Section 1: Product and Company Identification

1.1 Product Identifier

Trade Name	Epoxytec CPP Gel, A Component
Product Number	C311-A
Product Description	Epoxy Formulation
Recommended Use	Protective Coating

1.2 Details of the Supplier of the Safety Data Sheet

Company	EPOXYTEC INTL, INC. 3000 N 29 CT HOLLYWOOD, FLORIDA 33023 Telephone (General): 954-961-4656

1.3 Emergency Telephone Number

3E Company Contract # 14738	N. America/S. America (+)1.760.476.3962 Europe (+)1.760.476.3962 Asia Pacific (+)1.760.476.3960 Middle East/Africa (+)1.760.476.3959

Section 2: Hazard(s) Identification

The product is classified and labeled according to the Globally Harmonized System (GHS) Classification in accordance with 29 CFR 1910 (OSHA HCS)

2.1. Classification of the mixture

Contains Epoxy Resin
Fiber
Ceramic Powder

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Carcinogens: No carcinogens as a mixture. Any and all carcinogens reported here for pigments or fillers are related to airborne dust exposure, they are not known to be hazardous after blended into a liquid. If product is machined, sanded or grinded, in an airborne dry form, these substances can cause severe lung diseases if you breathe their dusts, see Section 8 for recommended respiratory protection.

Toxic to aquatic organisms, (Category 2), H411.

2.2. GHS Label elements, including precautionary statements

Pictogram	Signal Word	Hazard Category	Hazard Statement
	Warning	1.2	Causes skin irritation Causes serious eye irritation May cause an allergic skin reaction
	Warning	2	Toxic to aquatic life with long lasting effects

Signal word	Code	Warning
Hazard Statements	H315 H317 H319 H335 H411	Causes skin irritation May cause an allergic skin reaction Causes serious eye irritation May cause respiratory irritation Toxic to aquatic life with long lasting effects.
Precautionary Statements	P201 P202 P260 P264 P270 P273 P280 P391	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves, eye and face protection. Collect spillage.
Supplementary Precautionary Statements	P308 + P313 P314 P302+352 P303 + P361 + P353 P305 + P351 + P338 P332 + P313 P337 + P313 P362 P391	If exposed or concerned: Get medical advice/ attention. IF IN EYES: Rinse cautiously with water for several minutes. Get medical advice/ attention if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. If ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. Collect spillage
Storage/Disposal	P501 P405 P404 + P233	Dispose of contents/ container to an approved waste disposal plant. Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Section 3: Composition/Information on Ingredients

Chemical Characterization: Mixture
Description Mixture: Consisting of the following components
Trade Secret Components: Contains trade secret component. For Trade Secret information refers to 29 CFR 1910.120.

Materials	CAS Number	Percentage, %
Diglycidyl ether of Bisphenol A (Number average MW <= 700)	25085-99-8	70-90
Silica (Quartz)	14808-60-7	5-10
Fiber	Proprietary*	1-5
Ceramic Powder	66402-68-4	10-25

: Chemical Identity and/or exact percentage (concentration) of composition has been withheld as a trade secret

Section 4: First Aid Measures

4.1 Description of first aid measures

General advice
Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled,
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Get medical attention.
In case of skin contact,
Remove contaminated clothing/shoes and wipe excess from skin. Flush skin with water. Follow by washing with soap and water. In case of inflammation (redness, and irritation) obtain medical attention. Show this sheet to the doctor. Do not reuse clothing until cleaned. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse.
In case of eye contact,
Immediately flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention.
If swallowed,
Never give anything by mouth to an unconscious person. Rinse mouth with water. Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical advice.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in toxicological effects on section 11.

4.3 Indication of immediate medical attention and special treatment needed
No specific antidote. Treatment of exposure should be directed at the control of symptoms and clinical condition of the patient.

Section 5: Firefighting Measures

Flammability of the product
Product contains epoxy. In a fire or if heated a pressure increase will occur and the container may burst.

5.1. Extinguishing media
Fire can be extinguished using: Foam. Alcohol resistant foam. Dry chemicals, sand, dolomite etc.
Do not use direct water stream. May spread fire.

5.2. Special hazards arising from the substance or mixture
During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolics, Carbon monoxide, Carbon dioxide, Silicon dioxide.

5.3. Special firefighting Procedure
Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots, and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse.

Section 6: Accidental Release Measures

Wear self-contained breathing apparatus and full protective clothing in case of fire.

6.1. Personal precautions, protective equipment and emergency procedures
No action shall be taken involving any personal risk or without suitable training. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Use appropriate respirator when ventilation is inadequate and use personal protective clothing as described in Section 8 of this safety data sheet. See section 11 for additional information on health hazards.

6.2. Environmental precautions
Do not let product enter drains, do not allow to sewers/surface or ground water. Prevent spillage. See Section 12, Ecological information.

