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## Section 1: Product and Company Identification

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### 1.1 Product Identifier

Trade Name	Uroflex, A Component
Product Number	UME38-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
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### 1.3 Emergency Telephone Number

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

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## Section 2: Hazard(s) Identification

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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  
Aliphatic Acrylate  
Proprietary oligomer

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

Skin irritation (Category 2), H315  
Eye irritation (Category 2A), H319  
Skin sensitisation (Category 1), H317  
Acute aquatic toxicity (Category 2), H401  
Chronic aquatic toxicity (Category 2), H411

**2.2. GHS Label elements, including precautionary statements**

Pictogram	Signal Word	Hazard Category	Hazard Statement
	Warning	4	Harmful in contact with skin Harmful if inhaled 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 H332 H334  H360 H411	Causes skin irritation May cause an allergic skin reaction Causes serious eye irritation Harmful if inhaled May cause allergy or asthma symptoms or breathing difficulties if inhaled May damage fertility or the unborn child Toxic to aquatic life with long lasting effects.
Precautionary Statements	P201 P202  P261 P264 P270 P272  P273 P280 P281 P391	Obtain special instructions before use. 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. Collect spillage
Supplementary Precautionary Statements	P314 P302+352 P305 + P351 + P338  P321  P333 + P313 P337 + P313 P362 P391	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 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see supplemental first aid instructions on this label). If skin irritation or rash 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.

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### Section 3: Composition/Information on Ingredients

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**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, %
4,4'-isopropylidenediphenol-Epichlorohydrin Copolymer	25068-38-6	75-90
Aliphatic Acrylate	13048-33-4	3-10
Proprietary oligomer	Proprietary*	5-10

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

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### Section 4: First Aid Measures

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#### 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 Protection of first aid personnel

In the case 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 air to give mouth to mouth resuscitation.

#### 4.4. Notes to physician

Person might give an indication of skin, and eye injury because of mixture contains small concentration of isocyanate. Physician Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed.

Workplace vapors could produce reversible corneal epithelial edema impairing vision. Skin: Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure.

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## Section 5: Firefighting Measures

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### **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..

#### **5.2. Special hazards arising from the substance or mixture**

During a fire, thermal decomposition of isocyanate vapors or combustion may liberate carbon oxides and other toxic gases or vapors. Exposure to heated diisocyanate can be extremely dangerous.

#### **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.

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## Section 6: Accidental Release Measures

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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 leakage or spillage.

#### **6.3. Methods and material for containment and cleaning up**

Stop leak if without risk. Move containers from spill area. Absorb with liquid-binding material (sand, earth, vermiculate, and universal binders) Wear necessary protective equipment. Wash thoroughly after dealing with a spillage. Vacuum or sweep up material and place in designated labeled waste container. Dispose of via a licensed waste disposal contractor.

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## Section 7: Handling and Storage

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For waste disposal, see section 13.

#### **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).

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## Section 8: Exposure Controls/Personal Protection

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### 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.

Ingredient	CAS #	Agency	Limit type
4,4'-isopropylidenediphenol-Epichlorohydrin Copolymer	25068-38-6		No occupational exposure limit values.
Aliphatic Acrylate	13048-33-4	WEEL	TWA: 1 mg/m <sup>3</sup> Dermal Sensitization Notation
Proprietary oligomer		ACGIH	TWA: 0.005 ppm STEL: 0.02 ppm

### 8.2. Personal Protective Equipment



### 8.3. Exposure controls

#### Respiratory Protection

In case of inadequate ventilation wear respiratory protection. In the recommended room temperature, product does not release airborne side products; however, if a fire or a process occurs resulting heating above 248 °F (120 °C), workers must wear air supplied respirators.

#### 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

Avoid all skin contact. Depending on the condition of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact such as gloves, goggles, long sleeved shirts and pants

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.

