

1. Product Identification

Product name	Clear Coat Hardener, Part B
SDS Number	0600B00
Product type	Curing Agent
Recommended use of the chemical and restrictions on use	Directed at, but not limited to, the coating and laminating of fiber composites and wood.
Restrictions	None known.
Manufacturer/Supplier information	
Company name	SYSTEM THREE RESINS, INC.
Address	8517 Commerce Place Dr NE Lacey, WA 98516 United States
Telephone	1-253-333-8118
Website	www.systemthree.com
Email	support@systemthree.com
Emergency Contact	CHEMTEL (U.S. and CANADA) 1-800-704-9215 CHEMTEL (Outside the U.S.) – Call Collect accepted +1-360-256-7365

2. Hazard(s) Identification

Classification of substance or mixture/Signal Word	DANGER Acute Toxicity (oral) – Category 4 Skin Corrosion/Irritation – Category 1 Serious Eye Damage/Eye Irritation – Category 1 Skin Sensitization – Category 1 Specific Target Organ Toxicity (Single Exposure) [Respiratory tract irritation] – Category 3 Aquatic Hazard (Acute) – Category 4 Aquatic Hazard (Long-term) – Category 4
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GHS Label Elements
Hazard Pictograms



Hazard Statements/Classification of substance or mixture	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H335 May cause respiratory irritation. H413 May cause long lasting harmful effects to aquatic life.
Precautionary statements	
<u>Precautionary Statements</u> Prevention	P260 Do not breathe dusts or mists. P261 Avoid breathing vapors. P264 Wash hands 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. Wear eye or face protection.
Response	P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P310 Immediately call a POISON CENTER/doctor.
	P303+361+353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Storage	P363 Wash contaminated clothing before reuse.
	P401 Store at room temperature in a well-ventilated area.
	P405 Store locked up.
Disposal	P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified (HNOC) None Available.

3. Composition/Information On Ingredients

Chemical Name	CAS Number	Content (%)
Cycloaliphatic Amine Blend	Proprietary	50 – 60%
Polyoxypropylene diamine	9046-10-0	20 – 25%
1,3-cyclohexanedimethanamine adduct	Proprietary	10 – 15%
Alkylphenol Blend	Proprietary	10 – 15%

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

4. First-Aid Measures

Skin contact	Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Flush immediately with copious amounts of water. Initiate and maintain continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Cover wound with sterile dressing.
Eye contact	Hold eyelids apart, initiate and maintain gently and continuous irrigation until the patient receives medical attention. If medical care is not promptly available, continue to irrigate for one hour.
Ingestion	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.
Inhalation	Move to fresh air.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically.
Specific treatments	No specific treatments.

5. Fire-Fighting Measures

Suitable extinguishing media	Alcohol-resistant foam, carbon dioxide (CO ₂), dry chemical, water fog.
Unsuitable extinguishing media	None known.

Specific hazards arising from the chemical	In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated must be contained and prevented from being discharged to any waterway, sewer or drain. May generate ammonia gas. May generate toxic nitrogen oxide gases. Use of water may result in the formation of very toxic aqueous solutions.
Hazardous decomposition products	Decomposition products may include the following materials: Carbon dioxide Carbon monoxide Nitrogen oxides
Special protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Further information	Do not allow run-off from firefighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. Accidental Release Measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Wear proper protective clothing, gloves and eye/face protection.
Emergency procedures	If material is spilled, avoid contact with material. Persons not wearing appropriate protective equipment should leave the area of the spill until cleanup is complete.
Methods and materials for containment/cleanup	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

7. Handling and Storage

Precautions for safe handling	Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Use personal protective equipment. When using, do not eat, drink, or smoke.
Precautions/Recommendations for safe/proper storage	Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep from freezing.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Not established.
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Appropriate engineering controls	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Do not allow spill to enter sewers or waterways.
Individual protection measures/Personal protective equipment	
Eye/face protection	Splash-proof goggles or safety spectacles with side shields are recommended. Always wear eye protection when sanding cured epoxy resins to avoid dust in eyes.
Hand protection	Always wear impervious gloves: butyl rubber, nitrile rubber, Neoprene, PVC disposable gloves,
Skin protection	Wear clean, body-covering clothing to avoid skin contact.
Respiratory protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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.
Special instructions for protection and hygiene	Wear gloves at all times when handling product, avoid direct contact with skin. When finished using product, dispose of gloves properly and wash hands with warm, soapy water.