6.3. Methods and material for containment and cleaning up
Wear necessary protective equipment. Vacuum or sweep up material and place in designated labeled waste container. Wash thoroughly with soap and hot water after dealing with a spillage. Dispose of via a licensed waste disposal contractor. For waste disposal, see section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Put on appropriate personal protective equipment (see section 8 of SDS). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Avoid contact with skin,

eyes and clothing. Wash thoroughly after handling. Use soap and water or a commercial hand cleaner. Person with a history of skin sensitization problems should not be employed in any process in which this product is used.
Handle with good mechanical ventilation and local exhaust. Avoid inhalation of vapor or mist. For precautions see section 2.2. Avoid use of electric band heaters. Failures of electric band heaters have been reported to cause drums of epoxy resin to catch fire.

7.2 Conditions for safe storage, including any incompatibilities
Store in original container protected from direct sunlight, keep container tightly closed in a dry and well-ventilated place, away from heat, and strong oxidizers.
Recommended storage temperature 35-109 °F (2-43 °C).

Section 8: Exposure Controls/Personal Protection

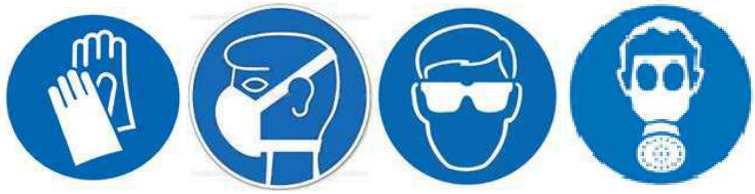
8.1. Control parameters

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.

The limit values must be followed strictly if dust form occurs during any of the use. As a classified Carcinogen, there may be NO safe level of exposure; reduce all contact to the lowest possible level.

Ingredient	CAS #	Agency	Limit type
Silica (quartz)	14808-60-7	ACGIH OSHA and MSHA NIOSH	TLV, -TWA: 0.025 mg/m^3 PEL, -TWA 10mg/m^3 REL, -0.05 mg/m^3
Ceramic Powder	66402-68-4	ACGIH OSHA	TLV, -TWA: 10 mg/m^3 PEL,- TWA: 15mg/m^3
Fiber	Proprietary	ACGIH NIOSH	TLV, -TWA: 10 mg/m^3 TWA: 15mg/m^3

8.2. Personal Protective Equipment



8.3. Exposure controls

Respiratory Protection
In case of inadequate ventilation wear respiratory protection. If cured product is machined, sanded or grinded, wear particulate respirators or other air-purifying respirators based on the specific airborne concentration found in the workplace.

Hand Protection
Wear chemical-resistant gloves such as: Nitrile, butyl rubber, neoprene, and polyvinyl chloride. Gloves should conform to EN374

Eye Protection
Safety eyewear complying with an approved standard should be used: chemical goggles or safety glasses with side shields.

Body Protection
If frequent or prolonged skin contact with epoxy resin systems is unavoidable or if splashing may occur, protective equipment such as gloves, goggles should be worn. Protective clothing should be made of a material that will protect you from the chemicals in the epoxy resin system you use.

Hygiene measures
Wash hands at the end of each work shift and before eating, smoking and using the lavatory. Wash promptly if skin becomes wet or contaminated. When using do not eat, drink or smoke. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to workstation location.

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties of Mixture

Appearance

Form	Paste
Color	Light Grey
Odor	Mild epoxy odor
Density	1.12 g/cm^3
Viscosity	1120,000-1490,000 cPs
Boiling Point (deg. C)	Not established

Basic Physical and Chemical Properties of Components

Diglycidyl ether of Bisphenol A, CAS # 25085-99-8	
Physical State: Viscous, Liquid	Flash Point: Closed Cup 264 - 268 °C (507 - 514 °F)
Color: Colorless to yellow	Specific Gravity: (H2O = 1) 1.16 20 °C/20 °C Literature
Odor: Odorless to mild	Solubility in water (by weight): 5.4 - 8.4 mg/l @ 20 °C
Boiling Point (760 mmHg): 320 °C (608 °F)	Liquid Density: 1.16 g/cm3 at 25 °C
Silica (quartz), CAS # 14808-60-7	
Physical State: Powder	Melting Point: 1,610 °C (2,930 °F)
Color: White	Boiling Point: 2230 °C (4046 °F)
Odor: Odorless	Specific Gravity: 2.65
Ceramic Powder, CAS # 66402-68-4	
Physical State: Crystalline	Boiling point : 3,000 °C (5.432 °F)
Color: White	Melting point : 1,843 °C (3349 °F)
Odor: Odorless	Specific Gravity: 3.4 - 4.3
Fiber, Proprietary	
Physical State: Fibrous Powder	pH value: Neutral to slightly acidic (at 100 g/l H_2O at 20 °C)
Color: White, Grey	Ignition temperature: Approx. 350 °C- 500 °C
Odor: Odorless	Thermal Decomposition: 200 °C

Section 10: Stability and Reactivity

Reactivity
No dangerous reaction known under conditions of normal use.

Chemical Stability
Stable under recommended storage conditions. See Storage, Section 7.

