

SYSTEMTHREE

Safety Data Sheets (SDS)

Updated: January 1, 2023

This file contains Safety Data Sheets for MetlWeld. This is a two-component system. It is imperative that you know whether you need information on the Resin or the Hardener.

Resin: Pages 2-10

Hardener: Pages 11-19

If this is a medical emergency, call 911 or your local poison control center. Seek medical attention.

For technical assistance, call System Three Technical Support at 253-333-8118 option 2.

These SDS are provided pursuant to 29 CFR 1910.1200(g).

1. Product Identification

Product name	MetlWeld Adhesive Resin, Part A
SDS Number	1200A00
Product type	Epoxy polymer mixture
Recommended use of the chemical and restrictions on use	Directed at, but not limited to, adhesive bonding of metal substrates.
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	WARNING Skin Corrosion/Irritation - Category 2 Serious Eye Damage/Eye Irritation - Category 2 Skin Sensitization - Category 1 Specific Target Organ Toxicity (Single Exposure) [Respiratory tract irritation] – Category 3 Acute Aquatic Hazard – Category 3 Chronic Aquatic Hazard – Category 2
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GHS Label Elements
Hazard Pictograms



Hazard Statements/Classification of substance or mixture	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H402 Harmful to aquatic life. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	
<u>Precautionary Statements</u>	
Prevention	P280 Wear protective gloves. Wear eye or face protection. P201 Obtain special instructions before use. P271 Use only outdoors or in a well-ventilated area.

Response	<p>P261 Avoid breathing vapor.</p> <p>P264 Wash hands thoroughly after handling.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 Avoid release to the environment.</p> <p>P304 + 340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P313 Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P302+352+363 IF ON SKIN: Wash with soap and water. Take off contaminated clothing and wash before reuse.</p> <p>P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.</p>
Storage	P391 Collect spillage.
Disposal	P401 Store at room temperature in a well ventilated area.
	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 (%)
Diglycidyl Ether of Bisphenol A	25068-38-6	45 – 50%
Polypropylene glycol diepoxide resin	26142-30-3	15 – 20%
Bisphenol A epoxy – CTBN rubber adduct	68610-41-3	10 – 15%
Diglycidyl Ether of Bisphenol F	28064-14-4	1 – 5%

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	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Ingestion	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting without medical advice. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain open airway. Loosed tight clothing such as a collar, tie, belt, or waistband.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to

the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

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

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.

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.
Hazardous decomposition products	Decomposition products may include the following materials: Carbon dioxide Carbon monoxide
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 specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.
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	Put on appropriate personal protective equipment. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid contact with skin and eyes. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. When using, do not eat, drink or smoke. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Precautions/Recommendations for safe/proper storage	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure Controls/Personal Protection

Permissible exposure limit (OSHA)	None established.
Threshold limit value (ACGIH)	None established.
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	Use appropriate containment to avoid environmental contamination. 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	Discard contaminated leather articles. Remove contaminated clothing. Wash at the end of each work shift and before eating smoking or using the toilet. Provide readily accessible eye wash stations and safety showers.

9. Physical and Chemical Properties

Chemical family	Epoxy Resin
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Appearance	White paste
Physical State	Epoxy polymer mixture
Form	Paste
Color	White
Odor	Little or no odor
Density (Specific Gravity)	10.26 lb/gal (1.23)
Viscosity	120,000 – 140,000 CPS @77°F
pH	N/A
Melting point/freezing point	N/A
Initial boiling point and boiling range	N/A
Flash point	N/A
Evaporation rate	Slower than ether
Flammability (solid, gas)	Data not available
Upper/lower flammability limit (by volume)	N/A
Upper flammability limit (by volume)	N/A
Lower flammability limit (by volume)	N/A
Material VOC	None
Vapor density	Heavier than air
Relative density	Not determined
Solubility in water	Negligible
Partition coefficient: n-octanol/water	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A

10. Stability and Reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	Stable under normal conditions.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Reactive or incompatible with the following materials: Strong oxidizing agents Lewis acids Mineral acids
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Other hazards	Reacts with considerable heat release with some curing agents.

11. Toxicological Information

Acute Health Hazard (components)

No comprehensive data is available on the product itself.

Component	Result	Species	Dose	Exposure
Diglycidyl Ether of Bisphenol A	LD50 Oral	Rat	11,400 mg/kg	-
	LD50 Dermal	Rat	2,000 mg/kg	-
Polypropylene glycol diepoxide resin	LD50 Oral	Rat	>2,000 mg/kg	-
	LD50 Dermal	Rabbit	>2,000 mg/kg	-
Bisphenol A epoxy – CTBN rubber adduct	LD50 Oral	Rat	>2,000 mg/kg	-
	LD50 Dermal	Rabbit	>2,000 mg/kg	-

Irritation/Corrosion (components)

No information on product itself.

