (760mm/Hg): > 400°F (204°C) Estimated based on ingredient data.
FLASH POINT: >200°F (93°C) Based on ASTM D92 test results from 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) 1.17
BULK DENSITY 9.75 lbs./gal. (1.17 kg/L)
VAPOR DENSITY (air = 1) < 1 mmHg@ 20°C. Estimated based on ingredient data.
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 mm²/s @ 20°C
DECOMPOSITION TEMPERATURE: No data available.
% VOLATILE BY WEIGHT: ASTM D 2369-07 was used to determine the Volatile Content of mixed epoxy resin and hardener. Refer to the hardener SDS for information about the total volatile content of the resin/hardener system.

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 plus an aliphatic amine will cause irreversible polymerization with significant heat buildup. Strong acids, bases, amines and mercaptans can cause polymerization.

INCOMPATIBILITIES: Strong acids, bases, amines and mercaptans can cause polymerization. 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: Carbon monoxide, carbon dioxide and phenolics may be produced during uncontrolled exothermic reactions or when otherwise heated to decomposition.

11. TOXICOLOGICAL AND HAZARD ENDPOINT INFORMATION

Component Name	CAS#	LD ₅₀ Oral	LD ₅₀ Dermal	LC ₅₀ Inhalation
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	25085-99-8	>15,000 mg/kg (rat)	>23,000 mg/kg (rabbit)	No data

Oxirane, Mono[(C12-14-alkyloxy)methyl] Derivs.	68609-97-2	17000 mg/kg (rat)	No data	No data
Synthetic Amorphous, Pyrogenic Silica	112945-52-5	>5000 mg/kg	>2000 mg/kg	No data
Phenol-Formaldehyde Polymer Glycidyl Ether	28064-14-4	>2000 mg/kg	2000 mg/kg	No data
Oxirane, 2,2'[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis-	17557-23-2	4500 mg/kg	>2000 mg/kg	No data

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 oral toxicity criteria.

Dermal: Not classified. Does not meet acute dermal toxicity criteria.

Inhalation: Not classified. Does not meet acute inhalation toxicity criteria. If product is heated, vapors generated can cause headache, nausea, dizziness and possible respiratory irritation if inhaled in high concentrations.

SKIN CORROSION / IRRITATION: Causes skin irritation – Category 2.

SERIOUS EYE DAMAGE / IRRITATION: Causes serious eye irritation. Category 2A.

RESPIRATORY SENSITIZATION: Not classified. Does not meet criteria for respiratory sensitizer. 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.

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

REPRODUCTIVE TOXICITY: Not classified. Diglycidyl ether bisphenol-A, in animal studies, has been shown not to interfere with reproduction. Diglycidyl ether bisphenol-A 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.

MUTAGENICITY: Not classified. Does not meet criteria for germ cell mutagenicity.

Diglycidyl ether bisphenol-A in animal mutagenicity studies were negative. In vitro mutagenicity tests were negative in some cases and positive in others.

CARCINOGENICITY: Not classified. Does not meet criteria for carcinogenicity.

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 Diglycidyl ether bisphenol-A is carcinogenic. Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that Diglycidyl ether bisphenol-A 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.

A two-year dermal study in mice produced skin tumors at doses greater than 1.87 mg Neopentyl Glycol Diglycidyl Ether per mouse per week (Holland, 1981).

SPECIFIC TARGET ORGAN TOXICITY (Single Exposure): Not classified. Does not meet STOT SE criteria.

SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure): Not classified. Does not meet STOT RE criteria.

ASPIRATION HAZARD: Not classified. Does not meet aspiration toxicity criteria.

OTHER HEALTH HAZARD INFORMATION: None known.

12. ECOLOGICAL INFORMATION

ACUTE AQUATIC TOXICITY: No specific test data available for the mixture. Calculated Estimate: Does not meet acute aquatic toxicity requirements.

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

Ingredient	CAS#	Ecotoxicity Classification Information
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WEST SYSTEM® SIX10® Part A Resin

Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	25085-99-8	Aquatic Chronic Cat. 2
Oxirane, Mono[(C12-14-alkyloxy)methyl] Derivs.	68609-97-2	Not classified.
Synthetic Amorphous, Pyrogenic Silica	112945-52-5	Not classified.
Phenol-Formaldehyde Polymer Glycidyl Ether	28064-14-4	Aquatic Chronic Cat. 2
Oxirane, 2,2'[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis-	17557-23-2	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.

