

Company Name: **EURO TOOL, Inc.**

ChemTel 365/24/7 Emergency Contact:

US/Canada toll free: 1-800-255-3924

All other locales: + 1 813-248-0585

Collect calls are accepted.

DATE OF PRINT: 7/29/2014

Product Name: Epoxy 330

Chemical Name: Epoxy Resin

HAZARDS IDENTIFICATION (Section 2)

Emergency Overview

Form: Viscous liquid

Hazard of Product:

WARNING! Causes eye and skin irritation. May cause allergic skin reaction. May cause respiratory tract irritation. Heated material can cause thermal burns.

OSHA Hazard Communication Standard

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

IMPORTANT: While Hughes Associates believes the information contained herein to be accurate, Hughes Associates makes no representation or warranty, express or implied, regarding and assumes no liability for the accuracy or completeness of the information. Hughes Assoc. assumes no responsibility for injury from the use of the product described herein. The Buyer assumes all responsibility for handling, using and/or reselling the Product in accordance with the applicable federal, state

and local law. This SDS shall not in any way limit or preclude the operation and effect of any of the provisions of Hughes Associates terms and conditions of sale.

Potential acute health effects

Inhalation: Slightly irritating to the respiratory system.

Ingestion: Not expected to be harmful under normal conditions of use.

Skin: Irritating to skin. May cause sensitization by skin contact. Heated material can cause thermal burns.

Eyes: Irritating to eyes. Heated material can cause thermal burns.

Potential chronic health effects

Chronic effects: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Tertogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No know significant effects or critical hazards.

Target organs: Review Section 2 and 11 for any additional assessments.

Over-exposure signs/symptoms

Inhalation: Adverse symptoms may include the following: respiratory tract irritation, coughing.

Ingestion: No specific data.

Skin: Adverse symptoms may include the following: irritation, redness.

Eyes: Adverse symptoms may include the following: pain or irritation, watering, redness.

Medical conditions aggravated by over-exposure: Pre-existing skin disorders may be aggravated by over exposure to this product.

See section 11 for more detailed information on health effects and symptoms.

Composition/Information on Ingredients

Ingredient name	CAS
NO. WT%	
4,4-isopropylidenediphenol-Epichlorohydrin 100.00 Copolymer	25068-38-6 70.0-

First Aid Measures (Section 4)

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.

Skin Contact: Flush contaminated skin with plenty of 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. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. For contact with hot product, flush contaminated skin with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze. Get medical attention immediately.

Inhalation: Move exposed person to fresh air. Keep person warm and at rest. 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. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion: Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. 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 unless directed to do so by medical personnel. 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 an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first aid personnel: In the event of body contact with molten material, immediately cool with running water, do not attempt to remove material from skin. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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

See section 11 for more detailed information on health effects and symptoms.

Fire Fighting Measures (Section 5)

Flammability of the product: In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media:

Suitable: Use an extinguishing agent suitable for the surrounding fire.

Not Suitable: None Known.

Special exposure hazards: 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.

Hazardous combustion products: Decomposition products may include the following materials: carbon oxides.

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.

Accidental release measures (Section 6)

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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8) .

Environmental: 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).

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. For molten material, allow the product to cool and solidify. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: See section 1 for emergency contact information and section 13 for waste disposal.

Small spill: Stop leak if without risk. Move containers from spill area. For molten material, allow the product to cool and solidify. Vacuum or sweep up material and place in designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Handling and Storage (Section 7)

Handling: Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating , drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. 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.

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 (see section 10) and food and drink. 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. Note: This resin may be handled, shipped and stored at elevated temperature in bulk.

Exposure controls/personal protection (Section 8)

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures: 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.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory: 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 respirator.

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes,

mists, gasses or dusts.

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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.

Physical and chemical properties (Section 9)

Information on basic physical and chemical properties.

Appearance:

Physical state	Viscous liquid
Color	Clear
Odor	Not
available	
Odor Threshold	Not available
PH	Not
available	
Boiling Point	Greater than
260*C (500* F)	
Flash Point	251*C(484*F)
Pensky-Martens Closed	
	Cup ASTM
D 93	
Evaporation Rate	Not available
Flammable limits	
Upper	Not
available	
Lower	Not
available	
Vapor Pressure	
0.03mbar@77*C(171*F)	
Vapor Density	Not available

Relative Density	1.17
Solubility	Negligible
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	
Kinematic-Not available	
Dynamic-Not available	
Typical % solids available	Not

Other information: Not applicable.