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## Section 9: Physical and Chemical Properties

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Information on Basic Physical and Chemical Properties of Mixture

**Appearance**

Form	Viscous, liquid
Color	Red or Beige
Odor	Mild epoxy odor
Solids (% by weight)	100.0
Density	1.34 g/cm <sup>3</sup>
Viscosity	14,000 (cPs)

**Basic Physical and Chemical Properties of Components**

<b>4,4'-isopropylidenediphenol-Epichlorohydrin Copolymer, CAS # 25068-38-6</b>	
Physical State: Viscous, Liquid	Flash Point: 252 °C (486 °F)
Color: Colorless	Vapour pressure: 0.04 hPa (0.03 mmHg) at 77 °C (171 °F)
Boiling Point (760 mmHg): 320 °C (608 °F)	Relative Density: 1.168 g/cm <sup>3</sup>
<b>Aliphatic Acrylate, CAS # 13048-33-4</b>	
Physical State: Liquid	Melting/Freezing point: 5 °C (41 °F)
Color: Colorless	Boiling Point: 107 °C (225 °F) at 0.3 hPa (0.2 mmHg)
Relative Density: 1.01 g/cm <sup>3</sup> at 25 °C (77 °F)	Flash Point: 113 °C (235 °F) - closed cup
Water Solubility: 0.36 g/l at 20 °C (68 °F)	Auto-ignition temperature: 235 °C (455 °F) at 1,013.25 hPa
<b>Proprietary Oligomer</b>	
Physical State: Viscous, Liquid	Melting/Freezing point: 3.89 °C (39 °F)
Color: Clear, light yellow	Flash Point: 192 °C (378 °F)
Density: 1.0 g/cm <sup>3</sup> at 20°C (68 °F)	Bulk Density: 1,042 kg/m <sup>3</sup>

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## Section 10: Stability and Reactivity

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**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.

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Section 11: Toxicological Information

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**Inhalation**

Not expected to be a relevant route of exposure, however, under conditions where exposure to vapors or mists is possible, could cause respiratory tract irritation.

**Respiratory Tract Irritation:** Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Skin Contact**

Signs/symptoms may include abrasion, redness, pain, and blistering, itching and skin sensitization.

**Eye Contact**

May be severely irritating to the eyes: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

**Ingestion**

Product may be slightly toxic and harmful if swallowed.

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**Toxicological information on ingredients:**

Name	Route	Species	Value
4,4'-isopropylidenediphenol-Epichlorohydrin Copolymer	Dermal	Rat	LD50 - > 1,200 mg/kg
4,4'-isopropylidenediphenol-Epichlorohydrin Copolymer	Ingestion	Rat	LD50 - > 30,000 mg/kg
Aliphatic Acrylate	Dermal	Rabbit	LD50: 5,170 mg/kg
Aliphatic Acrylate	Ingestion	Rat	LD50: 5,190 mg/kg
Proprietary oligomer (data is based on a similar product)	Ingestion	Rat	LD50: > 5,000 mg/kg

**Other Toxicological Information**

**Carcinogenicity Classification**

**4,4'-isopropylidenediphenol-Epichlorohydrin Copolymer**

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

**Aliphatic Acrylate**

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

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## Section 12: Ecological Information

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**OVERVIEW: No ecological information available on the specific mixture.**

Eco toxicological data have not been determined for this product. The information is given below is based on a knowledge of the components and ecotoxicology of similar components.

**Mobility in soil:** Paste insoluble in water.

### 12.1. Toxicity

#### **4,4'-isopropylidenediphenol-Epichlorohydrin Copolymer**

Acute LC50 1.3 mg//96 h Fish

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

#### **Proprietary oligomer**

Acute and Prolonged Toxicity to Fish

LC50: > 10,000 mg/l (Danio magna (zebra fish), 96 h)

#### **Acute Toxicity to Aquatic Invertebrates**

EC50: > 100 mg/l (Daphnia magna (water flea), 96 h)

#### **Toxicity to Aquatic Plants**

ErC50: > 100 mg/l, (Desmodesmus subspicatus (Green algae), 72 h)

#### **Toxicity to Microorganisms**

EC50: > 10,000 mg/l, (activated sludge)

#### **Aliphatic Acrylate**

##### **Toxicity to fish**

LC50 – 4.6-10 mg/l - 96 h (Leuciscus idus (Golden orfe))

##### **Acute Toxicity to Aquatic Invertebrates**

LC50 – 2.6 mg/l - 48 h Daphnia magna (Water flea)

##### **Toxicity to Aquatic Plants**

EC50 – 1.5 mg/l - 96 h (Desmodesmus subspicatus (Scenedesmus subspicatus))

##### **Toxicity to Microorganisms**

EC50 -270 mg/l - 30 min Sludge Treatment

### 12.2 Persistence and degradability

**4,4'-isopropylidenediphenol-Epichlorohydrin Copolymer:** According to the results of tests of biodegradability this product is not readily biodegradable. Remarks: no data available

**Proprietary oligomer:** Biodegradation, 0%, Exposure time: 28 d, i.e. not readily degradable

**Aliphatic Acrylate:** Biodegradability aerobic - Exposure time 28 d, Result: 60- 70 % - Readily biodegradable

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### Section 13: Disposal Considerations

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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 100 parts Part A with 73 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.