ICAO/IATA

UN NUMBER:..... UN 3077.
 SHIPPING NAME:..... Environmentally hazardous substance, solid, n.o.s.
 TECHNICAL SHIPPING NAME:..... Epoxy Resin.
 HAZARD CLASS:..... Class 9.
 PACKING GROUP:..... PG III.
 MARINE POLLUTANT:..... Yes

IMDG

UN NUMBER:..... UN 3077.
 SHIPPING NAME:..... Environmentally hazardous substance, solid, n.o.s.
 TECHNICAL SHIPPING NAME:..... Epoxy Resin.
 HAZARD CLASS:..... Class 9.
 PACKING GROUP:..... PG III.
 EmS Number:..... F-A, S-F
 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/NDL)	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.
New Zealand	NZIoC	All ingredients are listed or otherwise compliant.

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

Canada WHMIS Confidential Business Information (CBI).....No data available.

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 Refer to the health and physical classifications in section 2.
 Subject to Section 313 No data available.

STATE REGULATORY INFORMATION:

Chemicals listed below may be specifically regulated by individual states. For details on state regulatory requirements you should contact the appropriate state agency.

COMPONENT NAME

CAS NUMBER

Epichlorohydrin
106-89-8

< 5ppm

STATE CODE

¹CA

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

16. OTHER INFORMATION

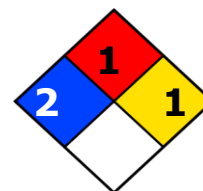
REASON FOR ISSUE:..... Approval date change.
 PREPARED BY:..... Gougeon Brothers, Inc.
 SDS CONTACT:..... safety@gougeon.com
 TITLE:..... Health, Safety & Environmental Manager
 APPROVAL DATE:..... January 3, 2022
 SUPERSEDES DATE:..... January 15, 2019
 SDS VERSION:..... 610A-2022a

OTHER HAZARD INFORMATION AND RATING SYSTEMS:

HMIS® RATING

HEALTH:	2
FLAMMABILITY:	1
PHYSICAL HAZARD:	1
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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SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:..... WEST SYSTEM® SIX10® Part B Hardener
APPLICABLE PRODUCT CODES: 610B
CHEMICAL FAMILY:..... Rubber modified-polyamine mixture.
INTENDED PRODUCT USES:..... Curing agent for epoxy resins.
PRODUCT RESTRICTIONS: None identified.
SDS VERSION: 610B-2022a

MANUFACTURER:
Gougeon Brothers, Inc.
100 Patterson Ave.
Bay City, MI 48706, U.S.A.
Phone: 866-937-8797 or 989-684-7286
www.westsystem.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 1B
Skin sensitizer, Category 1
Eye damage/irritation, Category 1
Germ cell mutagenicity, Category 2
Specific target organ toxicity – repeated exposure, Category 2
Acute aquatic toxicity, Category 3
Chronic aquatic toxicity, Category 3

Label Elements

Hazard Pictogram(s):



Signal Word:
DANGER

Hazard Statements:

H314 Causes severe skin burns and eye damage
H317 May cause an allergic skin reaction
H341 Suspected of causing genetic defects
H373 May cause damage to organs through prolonged or repeated exposure
H412 Harmful to aquatic life with long lasting effects

Precautionary Statements:

Prevention

P201 Obtain special instruction before use
P202 Do not handle until all safety precautions have been read and understood
P260 Do not breathe dust/fumes/gas/mists/vapors/spray
P264 Wash hands thoroughly after handling
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 + 331 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: Remove person 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 advice/attention
P310 Immediately call a POISON CONTROL CENTER or doctor
P333 + P313 If skin irritation or rash occurs: Get medical attention/advice
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage

P405 Store locked up.

Disposal

WEST SYSTEM® SIX10 Part B Hardener

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 (%)
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated	68683-29-4	10-30
Polyoxypropylenediamine	9046-10-0	10-30
Benzyl alcohol	100-51-6	10-30
Non-hazardous	NA	7-13
Reaction products of triethylenetetramine with phenol and formaldehyde	32610-77-8	7-13
Triethylenetetramine	112-24-3	7-13
Phenol, 2,4,6-tris[(dimethylamino)methyl] reaction products with triethylenetetramine	1101788-77-5	1-5
Synthetic amorphous pyrogenic silica	112945-52-5	5-10
Hydroxybenzene	108-95-2	1-5
Benzene-1,3-dimethanamine	1477-55-0	1-5
Polymer of epichlorohydrin / bisphenol A and diethylenetriamine	31326-29-1	1-5
Diethylenetriamine	111-40-0	1-5

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.