9. Physical and Chemical Properties

Chemical family	Amine curing agent
Appearance	Clear liquid
Physical State	
Form	Liquid
Color	Colorless
Odor	Ammoniacal
Density (Specific Gravity)	8.28 lb/gal (0.9 – 1.0)
Viscosity	50 – 100 CPS @ 77°F (25°C)
pH	Alkaline
Melting point/freezing point	Not available
Initial boiling point and boiling range	Not available
Flash point	Not available
Evaporation rate	Slower than ether
Flammability (solid, gas)	Not available
Upper/lower flammability limit (by volume)	Not available
Material VOC	Not available
Vapor density	Not available
Relative density	Not available

Solubility in water	Negligible
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available

10. Stability and Reactivity

Reactivity	Stable under normal conditions.
Chemical Stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Epoxy resins and epoxy resin hardeners react with each other producing heat. They should not be mixed with each other under uncontrolled conditions or in a large mass as the ensuing exotherm may result in heat and smoke.
Incompatible materials	Strong oxidizing agents and mineral acids.
Hazardous decomposition products	Oxides of carbon, nitrogen
Other hazards	None known.

11. Toxicological Information

Acute Health Hazard (components) No comprehensive data (ingestion, inhalation, dermal) on mixture (product).

Component	Result	Species	Dose	Exposure
Polyoxypropylenediamine	LD50 Oral	Rat	2,885 mg/kg	-
	LD50 Dermal	Rabbit	2,980 mg/kg	-
	LC50 Inhalation	Rat	>0.74 mg/l	-

Irritation/Corrosion (components) Classifies as Skin Corrosion Category 1 per positive Corrositex Dermal testing. Classifies as Serious Eye Damage Category 1 per GHS calculations of additivity.

Component	Result	Species	Test	Exposure
Polyoxypropylenediamine	Skin – Corrosive	Rabbit	Similar to OECD Guideline 404	-
	Eye – Risk of serious damage to eyes	Rabbit	Similar to OECD Guideline 405	-

Sensitization No information on product itself.

Mutagenicity No information on product itself.

Carcinogenicity No information on product itself.

Reproductive Toxicity No information on product itself.

Teratogenicity No information on product itself.

Specific target organ toxicity (single exposure) No information on product itself.

Specific target organ toxicity (repeated exposure) No information on product itself.

Aspiration hazard No information on product itself.

Potential acute health effects

Eye Contact	Causes serious eye damage.
Inhalation	May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin Contact	Causes severe burns. May cause an allergic skin reaction.
Ingestion	Harmful if swallowed. May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye Contact	Adverse symptoms may include the following: Pain or irritation Watering Redness
Inhalation	Adverse symptoms may include the following: Respiratory tract irritation Coughing
Skin Contact	Adverse symptoms may include the following: Pain or irritation Redness Blistering may occur
Ingestion	Adverse symptoms may include the following: Stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

No data is available for this product.

Potential chronic health effects

General	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	No significant effects or critical hazards.
Mutagenicity	No significant effects or critical hazards.
Teratogenicity	No significant effects or critical hazards.
Developmental effects	No significant effects or critical hazards.
Fertility effects	No significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates (ATEmix)

Route	ATE value
Oral	1529.0 mg/kg
Dermal	3506.1 mg/kg
Inhalation (vapors)	N/A

12. Ecological Information

Ecotoxicity

No data is available on the product itself.