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### Section 14: Transport Information

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#### **DOT (US)**

Not regulated for transport

#### **IMO/IMDG**

Proper Shipping Name : Environmentally Hazardous Substance, Liquid, N.O.S  
Technical Name : 4'-isopropylidenediphenol-Epichlorohydrin Copolymer  
Hazard Class : 9  
UN/ID Number : 3082  
Packing Group : III

#### **IATA**

Proper Shipping Name : Environmentally Hazardous Substance, Liquid, N.O.S  
Technical Name : 4'-isopropylidenediphenol-Epichlorohydrin Copolymer  
Hazard Class : 9  
UN/ID Number : 3082  
Packing Group : III

#### **CFR/TDG**

Not regulated for transport

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### Section 15: Regulatory Information

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#### **Superfund Amendments and Reauthorization Act (SARA) of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**

##### **SARA 302 Components (Emergency Planning)**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

##### **SARA 313 Components (Toxic Chemical Release Inventory)**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

##### **SARA 311/312 Hazards (Hazardous Chemical Storage Reporting Requirements)**

Acute Health Hazard

##### **Massachusetts Right To Know Components**

Proprietary oligomer

Cas # is a trade secret

**Pennsylvania Right To Know Components**

Reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin  
(number average molecular weight <= 700)

Cas # 25068-38-6

Proprietary oligomer

Cas # is a trade secret

Aliphatic Acrylate

Cas # 13048-33-4

**New Jersey Right To Know Components**

Reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin  
(number average molecular weight <= 700)

Cas # 25068-38-6

Proprietary oligomer

Cas # is a trade secret

Aliphatic Acrylate

Cas # 13048-33-4

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

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

**(DSL) Canada Domestic Substance List**

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

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**Section 16: Other Information**

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requirements.

Contains epoxy constituents and aliphatic acrylates. See information supplied by the manufacturer.

**HMIS Rating (Scale 0-4)**

Health hazard: 2

Flammability: 1

Reactivity Hazard: 0

**NFPA Rating (Scale 0-4)**

Health hazard: 2

Flammability Hazard: 1

Reactivity Hazard: 0

**Abbreviations and acronyms**

**ACGIH** *Industrial Hygienists Suggest Exposure Limits*

**CFR** *Code of Federal Regulations*

**OT** *Federal Department of Transportation*

**DSL** *Domestic Substance List*

<b>EC50</b>	Half maximal effective concentration
<b>ErC50</b>	EC50 in terms of reduction of growth rate
<b>EU</b>	European Union
<b>GHS</b>	The Globally Harmonized System of Classification and Labelling of Chemicals
<b>HMIS</b>	Hazardous Material Identification System
<b>HCS</b>	Hazard Communication Standard
<b>IARC</b>	International Agency for Research on Cancer
<b>IATA</b>	The International Air Transport Association
<b>IMDG</b>	International Maritime Dangerous Goods
<b>IMO</b>	International Maritime Organization
<b>LD50/LC0</b>	Lethal Concentration/Dose, 50 percent
<b>NFPA</b>	National Fire Protection Association
<b>NTP</b>	National Toxicology Program
<b>OSHA</b>	Occupational Safety and Health
<b>SARA</b>	Superfund Amendments and Reauthorization Act
<b>STEL</b>	Short Term Exposure Limit
<b>TDG</b>	The Canadian Transportation of Dangerous Goods
<b>TWA</b>	Time-Weighted Average
<b>WEEL</b>	Workplace Environmental Exposure Levels

**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.**

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## Section 1: Product and Company Identification

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### Product Identifier

Trade Name	Uroflex, B Component
Product Number	UME38-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
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### Emergency Telephone Number

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

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## Section 2: Hazard(s) Identification

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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: Amine

Contains Cycloaliphatic polyamine and amine  
Amine-Epoxy Resin Adduct  
Fatty acid amido amine  
Benzyl Alcohol  
Soda Lime Borosilicate Glass

Corrosive  
Severe respiratory irritant  
Severe skin irritant  
Severe eye irritant  
May cause sensitization by skin contact  
May cause sensitization by inhalation  
Acute aquatic toxicity  
Chronic aquatic toxicity