Component	Result	Species	Score	Exposure
Diglycidyl Ether of Bisphenol A	Skin – Erythema/Eschar 404 Acute Dermal Irritation/Corrosion	Rabbit	1.5 – 2	-
	Skin – Edema 404 Acute Dermal Irritation/Corrosion	Rabbit	1.0 – 1.5	-
	Eyes – 405 Acute Eye Irritation/Corrosion	Rabbit	0	-
	Eyes – Redness of the conjunctivae	Rabbit	0.7	-
	Skin – Moderate irritant	Rabbit		24 hrs
	Eyes – Mild irritant	Rabbit		-

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.

Component	Category	Route of exposure	Target organs
Diglycidyl Ether of Bisphenol A	Category 3		Respiratory tract irritation
Diglycidyl Ether of Bisphenol F	Category 3		Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Potential acute health effects**Eye Contact**

Causes serious eye irritation.

Inhalation

May cause respiratory irritation.

Skin Contact

Causes skin irritation. May cause an allergic skin reaction.

Ingestion

Irritating 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: Irritation Redness
Ingestion	No specific data.
<u>Delayed and immediate effects and also chronic effects from short and long term exposure</u>	Not available.
<u>Potential chronic health effects</u>	
General	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

12. Ecological Information

Ecotoxicity No information on product itself.

Component	Result	Species	Exposure
Diglycidyl Ether of Bisphenol A	Acute LC50 1.3 mg/l – 203 Fish, Acute Toxicity Test	Fish – Fish	96 h
	Acute EC50 2.1 mg/l – 202 Daphnia sp. Acute Immobilization Test and Reproduction Test	Aquatic invertebrates. Water flea	48 h
	Acute NOEC 0.3 mg/l – 211 Daphnia Magna Reproduction Test	Aquatic invertebrates. Water flea	21 d
	Acute LC50 > 11 mg/l	Aquatic plants – Algae	72 h
Bisphenol A epoxy – CTBN rubber adduct	Acute LC50 2.0 mg/L	Fish	96 h
	Acute EC50 1 – 100 mg/L	Invertebrates	48 h

Persistence and degradability No information on product itself.

Bioaccumulative Potential No information on product itself.

Component	LogPow	BCF	Potential
Diglycidyl Ether of Bisphenol A	2.64 – 3.78	3 – 31 31.00	low
Diglycidyl Ether of Bisphenol F	3	-	low

Mobility in Soil

Soil/water partition coefficient (KOC)	No information on product itself.
Other adverse effects	No known significant effects or critical hazards.

13. Disposal Considerations

Waste from residues/ unused products

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. 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		Non-regulated		
TDG		Non-regulated		
IMO/IMDG	UN3082	Environmentally Hazardous Substance, n.o.s. (Bisphenol-A Epichlorohydrin Resin)	Class 9 III	Marine pollutant
IATA	UN3082	Environmentally Hazardous Substance, n.o.s. (Bisphenol-A Epichlorohydrin Resin)	Class 9 III	

*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.

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer. WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient Name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Oxirane, 2-(phenoxyethyl)-	Yes	No	5 µg/day	No
Oxirane, 2-(chloromethyl)-	Yes	Yes	9 µg/day	No

EPA SARA 302 Extremely Hazardous Substances

None required.

EPA SARA 302/304/311/312 Hazardous Chemicals

Acute Health Hazard.

United States inventory (TSCA 8b)

All components are listed or exempted.

CANADA

WHMIS (Canada)

Class D-2B: Material causing other toxic effects (Toxic).

Canadian NPRI

None Required

CEPA Toxic substances

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.

16. Other Information, Including Date of Preparation or Last Revision

HMIS Rating

Health 2
Flammability 1
Physical Hazard 0

Date of Preparation

January 24, 2020

Date of Last Revision

September 23, 2019

Revision #

4.0

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.