Stability and reactivity (Section 10)

Reactivity : Stable under normal conditions.

Stability: The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid: Strong oxidizer

Materials to avoid: Reactive or incompatible with the following materials: oxidizing materials, strong acids, strong alkalis.

Other hazards: Reacts with considerable heat release with some curing agents.

Hazardous decomposition products: Decomposition products may include the following materials: carbon oxides.

Toxicological information (Section 11)

Acute toxicity

Ingredient name: 4,4-Isopropylidenediphenol-Epichlorohydrin Copolymer

LD50 Oral Rat

30,000mg/kg

>2,000mg/kg LD50 Dermal Rat

Other toxicological information

Carcinogenicity

Ingredient name:4,4-Isopropylidenediphenol-Epichlorohydrin Copolymer

classified ACGIH Not

classified IARC Not

NTP Not listed
OSHA Not classified

Ecological Information (Section 12)

Environmental effects: No known significant effects or critical hazards.

Other adverse effects: No known significant effects or critical hazards.

Disposal Considerations (Section 13)

Waste disposal: The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways ,drains and sewers.

Transport Information (Section 14)

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 appropriate regulations to properly classify your shipment for transportation.

International transport regulations

Regulatory UN/NA Proper Shipping name Classes/*PG

Reportable
Information number
Quantity

CFR	Non-regulated
TDG	Non-regulated
IMO/IMDG	Non-regulated
IATA (cargo)	Non-regulated

*PG: Packing group

Regulatory Information (Section 15)

US regulations HCS Classification material	Irritating material, sensitizing
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US Federal regulations Immediate hazard	SARA 311/312 Classification (acute) health
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SARA 313-

Supplier Notification: This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372. : None Required

SARA 302 Extremely Hazardous Substances: None Required

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

Canadian Lists: Canadian NPRI: None Required

Other Information(Section 16)

Hazardous Material Information System III (USA)

Health : 2
Flammability : 1
Physical Hazard : 0
Chronic

Caution: HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks . Although HMIS ratings are not required on SDSs under 29 CFR 1910.1200 the preparer may choose to provide them . HMIS is a registered mark of the National Paint & Coatings Association (NPCA). The customer is responsible for determining the PPE code for this material.

NOTICE: Hughes Associates recommends that its customers minimize their exposure to Epoxy 330. We strongly recommend that consumers thoroughly read the SDS to become aware of and understand any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as the effective date shown. However, HUGHES ASSOCIATES makes no warranty, expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof , HUGHES ASSOCIATES assumes no responsibility for injury from the use of the product described herein. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his/her activities comply with all Federal, State, Provincial or local laws.

The specific information herein is made for the purpose of complying with numerous Federal, State, Provincial and local laws and regulations.

Product and Company Identification (Section 1)

Company Name: **EURO TOOL, Inc.**

ChemTel 365/24/7 Emergency Contact:

US/Canada toll free: 1-800-255-3924

All other locales: + 1 813-248-0585

Collect calls are accepted.

DATE OF PRINT : 8/25/2014

Product Name : Epoxy 330 Part B

Product Type: Curing Agent

Product Use: Epoxy System (part of a two part Epoxy System)

Hazards Identification (Section 2)

Form: Liquid

Odor: Amine

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communications Standard (29 CFR 1910.1200).

Emergency overview: WARNING! Toxic if inhaled. Harmful in contact with skin or if swallowed. Causes respiratory tract, eye and skin irritation . May cause allergic respiratory and skin reaction. Cross-sensitization to other amines may occur.

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Potential acute health effects.

Inhalation: Severely irritating to the respiratory system. May cause sensitization by inhalation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. Toxic if inhaled. Exposure can produce sensor motor effects.

Ingestion: Harmful if swallowed.

Skin: Harmful in contact with skin. Severely irritating to the skin. May cause sensitization by skin contact.

Eyes: Severely irritating to eyes. Risk of serious damage to eyes. Excessive tear formation. Direct contact with the eyes can cause irreversible damage, including blindness.