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: Causes eye burns and eye damage. May cause allergic skin reaction and sensitization. RESPONSE: Immediately wash skin with soap and water. Immediately call a POISON CONTROL CENTER or doctor.

FIRST AID FOR INHALATION:..... SYMPTOMS: Can cause shortness of breath or cough upon exposure to concentrated vapors or vapors/aerosol from heated product. RESPONSE: Remove to fresh air if effects occur and keep comfortable for breathing. Immediately call a POISON CONTROL CENTER or doctor if symptoms develop and persist or if you feel unwell.

FIRST AID FOR INGESTION:..... SYMPTOMS: May cause gastrointestinal irritation or ulceration. 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:..... SUIABLE: Foam, carbon dioxide (CO₂), dry chemical. NON-SUIABLE: 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, aldehydes, 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:..... This product is not considered a fire hazard, but may burn if ignited. Hot vapor or mists may be susceptible to spontaneous combustion when mixed with air. Ignition temperatures decreases with vapor volume and vapor/air contact time, and are influence by pressure changes. Therefore, ignition may occur below published ignition temperatures. Use of this product in processes involving elevated temperatures, vacuum (if subject to sudden ingress of air), or sudden escape of vapor or mist, etc., must be thoroughly evaluated to ensure a safe operation. 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

EMERGENCY PROCEDURES: 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, direct sunlight and moisture. Keep container tightly closed. Store in a secure location with restricted access or store locked up. Store away from incompatible materials and conditions listed in Section 10.

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

ENGINEERING CONTROLS: Use with adequate general ventilation and/or local ventilation to keep exposures below established limits.

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 PROTECTION GUIDELINES: 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 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
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated	68683-29-4	No data available
Polyoxypropylenediamine	9046-10-0	No data available
Benzyl alcohol	100-51-6	10 ppm TWA (WEEL)
Non-hazardous	NA	No data available
Reaction products of triethylenetetramine with phenol and formaldehyde	32610-77-8	No data available
Triethylenetetramine	112-24-3	AIHA WEEL: 1 ppm ; 6 mg/ m ³ ; Absorbed via skin (Reference Triethylenetetramine, CAS# 112-24-3)
Phenol, 2,4,6-tris[(dimethylamino)methyl] reaction products with triethylenetetramine	1101788-77-5	AIHA WEEL: 1 ppm ; 6 mg/ m ³ ; Absorbed via skin
Synthetic amorphous pyrogenic silica	112945-52-5	Amorphous silica: OSHA PEL 6 mg/m ³ Dust and PNOS: ACGIH 10mg/m ³ , TWA, Inhalable; 3 mg/m ³ , TWA, Respirable; OSHA PEL 15 mg/m ³ , TWA, total dust; 5 mg/m ³ , TWA, Respirable
Hydroxybenzene	108-95-2	ACGIH TWA: 5 ppm; 19 mg m ³ ; BEI® Index Substance NIOSH REL: 5 ppm; 19 mg/ m ³ OSHA PEL: 5 ppm; 19 mg m ³ ; Table Z-1 NIOSH CEILING: 15.6 ppm; 60 mg/m ³ ; Danger of cutaneous absorption
Benzene-1,3-dimethanamine	1477-55-0	0.1 mg/m ³ SKIN, Ceiling NIOSH; OSHA Z1A Remarks: potential for skin absorption
Polymer of epichlorohydrin / bisphenol A	31326-29-1	No data available

WEST SYSTEM® SIX10 Part B Hardener

and diethylenetriamine		
Diethylenetriamine	111-40-0	ACGIH TWA 1ppm; SKIN

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: Gel.
COLOR: Off-white colored.
ODOR: Amine-like odor
ODOR THRESHOLD: No data available.
pH: 10.59
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) 1.04
BULK DENSITY 8.67 lbs./gal. (1.04 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: Gel (mm²/s @ 20°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)
610A/610B.....	11.8	0.10

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, ignition sources.
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, oxides of carbon, volatile amines, ammonia, nitric acid, aldehydes, nitrosamines.