Thermal Decomposition and Conditions to be avoided
Avoid short term exposures to temperatures above 300 °C (572 °F). Avoid prolonged exposure to temperatures above 250 °C (482 °F). Potentially violent decomposition can occur above 350 °C (662 °F). Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid.

Incompatible materials
Avoid contact with oxidizing materials. Avoid contact with: acids, bases and oxidizing agents such as fluorine, chlorine. Avoid unintended contact with amines.

Hazardous Decomposition Products
Decomposition products depend upon temperature, air supply and the presence of other materials.
Gases are released during decomposition. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.

Possibility of Hazardous Reactions
Polymerization will not occur by itself. Masses of more than one pound (0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build-up.

Section 11: Toxicological Information

Resins based on the diglycidyl ether of bisphenol A (DGEBPA),
Eye damage/eye irritation
May cause moderate eye irritation.
Skin corrosion/irritation
Brief contact may cause moderate skin irritation with local redness. Sensitization
Skin
Has caused allergic skin reactions in humans. Has demonstrated the potential for contact allergy in mice.
Respiratory
No relevant data found.
Repeated Dose Toxicity
Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.
Developmental Toxicity
Did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.
Reproductive Toxicity
In animal studies, did not interfere with reproduction.
Genetic Toxicology
In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

Toxicological information on ingredients:

Name	Route	Species	Value
Diglycidyl ether of Bisphenol A	Dermal	Rabbit	LD50 - 23,000 mg/kg
	Ingestion	Rat	LD50 - 15,000 mg/kg
Silica (Quartz)	Ingestion	Rat	LD50 - 3,160 mg/kg
Ceramic Powder	Ingestion	Rat	LD50: > 5,000 mg/kg
	Inhalation	Rat	LC50 - > 6.82 mg/l, 4 h
Fiber	Dermal	Rabbit	LD50- > 2,000 mg/kg
	Ingestion	Rat	LD50 - > 5,000 mg/kg

Carcinogenicity Classification

DIGLYCIDYL ETHER OF BISPHENOL A
ACGIH : Not classified
IARC : Not classified
NTP : Not classified
OSHA : Not classified
EU : Not classified

FIBER
IARC : Not classified
OSHA : Not classified

SILICA (QUARTZ)
Limited evidence of carcinogenicity in human studies. Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis.

IARC : 1 - Group 1: Carcinogenic to humans (Quartz)
ACGIH : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP : Known to be human carcinogen (Quartz)
OSHA : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Section 12: Ecological Information

OVERVIEW: No ecological information available on the specific mixture.

Eco toxicological data has not been determined for this product. The information is given below is based on main component of this product. According to this, Diglycidyl ether of Bisphenol A is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

Mobility in soil: Potential for mobility in soil is low

Ecological information of components

Name	Toxicity to fish	Toxicity to daphnia	Toxicity to algae
Diglycidyl ether of Bisphenol A	Rainbow trout LC50 (96 h): 2 mg/l	EC50 (48 h): 1.8 mg/l	ErC50 (72 h): 11 mg/l
Ceramic Powder	Fathead minnow LC50 (96 h): 1,000 mg/l	EC50 (48 h): 1,000 mg/l	EC50 (72 h): 61 mg/l

Persistence and Degradability
Based on stringent OECD test guidelines, Diglycidyl ether of Bisphenol A cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

Section 13: Disposal Considerations

The generation of waste should be avoided or minimized. Do not dump into any sewers, on the ground, or into any body of water. For disposal of residual product, mix by weight 1 parts Part A with 1 parts Part B. Allow mix to solidify in well ventilated area or outdoors. Regulations may vary in different locations. Dispose of this product, and/or any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Labels should not be removed from containers until they have been cleaned. Empty containers may contain hazardous residues.

Section 14: Transport Information

DOT (Non-Bulk)
NOT REGULATED

DOT (Bulk)
NOT REGULATED

IMO/IMDG
Proper Shipping Name : Environmentally Hazardous Substance, Paste, N.O.S (Epoxy Resin)
Technical Name : Diglycidyl ether of Bisphenol A
Hazard Class : 9
UN/ID Number : 3077
Packing Group : III
Marine Pollutant : Yes

IATA
Proper Shipping Name : Environmentally Hazardous Substance, Paste, N.O.S (Epoxy Resin)
Technical Name : Diglycidyl ether of Bisphenol A
Hazard Class : 9
UN/ID Number : 3077
Packing Group : III
Marine Pollutant : Yes

Section 15: Regulatory Information

OSHA Hazard Communication Standard
Epoxy is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29CFR 1910.1200**.**

Superfund Amendments and Reauthorization Act (SARA) of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 (Hazardous Chemical Storage Reporting Requirements)

Acute Health Hazard

Diglycidyl ether of Bisphenol A
Immediate (Acute) Health Hazard: Yes, A
Delayed (Chronic) Health Hazard: No
Fire Hazard: No
Reactive Hazard: No
Sudden Release of Pressure Hazard: No

Silica (Quartz), Halloysite nanoclay
Delayed (Chronic) Health Hazard: Yes, C

Superfund Amendments and Reauthorization Act (SARA) of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313 (Toxic Chemical Release Inventory)

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components
Fiber

New Jersey Right To Know Components
Fiber

California Prop. 65 Components (Safe Drinking Water and Toxic Enforcement Act of 1986)

Chemicals known to cause cancer: 14808-60-7/Quartz (SiO_2)
Chemicals known to cause reproductive toxicity: None of the ingredients is listed.