Potential chronic health effects.

Chronic effects: Contains material that can cause target organ damage.

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.

Target Organs: Contains material which causes damage to the following organs; blood, kidneys, lungs, liver, upper respiratory tract, skin. Review Section 2 and 11 for any additional assessments.

Over Exposure signs/symptoms

Inhalation: Adverse symptoms may include the following; respiratory tract irritation, coughing, wheezing and breathing difficulties, asthma, visual disturbances, halos around bright objects.

Ingestion: No specific data.

Skin: Adverse symptoms may include the following; irritation, redness.

Eyes: Adverse symptoms may include the following; pain or irritation, watering and redness.

Medical conditions aggravated by over-exposure: Pre-existing respiratory and skin disorders and disorders involving any other target organs mentioned in this SDS as being at risk may be aggravated by over-exposure to this product.

See section 11 for more detailed information on health effects and symptoms.

Composition/Information on Ingredients (Section 3)

Ingredient name:	CAS #
WT %	
N-(aminoethyl)piperazine	140-31-8
Phenol, 4-Nonyl-Branched	84852-15-3
Diethylenetriamine	111-40-0
1.0-5.0	

First Aid Measures (Section 4)

Eye Contact: Immediately flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention. Chemical burns must be treated promptly by a physician.

Skin contact: Flush contaminated skin with plenty of 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. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation: Move exposed person to fresh air. If it is suspected that the fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. 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 an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.

Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first aid personnel: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to Physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

See Section 11 for more detailed information on health effects and symptoms.

Fire-Fighting Measures (Section 5)

Flammability of the product: In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media:

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not Suitable: Water or fog may cause frothing which can be violent, especially if sprayed into containers of hot or burning liquid.

Special Exposure Hazards: 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.

Hazardous combustion products: Decomposition products may include the following materials; carbon oxides, nitrogen oxides.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece.

Accidental Release Measures (Section 6)

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 . Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

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).

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers , water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: See section 1 for emergency contact information and section 13 for waste disposal.

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Handling and Storage (Section 7)

Handling: Put on appropriate personal protection equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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 (see section 10) and food and drink. 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.

Exposure Controls/Personal Protection (Section 8)

**Ingredient name
limits**

Occupational exposure

Diethylenetriamine
Average

ACGIH TLV Time Weighted

4.2mg/m³ 1ppm

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating ,smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard 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.

Hands: Chemical resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a

risk assessment indicates this is necessary.

Recommended; Neoprene

Nitrile rubber

Gauntlet type

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin: Personal protective equipment for the body should be selected based on the tasks being performed and the risks involved and should be approved by a specialist before handling this product.

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.

Physical and Chemical Properties (Section 9)

Information on basic physical and chemical properties

Appearance

Physical state

Liquid

Color

Light

Odor

Amine

Odor threshold

Not available

PH

Not

available

Boiling Point

Greater than 222°C

(432°F)

Flash Point

Greater than

93.4°C (200.1°F)

Setaflash closed cup ASTM D 3828

Evaporation rate

Not available

Flammable limits

Upper

Not available

Lower

0.8%(V)

Vapor pressure

Less than 1.33 mbar

@ 20°C (68°F)

Vapor density

Not available

Relative density

0.97

Solubility

Partial

Partition coefficient:

Not available

n-octanol/water

Auto-ignition temp.

Not available

Decomposition temp.

Kinematic-Not available

Dynamic-Not

available

Typical % solids

Not available

Other Information

Not applicable

Stability and Reactivity (Section 10)

Reactivity: Stable under normal conditions

Stability: The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid: Strong oxidizer. Keep away from heat, sparks, flame and other ignition sources.

Other hazards: Reacts with considerable heat release with some curing agents. Heating this substance above 300 deg. F in the presence of air may cause slow oxidative decomposition, above 500 deg. F polymerization may occur. Some combinations of resins and curing agents can cause runaway polymerization and charring of the reactants. Fumes and vapors from the thermal and chemical decompositions vary widely in composition and toxicity.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Decomposition products may include the following materials; nitrogen oxides, carbon monoxide.