11. TOXICOLOGICAL INFORMATION

Ingredient Name	CAS#	LD₅₀ Oral	LD₅₀ Dermal	LC₅₀ Inhalation
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated	68683-29-4	>15,400 mg/kg	>3000 mg/kg	No data available
Polyoxypropylenediamine	9046-10-0	2855 mg/kg	2980 mg/kg	>0.74 mg/L 8h vapor
Benzyl alcohol	100-51-6	1620 mg/kg	No data available	>4.18 mg/l 4h aerosol
Non-hazardous	NA	No data available	No data available	No data available
Reaction products of triethylenetetramine with phenol and formaldehyde	32610-77-8	No data	No data	No data
Triethylenetetramine	112-24-3	1716 mg/kg	1465 mg/kg	No data
Phenol, 2,4,6-tris[(dimethylamino)methyl] reaction products with triethylenetetramine	1101788-77-5	1716 mg/kg (reference Triethylenetetramine)	1465 mg/kg	No data
Synthetic amorphous pyrogenic silica	112945-52-5	>5000 mg/kg	>2000 mg/kg	No data
Hydroxybenzene	108-95-2	317 mg/kg	630 mg/kg (solid)	0.9 mg/l; 8h
Benzene-1,3-dimethanamine	1477-55-0	980 mg/kg	2000 mg/kg	1.34 mg/l 4h mist / aerosol
Polymer of epichlorohydrin / bisphenol A and diethylenetriamine	31326-29-1	1620 mg/kg	No data available	No data available
				¹ 0.07-0.3 mg/l 4h

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Diethylenetriamine	111-40-0	1080 mg/kg	1090 mg/kg	mist/aerosol
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¹. LC50 data has been generated for this substance by subjecting rats to an airborne aerosol/mist atmosphere in a test chamber. It has not been determined that this data directly correlates to an inherent hazard of this product as would be expected under normal, foreseeable or anticipated conditions of use.

ACUTE TOXICITY: No specific toxicity data exists for this mixture. Classification is based on acute toxicity estimation methods using ingredient data.

Oral: Not classified. Based on available data product does not meet acute dermal toxicity classification criteria. Ingestion may result in gastrointestinal irritation or ulcer.

Dermal: Not classified. Based on available data product does not meet acute dermal toxicity classification criteria. However, product contains materials that are readily absorbed through the skin. Absorption of phenolic solutions through the skin may be very rapid and can cause damage to the kidneys, liver, pancreas, spleen, and cause edema of the lungs.

Inhalation: Not classified. Based on available data this product does not meet acute inhalation toxicity classification criteria.

SKIN CORROSION / IRRITATION: Category 1B. Causes severe skin burns. Effects may be immediate. May cause persistent irritation or dermatitis.

SERIOUS EYE DAMAGE / IRRITATION: Category 1. Causes serious eye damage. May cause blurred vision. May cause corneal damage resulting in vision impairment or even blindness.

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: Category 2. This product contains a substance (phenol, CAS# 108-95-2) that is suspected of causing genetic defects.

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. However, it is anticipated that inhalation of concentrated vapors or fumes from heated product may cause irritation to the respiratory track and may cause central nervous system effects.

SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure): STOT – Category 2. Product contains materials that are readily absorbed through the skin. Absorption of phenolic solutions through the skin may be very rapid and can cause damage to the kidneys, liver, pancreas, spleen, and cause edema of the lungs.

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

OTHER HEALTH HAZARD INFORMATION: This product contains a component (diethylenetriamine) that is highly toxic by inhalation when aerosolized due to spraying or when a mist is formed due to heating. It is advised that exposure not occur to product that is sprayed or heated. While this product does not meet the classification for a respiratory sensitizer, components of this product can cause aggravation of existing respiratory conditions, such as asthma.

12. ECOLOGICAL INFORMATION

ACUTE AQUATIC TOXICITY: Category 3 – Harmful to aquatic life. No specific test data is available for the mixture. Calculated estimate based on ingredient data. Avoid release to the environment.

CHRONIC AQUATIC TOXICITY: Category 3 – Harmful to aquatic life with long lasting effects. No specific test data is available for the mixture. Calculated estimate based on ingredient data. Avoid release to the environment.

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 uncured state, this product may be harmful to aquatic life. Prevent release to the environment, sewers and natural waters.