**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	2,3	Acute aquatic toxicity Chronic aquatic toxicity

Signal word	Code	Warning
Hazard Statements	H302 + H332 H302 + H312  H314 H317 H318 H319 H332 H335 H401 H412	Harmful if swallowed or if inhaled Precautionary statement(Harmful if swallowed or contact with skin Causes severe skin burns and eye damage May cause an allergic skin reaction Causes serious eye damage Causes serious eye irritation Harmful if inhaled May cause respiratory irritation Acute aquatic toxicity Harmful to aquatic life with long lasting effects
Precautionary Statements	P261 P264 P270 P271 P272  P273 P280 P284	Avoid breathing dust/fume/gas/mist/vapors/spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves, eye and face protection. Wear respiratory protection.
Supplementary Precautionary Statements	P301 + P312 + P330 P301 + P330 + P331 P304 + P340+ P312  P303 + P361 + P353 P304 + P340 P305 + P351+ P338  P310 P337 + P313 P363	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. If eye irritation persists: Get medical advice/ attention. Wash contaminated clothing before reuse.

	P322 P333 + P313 P363 P391	Specific measures (see supplemental first aid instructions on this label). If skin irritation or rash occurs: Get medical advice/ attention. Wash contaminated clothing before reuse. Collect spillage.
Storage/Disposal	P405 P501	Store locked up. Dispose of contents/ container to an approved waste disposal plant.

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### Section 3: Composition/Information on Ingredients

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#### **Chemical Characterization:** Amine

**Description Mixture:** Consisting of the following components

<b>Materials</b>	<b>CAS Number</b>	<b>Percentage, %</b>
Cycloaliphatic amine	2855-13-2	20-40
Fatty Acid Amido Amine	*Proprietary	5-10
Amine-Epoxy Resin Adduct	*Proprietary	15-30
Benzyl Alcohol	100-51-6	20-30
Soda Lime Borosilicate Glass	65997-17-3	15-25

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

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### Section 4: First Aid Measures

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#### **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.

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Section 5: Firefighting Measures

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**Flammability of the product:** 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. Carbon dioxide (CO<sub>2</sub>). Dry chemicals, sand, limestone powder.

**5.2. Special hazards arising from the substance or mixture**

**Hazardous combustion products**

Ammonia gas may be liberated at high temperatures. It may generate toxic nitrogen oxide gases. Burning produces noxious and toxic fumes. Use of water may result in the formation of very toxic aqueous solutions. Carbon monoxide and nitrogen oxides (NO<sub>x</sub>) may form result of incomplete combustion. Downwind personnel must be evacuated

**5.3. Advice for firefighters**

Special Fire Fighting Procedures:

Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary.

**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.

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Section 6: Accidental Release Measures

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**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. Construct a dike to prevent spreading 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, vermiculate, 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

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## Section 7: Handling and Storage

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### 7.1 Precautions for safe handling

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.

Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer causing nitrosamines could be formed.

### 7.2 Conditions for safe storage, including any incompatibilities

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 and kept upright to prevent leakage. Do not store in unlabeled containers.

### 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.

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## Section 8: Exposure Controls/Personal Protection

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### Personal Protective Equipment



#### Respiratory Protection

Wear appropriate respirator when ventilation is inadequate. 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

Full face shield with goggles underneath, and chemical resistant goggles must be worn.

#### 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.

**Exposure Limits**

Ingredient	CAS #	Agency	Limit type
Soda Lime Borosilicate Glass	65997-17-3		<b>TWA(as dust):</b> 10 mg/m <sup>3</sup>
Benzyl alcohol	100-51-6	WEEL	<b>TWA:</b> 10 ppm, 44 mg/m <sup>3</sup>

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Section 9: Physical and Chemical Properties

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**Physical and Chemical Properties**

Form	: Viscous liquid
Color	: Opaque amber
Odor	: Ammoniacal
Density	: 0.89 g/cm <sup>3</sup> (7.4 lb/gal) at 70 °F (21 °C)
Viscosity	: 16,000 cPs at 70 °F (21 °C)
pH	: Alkaline

