Safety Data Sheet

Date Issued: 7/18/18

1. CHEMICAL PRODUCTS AND COMPANY IDENTIFICATION

Product Names/Trade Names: 105-PumaPOXY Resin
Chemical Family: Bisphenol A Epoxy Resin

Manufacturer's Name: PUMA-CRETE Corp.
177 Huntington Ave. Boston, MA 02115
www.PUMACRETE.NET 857-226-8247

Company 24 Hour Emergency Response Information: CHEMTEL: 1-800-255-3924
Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

2. HAZARDS IDENTIFICATION

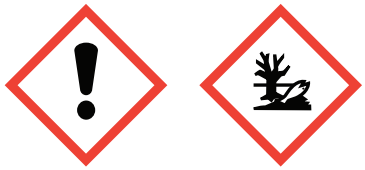
Emergency Overview: WARNING! CAUSES EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. Do not breathe vapor or mist. Do not get on skin or clothing. Avoid contact with eyes. Wash thoroughly after handling.

Classification of the substance
Hazard categories:
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Respiratory/skin sensitization: Skin Sens. 1
Hazardous to the aquatic environment: Aquatic Chronic 2
Hazard Statements:
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

Label Elements
Hazardous components that must be listed on the label:
Epoxy resin, May produce an allergic reaction.

Signal word: Warning

Pictograms:



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

Precautionary Statements
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.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P321 Specific treatment (see warning on this label).
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P363 Wash contaminated clothing before reuse.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P391 Collect spillage.
P501 Dispose of contents/container IAW local, state, or federal regulations.

General Information: This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Repeated or prolonged contact causes sensitization, asthma and eczemas.

Read the entire SDS for a more thorough evaluation of the hazards.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	% By Weight	CAS Number
Bisphenol A-(epichlorhydrin), Bisphenol A epoxy resin	60-100%	25085-99-8

4. FIRST-AID MEASURES

General advice: Seek medical advice or medical attention if condition persists.
Eye contact: Rinse immediately with plenty of water for at least 15 minutes.
Skin Contact: Immediately remove any extraneous chemical, if possible without delay. Take off contaminated clothing and shoes immediately. Wash body off with soap and plenty of water.
Ingestion: Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position and turn victim's head to the side. Do not induce vomiting.

Inhalation: Move to fresh air. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.
Notes to Physician: No specific treatment. Treat symptomatically. Call the poison control center immediately if large quantities have been ingested.

5. FIRE-FIGHTING MEASURES

Suitable Fire Extinguishing Media: Water fog, foam, dry chemical, carbon dioxide.

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. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
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.

Danger of Explosion: This product does not present an explosion hazard
Flammable Limits: Not Available
Explosion Limits: Not Available
Auto-Ignition: Not Available
Flash Point: >200°C (>392°F) [DIN 51758 EN 22719 (Pensky-Martens Closed Cup)]

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. 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: Water polluting material. May be harmful to the environment if released in large quantities. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform authorities if the product has caused environmental pollution (sewers, drains, waterways or soil).

Methods for Cleaning up: Stop leak if without risk. Move containers from spill area. Approach release from upwind. 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). 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.

7. HANDLING AND STORAGE

Handling: Put on appropriate personal protective equipment, PPE (see Section 8). Eating and drinking should be prohibited in areas where this material is handled, stored and processed. Remove contaminated PPE or clothing, wash hands and face before eating and drinking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Use only in area provided with appropriate exhaust ventilation. Empty containers retain product residue and can be hazardous. Do not get in eyes, skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment.