1. Product Identification

Product name	MetlWeld Adhesive Hardener, Part B	
SDS Number	1200B00	
Product type	Amide/Butadiene mixture	
Recommended use of the chemical and restrictions on use	Directed at, but not limited to, the adhesive of metal substrates.	
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	WARNING SKIN CORROSION/IRRITATION – Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION – Category 1 SKIN SENSITIZATION – Category 1
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GHS Label Elements
Hazard Pictograms

Hazard Statements/Classification of substance or mixture	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage.
Precautionary statements	
<u>Precautionary Statements</u> Prevention	P261 Avoid breathing fume/vapours. P264 Wash hands thoroughly after handling. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response	P302+352 IF ON SKIN: Wash with plenty of water. P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

	P310 Immediately call a POISON CENTER.
	P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
Storage	P362+P364 Take off contaminated clothing and wash it before reuse.
Disposal	P405 Store locked up.
	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 (%)
Modified Polyamide	Trade Secret	70 – 80%
2,4,6 Tris(dimethylaminomethyl)phenol	90-72-2	5 – 10%
Benzyl Alcohol	100-51-6	5 – 10%
Formaldehyde, polymer with 1,3, dimethylbenzene	26139-75-3	5 – 10%

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. Take off contaminated clothing and shoes immediately. NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.
Eye contact	Immediately flush eyes with plenty of clean water for an extended time, not less than 15 minutes. Flush longer if there is any indication of residual chemical in eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. If eye irritation persists: Get medical advice/attention.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If a person vomits when lying on back, place in the recovery position. Prevent aspiration of vomit. Turn victim's head to the side.
Inhalation	Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

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

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

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	May generate ammonia gas. May generate toxic nitrogen oxide gases. Use of water may result in the formation of very toxic aqueous solutions. Do not allow run-off from firefighting to enter drains or water courses. Incomplete

Hazardous decomposition products	combustion may form carbon monoxide. Ammonia gas may be liberated at high temperatures. In case of incomplete combustion an increased formation of oxides of nitrogen (NOx) is to be expected. Downwind personnel must be evacuated. Burning produces noxious and toxic fumes. 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	Use self-contained breathing apparatus and chemically protective clothing. Wear suitable protective clothing, gloves and eye/face protection. Evacuate personnel to safe areas.
Emergency procedures	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.
Methods and materials for containment/cleanup	Contain by diking with sand, earth or other non-combustible material. Wear proper personal protective clothing and equipment. Absorb spill with an inert material. Place into labeled, closed container; store in a safe location to await disposal. Change contaminated clothing and launder before reuse. CAUTION: Spilled liquid and dried film are slippery. Use care to avoid falls.
Environmental precautions	Construct a dike to prevent spreading. Do not flush liquid into public sewer, water systems or surface waters.

7. Handling and Storage

Precautions for safe handling	Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Avoid breathing vapors and/or aerosols. Avoid contact with eyes. Use only in well-ventilated areas. Use personal protective equipment. When using, do not eat, drink or smoke.
Precautions/Recommendations for safe/proper storage	Store epoxy products in temperature stable environment, out of the reach of pets or children. Securely fasten container lids and tops, and prevent products from sitting and below freezing temperatures.

8. Exposure Controls/Personal Protection

Permissible exposure limit (OSHA)	None established.
Threshold limit value (ACGIH)	None established.
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	Use appropriate containment to avoid environmental contamination. 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	Polyamide
Appearance	Gray colored paste
Physical State	Polyamide/Butadiene mixture
Form	Paste
Color	Gray
Odor	Mild ammonia odor
Density (Specific Gravity)	11.18 lb/gal (1.34)
Viscosity	100,000 – 120,000 cps at 77 °F (25 °C)
pH	N/A
Melting point/freezing point	N/A
Initial boiling point and boiling range	N/A
Flash point	N/A
Evaporation rate	Slower than ether
Flammability (solid, gas)	Data not available
Upper/lower flammability limit (by volume)	N/A
Upper flammability limit (by volume)	N/A
Lower flammability limit (by volume)	N/A
Material VOC	None
Vapor density	Heavier than air
Relative density	Not determined
Solubility in water	Negligible
Partition coefficient: n-octanol/water	N/A

Auto-ignition temperature	N/A
Decomposition temperature	N/A

10. Stability and Reactivity

Reactivity	No specific test data related to reactivity available for this product.
Chemical Stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization 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 exothermic reaction may produce heat, smoke and hazardous decomposition products.
Incompatible materials	Strong oxidizing agents and acids.
Hazardous decomposition products	Organic acid vapors, nitric acid, ammonia, nitrogen and carbon oxides, nitrosamine and aldehydes. Nitrogen oxide can react with water vapors to form corrosive nitric acid.

11. Toxicological Information

Acute Toxicity (components) No comprehensive data is available on the product itself.