(DSL) Canada Domestic Substance List
All components of this product are on the DSL (Canada Domestic Substance List) or are exempt from DSL requirements.

Cancerogenity categories
EPA: None of the ingredients is listed.
IARC: 14808-60-7 Quartz (SiO_2)
NTP: 14808-60-7 Quartz (SiO_2)

Section 16: Other Information

Contains epoxy constituents, and ceramic powders. See information supplied by the manufacturer.

HMIS Rating (Scale 0-4)
Health hazard: 2
Flammability: 1
Reactivity Hazard: 1

NFPA Rating (Scale 0-4)
Health hazard: 2
Flammability Hazard: 1
Reactivity Hazard: 1

Caution: HMIS ratings are based on a 0-4 rating scale
0= Minimal Hazard
1= Slight
2= Moderate
3= High
4= Extreme

Abbreviations and acronyms

A	*Acute Health Hazard*
ACGIH	*American Conference of Governmental Industrial Hygienists*
C	*Chronic Health Hazard*
CFR	*Code of Federal Regulations*
DOT	*Federal Department of Transportation*
DSL	*Domestic Substance List*
EC50	*Half maximal effective concentration*
ErC50	*EC50 in terms of reduction of growth rate*
EU	*European Union*
GHS	*The Globally Harmonized System of Classification and Labelling of Chemicals*
HMIS	*Hazardous Material Identification System*
HCS	*Hazard Communication Standard*
IARC	*International Agency for Research on Cancer*
IATA	*The International Air Transport Association*
IMDG	*International Maritime Dangerous Goods*
IMO	*International Maritime Organization*
LD50/LC0	*Lethal Concentration/Dose, 50 percent*
MSHA	*Mine Safety and Health Administration*
NFPA	*National Fire Protection Association*
NIOSH	*National Institute for Occupational Safety and Health*
NTP	*National Toxicology Program*
OELs	*Occupational Exposure Limits*
OECD	*Organization for Economic Co-operation and Development*
OSHA	*Occupational Safety and Health*
PEL	*OSHA Permissible Exposure Limit*
REL	*Recommended Exposure Limit*
SARA	*Superfund Amendments and Reauthorization Act*
TLV	*ACGIH Threshold Limit Value*
TWA	*Time-Weighted Average*
WEEL	*Workplace Environmental Exposure Levels*

Special Precautions: *Silica fillers in a dry form can cause severe lung diseases if you breathe their dusts. Do not sand or grind hardened epoxies that contain these substances. They are not known to be hazardous after blended into a liquid. Wet sanding is suggested to eliminate airborne dust, if product is machined or ground. The only other exposure limits established for ingredients of this product apply to nuisance dusts from inert fillers. These fillers are blended into a liquid and pose no hazard as supplied.*

Explanation and Disclaimer: *Each customer or recipient has to become aware of and understand the data given in this SDS and any hazards associated with the product. The information is provided in good faith and believed to be accurate; however, does not appear all inclusive and shall be used only as a guide. Regulatory requirements are subject to change and may differ between various locations, it is buyer's responsibility to ensure that comply with all state, federal or local laws. The information in this document is based on the present state of our knowledge applicable to the product with regard to safety precautions. The information presented in here relates only to the product as shipped, and it is the buyer's responsibility to determine the conditions necessary for the safe use of this product. If you have received this SDS from any source other than Epoxytec or its authorized agent, the information contained in it may have been modified from the original document.*

EPOXYTEC products are designed for industrial use only.

Section 1: Product and Company Identification

Product Identifier

Trade Name	Epoxytec CPP Gel, B Component
Product Number	C311-B
Product Description	Epoxy Formulation
Recommended Use	Protective Coating

Details of the Supplier of the Safety Data Sheet

Company	EPOXYTEC INTL, INC. 3000 N 29 CT HOLLYWOOD, FLORIDA 33023 Telephone (General): 954-961-4656

Emergency Telephone Number

3E Company Contract # 14738	N. America/S. America (+)1.760.476.3962 Europe (+)1.760.476.3962 Asia Pacific (+)1.760.476.3960 Middle East/Africa (+)1.760.476.3959

Section 2: Hazard(s) Identification

The product is classified and labeled according to the Globally Harmonized System (GHS) Classification in accordance with 29 CFR 1910 (OSHA HCS)

2.1. Classification of the mixture

Chemical Family: Amidoamine

Contains Polyamide resin
Cyclic ethylene amine
Nonyl phenol
Silica (Quartz)
Ceramic Powder

Acute toxicity, Oral, H302
Skin corrosion, H314
Causes skin irritation, H315
Skin sensitization, H317
Causes serious eye damage, H318
Reproductive toxicity, H361
Very toxic to aquatic life with long lasting effects, H410

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Carcinogens: No carcinogens as a mixture. Any and all carcinogens reported here for pigments or fillers are related to airborne dust exposure, they are not known to be hazardous after blended into a liquid. If product is machined, sanded or grinded, in an airborne dry form, these substances can cause severe lung diseases if you breathe their dusts, see Section 8 for recommended respiratory protection.