Storage: Store between 15-27ºC (60-80ºF) in accordance with local regulations away from sources of heat, ignition, and direct sunlight. Store in original container. Keep in a dry, well-ventilated area, and away from incompatible materials (see section 10). 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 or unapproved containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Special Note for Exposure Control: Consult local authorities for acceptable exposure limits.
OSHA PEL (TWA): Not Determined
ACGIH TLV (TWA): Not Determined
NIOSH REL (TWA): Not Determined

Engineering measures: No special ventilation requirements. If possible work in ventilated area. Provide natural or explosion-proof fan to ensure adequate ventilation, especially in confined area. Avoid contact with skin, eyes, and clothing.
Environmental exposure controls: Construct a dike to prevent spreading. 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.
Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating and drinking, smoking or using the lavatory and at the end of the working period. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection:
Respiratory - In case of inadequate ventilation wear respiratory protection. 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.
Eyes – Splash proof safety glasses.
Skin - Rubber or plastic apron. Rubber or plastic gloves. Long sleeved clothing or wear protective sleeves. Remove and wash contaminated clothing before re-use.
Other protective equipment information - 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. Neoprene gloves. PVC disposable gloves. Nitrile rubber. Butyl rubber. Impervious gloves. (The breakthrough time of the selected glove(s) must be greater than the intended use period.)

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Odor:	Slightly/Faint Epoxy
Color:	Clear
PH Value:	7 [conc. (%w/w): 50%]
Boiling Point:	>200ºC (>392ºF)
Melting Point:	Not Available
Vapor Pressure (25ºC):	Not Available
Vapor Density:	Not Available
Density (Nominal):	1.13
Solubility in water:	Insoluble
Evaporation Rate (Butyl Acetate = 1):	Not Available
Volatile Organic Compounds:	Nil

10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions. Hazardous reactions will not occur.
Conditions to avoid: No specific data.
Materials to avoid: Strong acids, strong bases, strong oxidizing agents.
Hazardous decomposition products: Under normal conditions hazardous decomposition products should not be produced.
Hazardous polymerization: Under normal conditions hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicity Studies: Bisphenol A-(epichlorhydrin), Bisphenol A epoxy resin
Acute Oral Toxicity – Low toxicity, LD50 >2000 mg/kg.
Acute Dermal Toxicity – Low toxicity, LD50 >2000 mg/kg.
Medical Conditions Aggravated By Overexposure: Pre-existing skin disorders may be aggravated by over-exposure to this product.

Potential chronic health effects:
Chromic Effects - Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Target Organs - No known significant effects or critical hazards.
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

Environmental Effects: Toxic to aquatic organisms, and may cause long-term adverse effects in the aquatic environment. This product shows a high bioaccumulation potential. Water polluting material. May be harmful to the environment if released in large quantities.

Test	Result	Dose	Inoculum
OECD Derived from OECD 301F (Biodegradation Test)	5%-Not Readily 28 days	20 mg/L Oxygen consumption	No Data

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with federal, state and local regulations.
The generation of waste should be avoided or minimized wherever possible. Empty containers should be taken to an approved waste-handling site for recycling or disposal. Incineration or landfill should only be considered when recycling is not feasible. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Refer to 40 CFR § 261.7 (residues of hazardous waste in empty containers).

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

Regulatory Information	UN number	Classes	Packing Group	Proper Shipping Name
DOT	NA	NA	NA	Not Regulated
TDG	NA	NA	NA	Not Regulated
IMDG	UN3082	9	III	Environmentally hazardous substance, liquid, n.o.s. (BISPHENOL A EPOXY RESIN) Marine pollutant.
IATA	UN3082	9	III	Environmentally hazardous substance, liquid, n.o.s. (BISPHENOL A EPOXY RESIN)

NA = Not Applicable

15. REGULATORY INFORMATION

Country	Regulatory List	Notification
USA	TSCA	Included on Inventory
EU	EINECS	Included on Inventory
Canada	DSL	Included on Inventory
China	SEPA	Included on Inventory
Japan	ENCS	Included on Inventory

OSHA: This product is considered to be a hazardous chemical under 29 CFR 1910.1200s.
OSHA/HCS Classification – Irritating material, Sensitizing material.
SARA 302/304/311/312 extremely hazardous substances – No ingredients listed.
SARA 311/312 Hazard Identification - No ingredients listed.
SARA 313 - No ingredients listed.
California Safe Drinking Water & Toxic Enforcement Act (Proposition 65) – WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer. 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
1-chloro-2,3-epoxypropane CAS: 106-89-8	Yes	Yes	Yes	No

Canadian WHMIS: Class D2B: Material causing other toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

Full text of R phrases referred to under Sections 2 and 3

36/38	Irritating to eyes and skin.
43	May cause sensitization by skin contact.
51/53	Toxic to aquatic organisms, and may cause long-term adverse effects in the aquatic environment.