Component	Test	Species	Result
Modified Polyamide	LD50 Oral - Estimated	Rat	>500 mg/kg
	LD50 Dermal – Estimated	Rabbit	>2,000 mg/kg
Benzyl Alcohol	LC50 Inhalation – OECD Test Guideline 403	Rat	>4,178 mg/l
	LD50 Oral	Rat	1,620 mg/kg
2,4,6 Tris(dimethylaminomethyl)phenol	LD50 Oral	Rat	2,169 mg/kg
Formaldehyde, polymer with 1,3, dimethylbenzene	LD50 Oral	Rat	>2,000 mg/kg
	LD50 Dermal	Rabbit	>2,000 mg/kg

Irritation/Corrosion (components) Classifies as non-corrosive to skin per negative Corrositex Dermal Testing.
Classifies as Serious Eye Damage Category 1 per GHS calculations of additivity.

Component	Test	Species	Result
Modified Polyamide	-	-	Skin – Moderate irritant
2,4,6 Tris(dimethylaminomethyl)phenol	-	Rabbit	Skin – Corrosive
	-	Rabbit	Eyes – Corrosive
Benzyl Alcohol	OECD 405	Rabbit	Eyes – Irritant
Formaldehyde, polymer with 1,3, dimethylbenzene	-	-	Skin – Mild irritant
	-	-	Eye – Mild irritant

Sensitization No information on product itself.

Component	Species	Result
2,4,6 Tris(dimethylaminomethyl)phenol	Guinea Pig	Weak Sensitizer

<u>Mutagenicity</u>	No information on product itself.
<u>Carcinogenicity</u>	No information on product itself.
<u>Reproductive Toxicity</u>	No information on product itself.
<u>Teratogenicity</u>	No information on product itself.
<u>Specific target organ toxicity (single exposure)</u>	No information on product itself.
<u>Specific target organ toxicity (repeated exposure)</u>	No information on product itself.
<u>Aspiration hazard</u>	No information on product itself.
<u>Potential acute health effects</u>	
Eye Contact	Causes serious eye damage.
Inhalation	No data available.
Skin Contact	May cause allergic skin reaction. Causes skin irritation.
Ingestion	No data available.
<u>Symptoms related to the physical, chemical and toxicological characteristics</u>	
Eye Contact	Adverse symptoms may include the following: Pain Watering Redness
Inhalation	Adverse symptoms may include the following: Respiratory tract irritation
Skin Contact	Adverse symptoms may include the following: Pain or irritation Redness
Ingestion	Adverse symptoms may include the following: Stomach pains
<u>Delayed and immediate effects and also chronic effects from short and long term exposure</u>	Not available.
<u>Potential chronic health effects</u>	
General	Causes damage to organs through prolonged or repeated exposure: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.
<u>Numerical measures of toxicity</u>	
<u>Acute toxicity estimates (ATE_{mix})</u>	Not available.

12. Ecological Information

Ecotoxicity

No information on product itself.

Component	Test	Endpoint	Exposure	Species	Result
Modified Polyamide	-	Acute LC50	96 hrs	Guppy	63 mg/l
	-	Acute EC50	48 hrs	Daphnia	15.4 mg/l
Benzyl Alcohol	-	Acute EC50	48 hrs	Invertebrates	230 mg/l
	-	Acute LC50	96 hrs	Fish	460 mg/l
	-	Acute EC50	72 hrs	Algae	770 mg/l
2,4,6-tris(dimethylaminomethyl)phenol	201 Alga, Growth Inhibition Test	Acute EC50	72 hr	Aquatic plants – Green Algae	84 mg/l

Persistence and degradability

No information on product itself.

Bioaccumulative Potential

No information on product itself.

Component	LogPow	BCF	Potential
Benzyl Alcohol	1.05	1.37 (calculated)	Low

Mobility in Soil**Soil/water partition coefficient (KOC)**

No information on product itself.

Other adverse effects

No known significant effects or critical hazards.

13. Disposal Considerations

Waste from residues/ unused products

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. 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		Non-regulated		
TDG		Non-regulated		
IMO/IMDG	UN2735	Amines, liquid, corrosive, n.o.s. (2,4,6 Tris(dimethylaminomethyl)phenol)	Class 8 III	
IATA	UN2735	Amines, liquid, corrosive, n.o.s. (2,4,6 Tris(dimethylaminomethyl)phenol)	Class 8 III	

*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 12(b) – Proposed significant new use rules: None Required.
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)
Pennsylvania – RTK**

None known.

None known.

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

EPA SARA 302/304/311/312 Substances

Acute Health Hazard

EPA 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).

Canadian NPRI

None Required

CEPA Toxic substances

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.

16. Other Information, Including Date of Preparation or Last Revision

HMIS Rating

Health 3
Flammability 1
Physical Hazard 0

Date of Preparation

January 24, 2020

Date of Last Revision

September 23, 2019

Revision #

6.0

More Information

1-253-333-8118

Prepared by

System Three Resins Inc.

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