2.2. GHS Label elements, including precautionary statements

Pictogram	Signal Word	Hazard Category	Hazard Statement
	Warning	4	Harmful if swallowed or if inhaled Harmful in contact with skin Causes skin irritation Causes serious eye irritation May cause an allergic skin reaction
	Danger	1	Causes severe skin burns and eye damage
	Warning	2	Very toxic to aquatic life Very toxic to aquatic life with long lasting effects
	Warning	1	Suspected of damaging fertility or the unborn child Reproductive toxicity

Signal word	Code	Warning
Hazard Statements	H302 H314 H315 H317 H318 H361 H400 H410	Harmful if swallowed. Causes severe skin burns and eye damage Causes skin irritation May cause an allergic skin reaction Causes serious eye damage Suspected of damaging fertility or the unborn child. Very toxic to aquatic life Very toxic to aquatic life with long lasting effects
Precautionary Statements (Prevention)	P202 P261 P264 P270 P272 P273 P280 P281	Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves, eye and face protection. Use personal protective equipment as required.
Supplementary Precautionary Statements (Response)	P301 + P312 + P330 P308 + P313	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. IF exposed or concerned: Get medical advice/ attention.

	P304 + P340+ P312	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
	P305 + P351+ P338	IF IN EYES: Rinse cautiously with water for several minutes.
	P310	Remove contact lenses, if present and easy to do. Continue rinsing.
	P332 + P313	Immediately call a POISON CENTER or doctor/ physician.
	P333 + P313	If skin irritation occurs: Get medical advice/attention.
	P337 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
	P363	If eye irritation persists: Get medical advice/attention.
	P391	Wash contaminated clothing before reuse.
		Collect spillage.
Precautionary Statements (Storage/Disposal)	P403 + P235	Store in a well-ventilated place. Keep cool.
	P405	Store locked up.
	P501	Dispose of contents/ container to an approved waste disposal plant.

Section 3: Composition/Information on Ingredients

Chemical Characterization: Amidoamine
Description Mixture: Consisting of the following components

Materials	CAS Number	Percentage, %
Fatty acids, C18-unsatd., dimers, compds. with polyethylenepolyamine-tall-oil fatty acid reaction products	64754-99-0	30-50
2-piperazin-1-ylethylamine	140-31-8	3-6
4-Nonylphenol, Branched	84852-15-3	15-30
Silica (Quartz)	14808-60-7	5-10
Ceramic Powder	66402-68-4	20-35

: Chemical Identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4: First Aid Measures

4.1 Description of first aid measures

General advice
Seek medical advice. 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.
If inhaled,
If breathed in, move person into fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, give artificial respiration or oxygen by trained personal. 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. The exposed person may need to be kept under medical surveillance for 48 hours.
In case of skin contact
Immediately remove contaminated clothing and shoes without delay. Flush immediately with plentiful

amounts of water. Initiate and maintain continuous wash until the patient receives medical care. If medical care is not promptly available, continue to wash with water for one hour. Cover wound with sterile dressing. Application of corticosteroid cream has been effective in treating skin irritation.

In case of eye contact

Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. Remove contact lenses, if present and easy to do. If medical care is not available immediately, continue rinsing for one hour.

If swallowed

Wash out mouth with water. Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.

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.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

Section 5: Firefighting Measures

5.1. Extinguishing media

Fire can be extinguished using: Foam. Alcohol resistant foam. Carbon dioxide (CO_2). Dry chemicals, sand, limestone powder.

Extinguishing Media to Avoid: Do not use direct water stream. May spread fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolics, Carbon monoxide, Carbon dioxide.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is emitted when burned without sufficient oxygen

5.3. Advice for firefighters

Special Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personal from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream, may spread fire. Move container from the area if this is possible without hazard.

Special Protective Equipment for Firefighters: Wear positive pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (including firefighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant fire-fighting clothing with self-contained breathing apparatus. If this is not available wear full chemical resistant cloth-ing with self-contained breathing apparatus. And fight fire from a remote location.

5.4. Further Information

Do not allow run-off from firefighting to enter drains or water courses. Fire residues and contaminated water must be disposed of in accordance with local regulations.