Full text of H statements referred to under Sections 2 and 3

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.

Hazardous Material Information System (HMIS):

Scale 0-4		*NFPA*	*HMIS*
4=Severe Hazard	**Health**	**2**	**2**
3=Serious Hazard	**Flammability**	**1**	**1**
2=Moderate Hazard	**Reactivity**	**0**	**0**
1=Slight Hazard			
0=Minimal Hazard			

THE INFORMATION AND RECOMMENDATIONS PRESENTED HEREIN ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE. USER MUST CONDUCT THEIR OWN TESTS TO DETERMINE THE SUITABILITY OF THESE PRODUCTS FOR THEIR PARTICULAR PURPOSES AND USAGE. BECAUSE OF NUMEROUS FACTORS AFFECTING RESULTS, PUMA-CRETE CORP AND ITS AFFILIATION MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PURPOSE, OTHER THAN MATERIAL CONFORMS TO OUR APPLICABLE CURRENT SPECIFICATIONS. PUMA-CRETE CORP ASSUMES NO LEGAL RESPONSIBILITY FOR USE OR RELIANCE ON THE INFORMATION CONTAINED IN THIS SAFETY DATA SHEET.

END OF DATA SHEET

Safety Data Sheet

Date Issued: 7/12/18

1. CHEMICAL PRODUCTS AND COMPANY IDENTIFICATION

Product Names/Trade Names: 105c-PumaPOXY-Hardener
Chemical Family: Modified Amine Adduct
Manufacturer's Name: PUMA-CRETE Corp.
177 Huntington Ave. Boston, MA 02115
www.PUMACRETE.NET 857-226-8247

Company 24 Hour Emergency Response Information: CHEMTEL: 1-800-255-3924
Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

2. HAZARDS IDENTIFICATION

Emergency Overview: Corrosive. Respiratory irritant. Severe skin irritant. Severe eye irritant. May cause long-term adverse effects in the aquatic environment.

Classification of the Substance
Hazard Categories:
Acute toxicity: Acute Tox. 4
Skin corrosion/irritation: Skin Corr. 1B
Serious eye damage/eye irritation: Eye Dam. 1
Respiratory/skin sensitization: Skin Sens. 1
Aspiration hazard: Asp. Tox. 1
Hazardous to the aquatic environment: Aquatic Chronic 3

Label Elements
Hazardous components that must be listed on the label:

Signal Word: Danger
Pictograms: GHS05 – GHS07 – GHS08

Hazard Statements:
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H304 May be fatal if swallowed and enters airways.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
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.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P330 Rinse mouth.
P331 Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P321 Specific treatment (see warning on this label).
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P352 Wash with plenty of soap and water.
P363 Wash contaminated clothing before reuse.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P321 Specific treatment (see warning on this label).
P305+P351+P338 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 or doctor/physician.
P405 Store locked up.
P501 Dispose of contents/container to IAW local, state, and federal regulations.

General Information: This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Prolonged contact may result in chemical burns and permanent damage. Repeated or prolonged contact causes sensitization, asthma and eczemas.