Ingredient	CAS#	Ecotoxicity Classification Information
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperaziny)ethyl]amino]butyl-terminated	68683-29-4	No data available
Polyoxypropylenediamine	9046-10-0	Acute Aquatic Cat. 3; Chronic Aquatic Cat. 2
Benzyl alcohol	100-51-6	No data available

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Non-hazardous	NA	No data available
Reaction products of triethylenetetramine with phenol and formaldehyde	32610-77-8	Aquatic Chronic Cat. 3
Triethylenetetramine	112-24-3	Aquatic Chronic Cat. 3
Phenol, 2,4,6-tris[(dimethylamino)methyl] reaction products with triethylenetetramine	1101788-77-5	(Reference Triethylenetetramine); Aquatic Chronic Cat. 3
Synthetic amorphous pyrogenic silica	112945-52-5	No data available
Hydroxybenzene	108-95-2	Aquatic Acute Cat. 3; Aquatic Chronic Cat. 2
Benzene-1,3-dimethanamine	1477-55-0	Acute Aquatic Cat. 3; Chronic Aquatic Cat. 3
Polymer of epichlorohydrin / bisphenol A and diethylenetriamine	31326-29-1	No data available
Diethylenetriamine	111-40-0	No data available

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:..... UN 3259
 SHIPPING NAME:..... Polyamines, solid, corrosive, n.o.s.
 TECHNICAL SHIPPING NAME:..... Polyoxypropylenediamine
 HAZARD CLASS:..... Class 8
 PACKING GROUP:..... PG III
 MARINE POLLUTANT:..... No

CANADA TDG

UN NUMBER:..... UN 3259
 SHIPPING NAME:..... Polyamines, solid, corrosive, n.o.s.
 TECHNICAL SHIPPING NAME:..... Polyoxypropylenediamine
 HAZARD CLASS:..... Class 8
 PACKING GROUP:..... PG III
 MARINE POLLUTANT:..... No

IMDG

UN NUMBER:..... UN 3259
 SHIPPING NAME:..... Polyamines, solid, corrosive, n.o.s.
 TECHNICAL SHIPPING NAME:..... Polyoxypropylenediamine
 HAZARD CLASS:..... Class 8
 PACKING GROUP:..... PG III
 EmS Number:..... F-A, S-B
 MARINE POLLUTANT..... No

ICAO/IATA

UN NUMBER:..... UN 3259
 SHIPPING NAME:..... Polyamines, solid, corrosive, n.o.s.
 TECHNICAL SHIPPING NAME:..... Polyoxypropylenediamine
 HAZARD CLASS:..... Class 8
 PACKING GROUP:..... PG III
 MARINE POLLUTANT:..... No

15. REGULATORY INFORMATION

COUNTRY	INVENTORY LIST	STATUS
United States	TSCA	All ingredients are listed or otherwise compliant.
Europe	EINECS or ELINCS	No data available on CAS# 1101788-77-5. All other ingredients are listed or otherwise compliant.
Canada	CEPA (DSL/NDSL)	CAS# 1101788-77-5 listed on NDSL only. All other ingredients are listed or otherwise compliant.
Australia	AICS	No data available on CAS# 1101788-77-5. All ingredients are listed or otherwise compliant.
Japan	ENCS	No data available on CAS# 1101788-77-5. All ingredients are listed or otherwise compliant.
South Korea	KECI	No data available on CAS# 1101788-77-5. All ingredients are listed or otherwise compliant.
China	IECSC	All ingredients are listed or otherwise compliant. Notification registration complete for CAS# 1101788-77-5.

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Philippines	PICCS	No data available on CAS# 1101788-77-5. All ingredients are listed or otherwise compliant.
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US EPA TSCA Requirements:..... No data available.

Canada WHMIS Confidential Business Information (CBI).....No data available.

US EPA SARA TITLE III Reporting and Notification Requirements:

Subject to Section 302 (TPQ)..... Phenol = 500/1000 (lbs.). TPQ = 500 lbs. if phenol is in powder form and has a particle size of less than 100 microns or is handled in solution or molten form, or meets the criteria for a NFPA reactivity rating of 2, 3, or 4.
 Subject to Section 304 (RQ)..... Phenol RQ = 1000 lbs.
 Subject to Section 311 or 312 Refer to the health and physical classifications in section 2.
 Subject to Section 313 This product contains hydroxybenzene (phenol) and is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

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

Triethylenetetramine 112-14-3		PA, MA, NJ
Benzene-1,3-dimethanamine 1477-55-0		MA, PA, NJ
Hydroxybenzene 108-95-2		PA, MA, NJ, IL, RI
Diethylenetriamine 111-40-0		PA
Amorphous silica 7631-86-9 or 112945-52-5		PA, NJ, MA
Propylene oxide 75-56-9	< 0.0017%	¹ CA

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 Section 15.
PREPARED BY:..... Gougeon Brothers, Inc.
SDS CONTACT:..... safety@gougeon.com
TITLE:..... Health, Safety & Environmental Manager
APPROVAL DATE:..... January 3, 2022
SUPERSEDES DATE:..... January 15, 2019
SDS VERSION:..... 610B-2022a

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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