Section 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear self-contained breathing apparatus and chemically protective clothing in case of fire. Use suitable protective clothing, gloves and eye/face protection. Evacuate personnel to safe areas.
6.2. Environmental precautions
Do not let product enter drains, do not allow to sewers/surface or ground water. Prevent leakage or spillage. Use appropriate containment to avoid environmental contamination and inform the relevant authorities.
6.3. Methods and material for containment and cleaning up
Approach suspected leak areas with caution. Wear necessary protective equipment. Place in appropriate chemical waste container. Absorb with liquid-binding material (sand, earth, and universal binders)
6.4. Additional advice
See section 11 for additional information on health hazards.
For waste disposal, see section 13.
Open enclosed spaces to outside atmosphere. If possible, stop flow of product

Section 7: Handling and Storage

7.1 Precautions for safe handling
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only in well-ventilated areas and avoid breathing vapors and/or aerosols. Emergency showers and eye wash stations should be readily accessible. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Use personal protective equipment, do not drink, eat and smoke during handling.
7.2 Conditions for safe storage, including any incompatibilities
Store locked up. Keep container tightly closed in a dry and well-ventilated place, away from heat, and strong oxidizers. Containers that have been opened must be carefully resealed. Do not store in unlabeled containers. Protect from temperatures below: 0 °C. Protect from temperatures above: 40 °C
7.3. Technical Measures/Precautions
Do not store in reactive metal containers.
Provide accessible eye wash stations and safety showers.
Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limit.

Section 8: Exposure Controls/Personal Protection

8.1. Control parameters

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.

The limit values must be followed strictly if dust form occurs during any of the use. As a classified Carcinogen, there may be NO safe level of exposure; reduce all contact to the lowest possible level.

Ingredient	CAS #	Agency	Limit type
Silica (quartz)	14808-60-7	ACGIH OSHA and MSHA NIOSH	TLV, -TWA: 0.025 mg/m^3 PEL, -TWA 10mg/m^3 REL, -0.05 mg/m^3
Ceramic Powder	66402-68-4	ACGIH OSHA	TLV, -TWA: 10 mg/m^3 PEL,- TWA: 15mg/m^3

8.2 Personal Protective Equipment

Respiratory Protection
Wear a NIOSH certified organic vapor respirator. Not applicable with adequate ventilation. If cured product is machined, sanded or grinded, wear particulate respirators or other air-purifying respirators based on the specific airborne concentration found in the workplace.
Hand Protection
Wear chemical-resistant gloves such as: Nitrile- rubber, neoprene, and butyl-rubber. Gloves should conform to EN374. The breakthrough time of the selected gloves must be greater than the indented use period.
Eye Protection
Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Wear face shield if splashing hazard exist.
Body Protection
Protective clothing should be made of a material that will protect you from the chemicals: Slicker suit, impervious clothing, full rubber suit, rubber or plastic boots, long sleeve shirts and trousers without cuffs.
Hygiene Measures
Wash hands, forearms and face thoroughly at the end of each work shift and before eating, smoking and using the lavatory. Wash promptly if skin becomes wet or contaminated. When using do not eat, drink or smoke. Discard contaminated leather articles.
Environmental Control Measures
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Construct a dike to prevent spreading.

Section 9: Physical and Chemical Properties

Physical and Chemical Properties of Mixture

Form : Paste
Color : Grey
Odor : Ammoniacal
Density : 1.10 g/cm^3 at 70 °F (21 °C)
Viscosity : 1120,000 -1490, 000 cPs at 70 °F (21 °C)
Flash Point : Not determined
Solubility in/Miscibility with Water : Insoluble

Basic Physical and Chemical Properties of Components

Fatty acids, C18-unsatd., dimers, compds. with poly-ethylenepolyamine-tall-oil fatty acid reaction products CAS # 64754-99-0	
Physical State: Liquid	Melting/Freezing point: 0 °C (32 °F)
Color: Amber	Boiling Point: > 200 °C (392 °F)
Odor: Amine like	Flash Point: 230 °C (446 °F)
Relative Density: 0.95 g/cm^3 at 25 °C (77 °F)	Viscosity, dynamic: 800 mPa*s (25 °C)
2-piperazin-1-ylethylamine, CAS # 140-31-8	
Physical State: Liquid	Melting/Freezing point: -17 °C (1.4 °F)
Color: Colorless	Boiling Point: 218 - 222 °C (424 - 432 °F)
Odor: Amine like	Flash Point: 102 °C (216 °F) - closed cup
4-Nonylphenol, Branched, CAS # 84852-15-3	
Physical State: Liquid	Melting/Freezing point: -16 -13 °C (3 - 9 °F)
Color: Clear	Initial Boiling point: 302 °C (576 °F) at ca. 758 mmHg
Relative Density: 1.045 g/mL at 25 °C (77 °F)	Flash Point: 154 °C (309 °F) - closed cup
Silica (quartz), CAS # 14808-60-7	
Physical State: Powder	Melting Point: 1,610 °C (2,930 °F)
Color: White	Boiling Point: 2230 °C (4046 °F)
Odor: Odorless	Specific Gravity: 2.65

Section 10: Stability and Reactivity

Stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions
Risk of polymerization reactions.
Incompatible Materials
Avoid contact with oxidizing materials. Avoid contact with: acids (organic and mineral), bases and oxidizing agents (such as sodium hypochlorite, acetic acid, and citric acids), halogenated hydrocarbons, ketones, nitrites. Product slowly corrodes copper, bronze, brass, and galvanized surfaces. Avoid contact with absorbent materials such as most organic absorbents, sawdust.
Hazardous Decomposition Products
Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Ammonia, Ethylene diamine, volatile amines.
Other Hazards
Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Reaction with carbon dioxide may form amine carbamate. Smoke may be generated depending on vapor pressure of mixture.