Read the entire SDS for a more thorough evaluation of the hazards.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	% By Weight	CAS Number
Polyamine Adduct	30 - 60%	trade secret
Propionic Acid	1 - 10%	79-09-4
1-Methoxy-2 propanol	2.5 - 10%	107-98-2

4. FIRST-AID MEASURES

General Advice: Seek medical attention immediately if condition persists. Call a poison center or physician.
Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes occasionally lifting upper and lower eye lids.
Skin Contact: Immediately remove any extraneous chemical, if possible without delay. Take off contaminated clothing and shoes immediately. Wash body off with soap and plenty of water. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Clean clothing and shoes prior to reuse.
Ingestion: Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position and turn victim's head to the side. **Do not induce vomiting.**
Inhalation: Move to fresh air and keep at rest in a position comfortable for breathing. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.
Notes to Physician: No specific treatment. Treat symptomatically. Call the poison control center immediately if large quantities have been ingested. Corticosteroid cream has been effective and treating skin irritation in similar products with similar chemistries. Following severe exposure, medical follow-up should be monitored for at least 48 hours.

5. FIRE-FIGHTING MEASURES

Suitable Fire Extinguishing Media: Carbon dioxide (CO_2). Foam. Dry chemical. Water fog or fine spray.
Specific Hazards: May generate ammonia gas. May generate toxic nitrogen oxide gases. **Do not allow run-off from fire fighting to enter drains or water courses.** Incomplete combustion may form carbon monoxide (CO), carbon dioxide (CO_2) and nitrogen oxides (NO_X). Ammonia gas may be liberated at high temperatures. Burning produces noxious and toxic fumes. Downwind personnel must be evacuated.
Special Protective Equipment for Fire-Fighters: Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Unsuitable Extinguishing Media: Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.
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.

Danger of Explosion: This product does not present an explosion hazard
Flammable Limits: Not Available
Explosion Limits: Not Available
Auto-Ignition: 435ºC (815ºF)
Flash Point: >100°C (>212°F) [DIN 51758 EN 22719 (Pensky-Martens Closed Cup)]

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. 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: Water polluting material. May be harmful to the environment if released in large quantities. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform authorities if the product has caused environmental pollution (sewers, drains, waterways or soil).

Methods for Cleaning Up: Stop leak if without risk. Move containers from spill area. Approach release from upwind. 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). 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.

7. HANDLING AND STORAGE

Handling: Put on appropriate personal protective equipment, PPE (see Section 8). Eating and drinking should be prohibited in areas where this material is handled, stored and processed. Remove contaminated PPE or clothing, wash hands and face before eating and drinking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Use only in area provided with appropriate exhaust ventilation. Empty containers retain product residue and can be hazardous. Do not get in eyes, skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment.

Storage: Store between 15-27ºC (60-80ºF) in accordance with local regulations away from sources of heat, ignition, and direct sunlight. Store in original container. Keep in a dry, well-ventilated area, and away from incompatible materials (see section 10). 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, unapproved or reactive containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Special Note for Exposure Control: Consult local authorities for acceptable exposure limits.
OSHA PEL (TWA): Not Determined
ACGIH TLV (TWA): Not Determined
NIOSH REL (TWA): Not Determined

Engineering Measures: Work in well-ventilated area. Provide natural or explosion-proof fan to ensure adequate ventilation, especially in confined area. Avoid contact with skin, eyes, and clothing.
Environmental Exposure Controls: Construct a dike to prevent spreading. 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.
Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating and drinking, smoking or using the lavatory and at the end of the working period. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection:
Respiratory - In case of inadequate ventilation wear respiratory protection. 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.
Eyes – Splash proof safety glasses.
Skin - Rubber or plastic apron. Rubber or plastic gloves. Long sleeved clothing or wear protective sleeves. Remove and wash contaminated clothing before re-use.
Other Protective Equipment Information - 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. Neoprene gloves. PVC disposable gloves. Nitrile rubber. Butyl rubber. Impervious gloves. (The breakthrough time of the selected glove(s) must be greater than the intended use period.)