**Basic Physical and Chemical Properties of Components**

<b>Cycloaliphatic Amine, CAS # 2855-13-2</b>	
Physical State: Liquid	Melting/Freezing point: 10 °C (50 °F)
Color: Light yellow	Boiling Point: 247 °C (477 °F)
Odor: Amine like	Flash Point: 110 °C (230 °F)
Relative Density: 0.922 g/cm <sup>3</sup> at 25 °C (77 °F)	Auto-ignition Temp.: 380 °C (716 °F) at 997 hPa (748 mmHg)
<b>Fatty Acid Amido Amine</b>	
Physical State: Liquid	Boiling Point: Greater than 85°C (185 °F)
Color: Reddish-brown	Viscosity: 3,000-6,000 mPas at 25 °C (77 °F)
<b>Benzyl Alcohol, CAS # 100-51-6</b>	
Physical State: Liquid	Melting/Freezing point: -16 -13 °C (3 - 9 °F)
Color: Clear	Boiling point: 203 - 205 °C (397 - 401 °F)
Relative Density: 1.045 g/mL at 25 °C (77 °F)	Flash Point: 96 °C (205 °F)
<b>Soda Lime Borosilicate Glass, CAS # 65997-17-3</b>	
Physical State: Powder	Density: 0.1 - 0.6 g/cm <sup>3</sup>
Color: White	Specific Gravity: 0.1 - 0.6
Odor: Odorless	Softening point= >=600 °C

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Section 10: Stability and Reactivity

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**Stability**

Stable under recommended storage conditions.

**Incompatible materials**

Avoid contact with oxidizing materials. Avoid contact with: acids (organic and mineral), bases and oxidizing agents (such as sodium hypochlorite, acetic acid, citric acids). Reaction with peroxides may result in violent decomposition of peroxide (creating explosion). Product slowly corrodes copper, aluminum, zinc, and galvanized surfaces. Reactive metals (e.g. sodium, calcium, zinc, etc). Nitrous acid and other nitrosating agents. N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations.

**Hazardous Decomposition Products**

Nitrogen oxides (NO<sub>x</sub>): Nitrogen oxide can react with water vapors to form corrosive nitric acids. Chlorine, nitric acid, ammonia, carbon monoxide, carbon dioxide (CO<sub>2</sub>), aldehydes, nitrosamine.

**Other Hazards**

Heating this substance above 300 °F in the presence of air may cause slow oxidative decomposition and above 500 °F polymerization may occur. Some combinations of resins and curing agents can produce exothermic reactions. Fumes and vapors from the thermal and chemical decompositions vary widely in composition and toxicity.

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Section 11: Toxicological Information

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Eye contact/corrosion : Severe eye irritation

Acute dermal irritation/corrosion : Severe skin irritation

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

**Toxicological information on ingredients:**

Name	Route	Species	Value
Cycloaliphatic Amine	Dermal	Rat: male and female	LD50 - > 2,000 mg/kg
	Ingestion	Rat: male	LD50 - 1,030 mg/kg
	Inhalation	Rat: male and female	LC50- 4 h - > 5.01 mg/l
	Skin Irritation	Rabbit	Causes burns, 24 h
	Eye Irritation	Rabbit	Corrosive to eyes - 24 h
Benzyl Alcohol	Dermal	Rabbit	LD50 - 2,000 mg/kg
	Ingestion	Rat	LD50 - 1,230 mg/kg
	Inhalation	Rat	LC50 > 4.178 mg/1/4 h
	Eye Irritation	Rabbit	Eye irritation - 24 h
Soda Lime Borosilicate Glass	Dermal		LD50 > 5,000 mg/kg
	Ingestion		LD50 - 2,000 - 5,000 mg/kg
Phenol, 4-Nonyl-, Branched	Ingestion	Rat	LD50 - 1,412 mg/kg
	Skin Irritation	Rabbit	Causes burns.-4 h
	Eyes Irritation	Rabbit	Corrosive - 72 h

**Other Toxicological Information**

**Cycloaliphatic Amine**

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

**Amine-Epoxy Resin Adduct (Proprietary)**

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

### Soda Lime Borosilicate Glass

Some positive data exist, but the data are not sufficient for classification

ACGIH : Not classified

IARC : Not classified

NTP : Not classified

OSHA : Not classified

### Carcinogenicity

**IARC** : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**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** : No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**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.