Section 11: Toxicological Information

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Eye contact/corrosion : May cause severe damage to the eyes.

Acute dermal irritation/corrosion : Corrosive! Damages skin and eyes.

Sensitization : May cause sensitization by inhalation and skin contact. Sensitization has occurred in laboratory animals after repeated exposures.

Acute toxicity
Assessment of acute toxicity: May cause burns to the mouth, throat, and stomach. Higher temperatures may generate vapor levels sufficient to cause irritation of the respiratory tract.

Toxicological information on ingredients:

Name	Route	Species	Value
Fatty acids, C18-unsatd., dimers, compds. with poly-ethylenepolyamine-tall-oil fatty acid reaction products	Ingestion		LD50 - > 5,000 mg/kg
	Aspiration		No aspiration hazard expected.
	Eye Irritation		Causes serious eye damage. Corrosive
2-piperazin-1-ylethylamine	Dermal	Rabbit	LD50 – 866 mg/kg
	Ingestion	Rat	LD50 – 2,140 mg/kg
	Inhalation	Rat	LC50 > 4.178 mg/1/4 h
	Eye Irritation		Severe eye irritation, permanent impairment
	Skin irritation		Cause skin burns
4-Nonylphenol, Branched	Dermal		No data available
	Ingestion	Rat	LD50 - 1,412 mg/kg
	Skin corrosion	Rabbit	Causes burns. - 4 h
	Eye irritation	Rabbit	Corrosive - 72 h
	Skin Irritation	Rabbit	Causes burns.-4 h
	Eyes Irritation	Rabbit	Corrosive - 72 h
Silica (Quartz)	Ingestion	Rat	LD50 - 3,160 mg/kg
Ceramic Powder	Ingestion	Rat	LD50: > 5,000 mg/kg
	Inhalation	Rat	LC50 - > 6.82 mg/l, 4 h

Carcinogenicity
CYCLIC ETHYLENE AMINE

ACGIH : Not classified
IARC : Not classified
NTP : Not classified
OSHA : Not classified

NONYLPHENOL

ACGIH : Not classified
IARC : Not classified
NTP : Not classified
OSHA : Not classified

Reproductive toxicity
Suspected human reproductive toxicant

FATTY ACIDS, C18-UNSATD., DIMERS, COMPDS. WITH POLY-ETHYLENEPOLYAMINE-TALL-OIL FATTY ACID REACTION PRODUCTS
None known

SILICA (QUARTZ)
Limited evidence of carcinogenicity in human studies. Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis.

IARC : 1 - Group 1: Carcinogenic to humans (Quartz)
ACGIH : Not classified
NTP : Known to be human carcinogen (Quartz)
OSHA : Not .classified

Section 12: Ecological Information

OVERVIEW: No ecological information available on the specific mixture.
12.1 Toxicity
Aquatic toxicity: No data is available on the product itself.

Ecological information of components

Name	Toxicity to fish	Toxicity to daphnia	Toxicity to algae
Fatty acids, C18-unsatd., dimers, compds. with poly-ethylenepolyamine-tall-oil fatty acid reaction products	LC50 > 1 - 10 mg/l	EC50 > 0.1 - 1 mg/l	EC50: > 100 mg/l
2-piperazin-1-ylethylamine	Fathead minnow LC50 (96 h): 2,190 mg/l	LC50 (48h): 58 mg/l	EC50 (72 h): 495 mg/l
Ceramic Powder	Fathead minnow LC50 (96 h): 1,000 mg/l	EC50 (48 h): 1,000 mg/l	EC50 (72 h): 61 mg/l
4-Nonylphenol, Branched	Lepomis macrochirus LC50 (96 h) 0.209 mg/l	LC50 (48h): 0.0844 mg/	EC50 (72 h): 0.33 mg/l

12.1 Persistence and degradability

FATTY ACIDS, C18-UNSATD., DI-MERS, COMPDS. WITH POLY-ETHYLENEPOLYAMINE-TALL-OIL FATTY ACID REACTION PRODUCTS
Biodegradability, poorly biodegradable. The product has not been tested. The statement has been derived from the similar components

CYCLIC ETHYLENE AMINE
Biodegradability aerobic - Exposure time 28 d, Result: 0 % - Not readily biodegradable.