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Odor:	Slight chemical, ether
Color:	Pale straw-yellow liquid
PH Value:	Alkaline
Boiling Point/Condensation Point:	100ºC (212ºF)
Melting Point/Freezing Point:	0ºC (32ºF)
Vapor Pressure:	Not available
Vapor Density:	Not determined
Density (Nominal):	1.07 g/cm^3 [20°C (68°F)]
Solubility in Water:	Nil
Evaporation Rate (Butyl Acetate = 1):	Not determined
Volatile Organic Compounds:	Nil
Viscosity:	Dynamic (temp.): (14,000 – 22,000 cP)

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions. Hazardous reactions will not occur.
Conditions to Avoid: Direct source of heat. Static discharge.
Materials to Avoid: Strong oxidizers, acids and bases.
Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.
Reactive metals (e.g. sodium, calcium, zinc etc.).
Hazardous Decomposition Products: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide.
Hazardous Polymerization: Under normal conditions hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:
Acute Oral – LD50, >2000 mg/kg. Rat
Acute Dermal – LD50, >2000 mg/kg. Rabbit
Skin Irritation - Rabbit: Corrosive. (Literature Data)
Eye Irritation - Rabbit: Risk of serious damage to eyes. (OECD Guideline 405) (Literature data)
Sensitization - Guinea pig: Maximization test - sensitizing (OECD Guideline 406) (Literature data)

Genetic Toxicity:
The substance was not mutagenic in bacteria.
The substance was not mutagenic in mammalian cell culture.
The substance was not mutagenic in a test with mammals.
Literature data.

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects:
Acute Fish Toxicity – LC50, 130 mg/l. Golden Orfe
EC10, 90 mg/l. Bacteria – p. putida
Biodegradability – not expected to be readily biodegradable

Harmful to Aquatic Organisms. May cause long term damage to environment.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with federal, state and local regulations.
The generation of waste should be avoided or minimized wherever possible. Empty containers should be taken to an approved waste-handling site for recycling or disposal. Incineration or landfill should only be considered when recycling is not feasible. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Refer to 40 CFR § 261.7 (residues of hazardous waste in empty containers).

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

Regulatory Information	UN Number	Classes	Packing Group	Proper Shipping Name
DOT	UN2735	8	III	Amines, liquid, corrosive, n.o.s. (Contains Polyamine Adduct)
IATA	UN2735	8	III	Amines, liquid, corrosive, n.o.s. (Contains Polyamine Adduct)
IMDG	UN2735	8	III	Amines, liquid, corrosive, n.o.s. (Contains Polyamine Adduct)
TDG	UN2735	8	III	Amines, liquid, corrosive, n.o.s. (Contains Polyamine Adduct)

15. REGULATORY INFORMATION

Country	Regulatory List	Notification
USA	TSCA	Included on Inventory
EU	EINECS	Included on Inventory
Canada	DSL	Included on Inventory
China	SEPA	Included on Inventory
Japan	ENCS	Included on Inventory

OSHA: This product is considered to be a hazardous chemical under 29 CFR 1910.1200s.
SARA Section 311 AND 312 - This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: IMMEDIATE HEALTH HAZARD
SARA Section 313 - This product contains the following substances 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: None
California Safe Drinking Water & Toxic Enforcement Act (Proposition 65) – This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other reproductive harm.

Canadian WHMIS: Class E: Corrosive material, D2B: Toxic material causing other toxic effects.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

Full text of R phrases referred to under Sections 2 and 3

20/22 Harmful by inhalation and if swallowed.
21/22 Harmful in contact with skin and if swallowed.
22 Harmful if swallowed.
34 Causes burns.
35 Causes severe burns.
36/38 Irritating to eyes and skin.
37/38 Irritating to respiratory system and skin.
41 Risk of serious damage to eyes.
43 May cause sensitization by skin contact.
50 Very toxic to aquatic organisms.
52 Harmful to aquatic organisms.
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
53 May cause long-term adverse effects in the aquatic environment.

Full text of H statements referred to under Sections 2 and 3

H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Hazardous Material Information System (HMIS):

Scale 0-4		*NFPA*	*HMIS*
4=Severe Hazard	**Health**	**2**	**2**
3=Serious Hazard	**Flammability**	**1**	**1**
2=Moderate Hazard	**Reactivity**	**0**	**0**
1=Slight Hazard			
0=Minimal Hazard			

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