Component	Test	Endpoint	Exposure	Species	Result
Polyoxypropylenediamine	OECD 203 Fish, Acute Toxicity Test	Acute EC50	96 hr Semi-static	Fish	>15 mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute LC50	96 hr Static	Fish	772.14 mg/l

	OECD 201 Alga, Growth Inhibition Test	Chronic NOEC	72 hr Static	Algae	0.32 mg/l
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Persistence and degradability No data is available on the product itself.

Component	Test	Period	Result
Polyoxypropylenediamine	OECD 301B Ready Biodegradability – CO2 Evolution Test	28 days	0%

Bioaccumulative Potential No data is available on the product itself.

Component	LogPow	BCF	Potential
Polyoxypropylenediamine	1.34	-	low

Mobility in Soil

Soil/water partition coefficient (KOC) No data is available on the product itself.

Other adverse effects No known significant effects or critical hazards.

13. Disposal Considerations

Waste from residues/ unused products Product should not be allowed to enter drains, water courses or the soil; dispose of this material and its containers in a safe way. Contact supplier if guidance is required.

Contaminated packaging Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

International Transport Regulations

Regulatory information	UN/NA number	Proper Shipping Name	Classes/*PG	Additional Information
DOT	UN2735	Polyamines, liquid, corrosive, n.o.s. (Polyoxypropylenediamine, 1,3-cyclohexanedimethanamine)	Class 8 II	
TDG	UN2735	Polyamines, liquid, corrosive, n.o.s. (Polyoxypropylenediamine, 1,3-cyclohexanedimethanamine)	Class 8 II	
IMO/IMDG	UN2735	Polyamines, liquid, corrosive, n.o.s. (Polyoxypropylenediamine, 1,3-cyclohexanedimethanamine)	Class 8 II	
IATA	UN2735	Polyamines, liquid, corrosive, n.o.s. (Polyoxypropylenediamine, 1,3-cyclohexanedimethanamine)	Class 8 II	

*PG: Packing group

Special precautions for user: Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. Regulatory Information

UNITED STATES

U.S. Federal Regulations	United States – TSCA 12(b) – Chemical export notification: None Required. United States – TSCA 5(a)2 – Final significant new use rules: Not Listed. United States – TSCA 5(a)2 – Proposed significant new use rules: Not Listed. United States – TSCA 5(e) – Substance consent order: Not listed.
Clean Air Act – Ozone Depleting Substances (ODS)	This product does not contain nor is it manufactured with ozone depleting substances.
Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) California Prop. 65	None. WARNING: This product can expose you to chemicals including methyloxirane that is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov .
EPA SARA 302 Extremely Hazardous Substances	None known.
EPA SARA 302/304/311/312 Hazardous Chemicals	Acute Health Hazard
SARA 313	None.
Form R – Reporting requirements	
CERCLA Hazardous substances	None.
United States inventory (TSCA 8b)	All components are listed or exempted.

CANADA

WHMIS (Canada)	Class D-2B: Material causing other toxic effects (Toxic). Class E: Corrosive material.
Canadian NPRI CEPA Toxic substances	None required. None required.

INTERNATIONAL REGULATIONS

International Lists	Australia inventory (AICS): All components are listed or exempted. Canada inventory: All components are listed or exempted. Korea inventory: All components are listed or exempted. Japan inventory: All components are listed or exempted. China inventory (IECSC): All components are listed or exempted. New Zealand inventory (NZIoC): All components are listed or exempted. Philippines inventory (PICCS): All components are listed or exempted. Taiwan inventory (CSNN): All components are listed or exempted.
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16. Other Information, Including Date of Preparation or Last Revision

HMIS Rating

Health	3
Flammability	1
Physical Hazard	0

Date of Preparation	March 1, 2023
Date of Last Revision	July 1, 2021
Revision #	7.0
More Information	1-253-333-8118
Prepared by	System Three Resins Inc.

The information contained herein is based on the data available to us and is believed to be correct. However, System Three Resins, Inc. makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. System Three assumes no responsibility for injury from the use of the product described herein.