4-NONYLPHENOL, BRANCHED
Biodegradability aerobic - Exposure time 28 d, Result: 62 % - Readily biodegradable

Section 13: Disposal Considerations

Waste from Residues/Unused
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not dump into any sewers, on the ground, or into any body of water. Contact supplier if guidance is required

Contaminated Packaging
The generation of waste should be avoided or minimized wherever possible. Dispose of container and unused contents in accordance with all applicable local and national regulations.

Section 14: Transport Information

Road Transport: DOT / ADR
Proper Shipping Name : Amines, solid, corrosive, N.O.S., (contains amidoamine resin and nonylphenol)
Technical Name : Amidoamine curing agent
Hazard Class : 8
UN/ID Number : UN3259
Packing Group : III

Air Transport: IATA/ICAO
Proper Shipping Name : Amines, solid, corrosive, N.O.S., (contains amidoamine resin and nonylphenol)
Technical Name : Amidoamine curing agent
Hazard Class : 8
UN/ID Number : UN3259
Packing Group : III

Transportation of Dangerous Goods: TDG
Proper Shipping Name : Amines, solid, corrosive, N.O.S., (contains amidoamine resin and nonylphenol)
Technical Name : Amidoamine curing agent
Hazard Class : 8
UN/ID Number : UN3259
Packing Group : III

Sea Transport: IMDG
Proper Shipping Name : Amines, solid, corrosive, N.O.S., (contains amidoamine resin and nonylphenol)
Technical Name : Amidoamine curing agent
Hazard Class : 8
UN/ID Number : UN3259
Packing Group : III

Section 15: Regulatory Information

OSHA Hazard Communication Standard (29CFR 1910.1200) Hazard Class(es): Corrosive, toxic, and environmental hazardous material.

EPA SARA Title III Section 311/312 (40 CFR 370) Hazard Classification
Acute (immediate) and chronic (delayed) health hazard

EPA SARA Title III Section 313 (40 CFR 372) Components above 'de minimums' level
Not required

Massachusetts Right To Know Components
2-piperazin-1-ylethylamine CAS # 140-31-8

Pennsylvania Right To Know Components
2-piperazin-1-ylethylamine CAS # 140-31-8
Phenol, 4-Nonyl-, Branched CAS # 84852-15-3

New Jersey Right To Know Components

2-piperazin-1-ylethylamine	CAS # 140-31-8
Phenol, 4-Nonyl-, Branched	CAS # 84852-15-3

US California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
Chemicals known to cause cancer: 14808-60-7/Quartz (SiO_2)

Section 16: Other Information

Contains amidoamine resin, cyclic ethylene amine, nonylphenol and ceramic powder.

HMIS Rating (Scale 0-4)	**NFPA Rating (Scale 0-4)**
Health hazard: 3	Health hazard: 3
Flammability: 1	Flammability: 1
Physical Hazard: 0	Physical Hazard: 0

Caution: HMIS ratings are based on a 0-4 rating scale
4= Extreme
3= High
2= Moderate
1= Slight
0= Minimal hazard

Abbreviations and acronyms

ADR	*International Carriage of Dangerous Goods by Road*
ACGIH	*American Conference of Industrial Hygienists*
CFR	*U.S. Code of Federal Regulations*
DOT	*Department of Transportation*
EC50	*Half maximal effective concentration*
EPA	*Environmental Protection Agency*
EU	*European Union*
HCS	*Hazard Communication Standard*
HMIS	*Hazardous Material Identification System*
IATA	*The International Air Transport Association*
ICAO	*International Civil Aviation Organization*
IC50	*Half maximal inhibitory concentration*
IMDG	*International Maritime Dangerous Goods*
LD50/LC50	*Lethal Concentration/Dose, 50 percent*
NFPA	*The National Fire Protection Association*
OSHA	*Occupational Safety and Health*
PEL	*OSHA Permissible Exposure Limit*
REL	*Recommended Exposure Limit*
SARA	*Superfund Amendments and Reauthorization Act*
TDG	*Transportation of Dangerous Goods*
TLV	*ACGIH Threshold Limit Value*
WEEL	*Workplace Environmental Exposure Levels*
TWA	*Time-Weighted Average*

Special Precautions: *Silica fillers in a dry form can cause severe lung diseases if you breathe their dusts. Do not sand or grind hardened epoxies that contain these substances. They are not known to be hazardous after blended into a liquid. Wet sanding is suggested to eliminate airborne dust, if product is machined or ground. The only other exposure limits established for ingredients of this product apply to nuisance dusts from inert fillers. These fillers are blended into a liquid and pose no hazard as supplied.*

Explanation and Disclaimer: *Each customer or recipient has to become aware of and understand the data given in this SDS and any hazards associated with the product. The information is provided in good faith and believed to be accurate; however, does not appear all inclusive and shall be used only as a guide. Regulatory requirements are subject to change and may differ between various locations, it is buyer's responsibility to ensure that comply with all state, federal or local laws. The information in this document is based on the present state of our knowledge applicable to the product with regard to safety precautions. The information presented in here relates only to the product as shipped, and it is the buyer's responsibility to determine the conditions necessary for the safe use of this product.*

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