Toxicological Information (Section 11)

Acute toxicity

N-(aminoethyl)piperazine	LD50 Oral	Chicken	
1,500mg/kg			
		LD50 Oral	Rat
2,108mg/kg			
		LD50 Oral	Rat
2,140mg/kg			
		LD50 Dermal	
Rabbit	880mg/kg		
Phenol, 4-Nonyl-Branched	LD50 Oral	Rat	
1,300mg/kg			
		LD50 Dermal	
Rabbit	3,160mg/kg		
Diethylenetriamine	LD50 Oral	Rat	
2,800mg/kg			
		LD50 Dermal	
Rabbit	550mg/kg		

Other Toxicological Information**Carcinogenicity Classification****Ingredient name:**

N-(aminoethyl)piperazine		ACGIH	Not
classified			
		IARC	
Not classified			
		NTP	
Not listed			
		OSHA	
Not classified			
Phenol, 4-Nonyl-,Branched		ACGIH	Not
classified			
		IARC	Not
classified			
		NTP	
Not listed			

classified	OSHA	Not
Diethylenetriamine		
classified	ACGIH	Not
classified	IARC	Not
Not listed	NTP	
classified	OSHA	Not

Ecological Information (Section 12)

Environmental effects: No known significant effects or critical hazards.

Aquatic ecotoxicity

Ingredient name:

N-(aminoethyl)piperazine

Fresh water Acute LC50 2,190mg/I/4 d
Fathead minnow

Phenol, 4-Nonyl-,Branched

Fresh water Acute LC50 0.1383mg/I/4 d
Fathead minnow

Fresh water Acute LC50 0.1351mg/I/4 d Blue
gill

Salt water Acute LC50 0.142mg/I/4 d
Sheepshead minnow

Other adverse effects: No known significant effects or critical hazards.

Disposal Considerations (Section 13)

Waste Disposal: The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways , drains and sewers.

Transportation Information (Section 14)

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 claddity your shipment for transportation.

International transport regulations

Regulatory Reportable Information Quantity	UN/NA Number	Proper shipping name	Class
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CFR	Non-regulated		
TDG	Non-regulated		
IMO/IMDG	Non-regulated		
IATA	Non-regulated		

Regulatory Information (Section 15)

US regulations

HCS Classification: Toxic material, Irritating material, Sensitizing material, Target organ effects.

US Federal regulations: SARA 311/312 Classification Immediate (acute) health hazard, Delayed (chronic) health hazard

SARA 313- Supplier Notification:

This product contains the following toxic chemical(s) subject t o the reporting requirements of Section 313 of Title III of the Super fund Amendments and Reauthorization Act of 1986,and Subpart C-Supplier Notification Requirement of 40 CFR Part 372: None Required.

SARA 302 Extremely Hazardous

Substances: None Required.

State regulations: Massachusetts RTK Substances Listed: N-(aminoethyl)piperazine. Phenol, 4-Nonyl, Branched, Diethylenetriamine
New Jersey RTK Substances Listed: Same as above.

Pennsylvania RTK Substances Listed: Same as above.

California Prop. 65 : None required.

Canada

WHMIS (Canada) Class D-1A: Material causing immediate and serious toxic effects.

Class D-2A: Material causing other toxic effects

Class D-2B: Material causing other toxic effects

Canadian Lists: Canadian NPRI : Phenol,4-Nonyl-,Branched

Other Information (Section 16)

Hazardous Material

Information System III (USA)

Health : 2

Flammability : 1

hazard : 0

Physical

Chronic

HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks and a 4 representin significant hazards or risks. Although HMIS ratings are not required on SDS under 29 CFR 1910.1200

Other Information (Section 16)

Hazardous Material

Information System III (USA)

Health : 2

Flammability : 1

Physical

hazards : 0

Chronic

HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and a 4 representing significant hazards or risks. Although HMIS ratings are not required on SDSs under 29 CFR 1910.1200 the preparer may choose to provide them.

NOTICE: The information provided herein was believed by HUGHES ASSOCIATES to be accurate at the time of preparation from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. HUGHES ASSOCIATES makes no warranty, expressed or implied, concerning the product or the merchantability or fitness thereof for any purpose or concerning the accuracy of any information provided by HUGHES ASSOCIATES. The Buyer assumes all responsibility for handling, using and/or reselling the Product in accordance with the applicable federal, state, and local law.