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## Section 12: Ecological Information

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### 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
Cycloaliphatic amine	LC50 (96 h): 46-100 mg/l	LC50 (96 h): 46-100 mg/l	EC50 (72 h): 140-200 mg/l
Benzyl Alcohol	Bluegill sunfish LC50 (96 h): 10 mg/l Fathead minnow LC50 (96 h): 460 mg/l		IC50 (72 h): 700 mg/l
Phenol, 4-Nonyl-, Branched	LC50 (96 h) 0.209 mg/l Lepomis macrochirus	LC50 (48h): 0.0844 mg/l	EC50 (72 h): 0.33 mg/l

### 12.1 Persistence and degradability

#### Benzyl Alcohol

Biodegradability Biotic/Aerobic - Exposure time 28 d

Result: 92 - 96 % - Readily biodegradable

Aerobic Biochemical oxygen demand - Exposure time 7 d

Result: 92 - 96 % - Readily biodegradable

#### Cycloaliphatic polyamine

Biodegradability aerobic - Exposure time 28 d

#### Phenol, 4-Nonyl-, Branched

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

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Section 13: Disposal Considerations

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**Waste from Residues/Unused**

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.

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Section 14: Transport Information

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**Road Transport: DOT / ADR**

Proper Shipping Name : Amines, liquid, corrosive N.O.S., (contains Cycloaliphatic amine)  
Technical Name : Amine curing agent  
Hazard Class : 8  
UN/ID Number : UN2735  
Packing Group : III

**Air Transport: IATA/ICAO**

Proper Shipping Name : Amines, liquid, corrosive N.O.S., (contains Cycloaliphatic amine)  
Technical Name : Amine curing agent  
Hazard Class : 8  
UN/ID Number : UN2735  
Packing Group : III

**Transportation of Dangerous Goods: TDG**

Proper Shipping Name : Amines, liquid, corrosive N.O.S., (contains Cycloaliphatic amine)  
Technical Name : Amine curing agent  
Hazard Class : 8  
UN/ID Number : UN2735  
Packing Group : III

**Sea Transport: IMDG**

Proper Shipping Name : Amines, liquid, corrosive N.O.S., (contains Cycloaliphatic amine)  
Technical Name : Amine curing agent  
Hazard Class : 8  
UN/ID Number : UN2735  
Packing Group : III

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Section 15: Regulatory Information

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OSHA Hazard Communication Standard (29CFR 1910.1200) Hazard Class(es): Corrosive, irritating and sensitizer material.

**EPA SARA Title III Section 311/312 (40 CFR 370) Hazard Classification**

Acute (immediate) and chronic (delayed) health hazard

## SAFETY DATA SHEET

*Epoxytec Intl, Inc.*

UROFLEX, PART B

[epoxytec.com](http://epoxytec.com)

### EPA SARA Title III Section 313 (40 CFR 372) Components above 'de minimums' level

Not required

#### Massachusetts Right To Know Components

Benzyl Alcohol

CAS # 100-51-6

#### Pennsylvania Right To Know Components

Benzyl Alcohol

CAS # 100-51-6

Phenol, 4-Nonyl-, Branched

CAS # 84852-15-3

#### New Jersey Right To Know Components

Benzyl Alcohol

CAS # 100-51-6

Cycloaliphatic amine

CAS # 2855-13-2

Phenol, 4-Nonyl-, Branched

CAS # 84852-15-3

#### US 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 harm

#### WHMIS (Canada) Hazard Classification

Class D-1B: Material causing immediate and serious toxic effects (Toxic)

Class D-2A: Material causing other toxic effects (Very toxic)

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

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#### Section 16: Other Information

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Contains cycloaliphatic amine and amine adduct and benzyl alcohol.

#### HMIS Rating (Scale 0-4)

Health hazard: 2

Flammability: 1

Physical Hazard: 0

**Caution:** HMIS ratings are based on a 0-4 rating scale

4= Extreme

3= High

2= Moderate

1= Slight

0= Minimal hazards

**Abbreviations and acronyms**

<b>ADR</b>	<i>International Carriage of Dangerous Goods by Road</i>
<b>ACGIH</b>	<i>American Conference of Industrial Hygienists</i>
<b>CFR</b>	<i>U.S. Code of Federal Regulations</i>
<b>DOT</b>	<i>Department of Transportation</i>
<b>EPA</b>	<i>Environmental Protection Agency</i>
<b>HCS</b>	<i>Hazard Communication Standard</i>
<b>HMIS</b>	<i>Hazardous Material Identification System</i>
<b>IATA</b>	<i>The International Air Transport Association</i>
<b>ICAO</b>	<i>International Civil Aviation Organization</i>
<b>IC50</b>	<i>Half maximal inhibitory concentration</i>
<b>IMDG</b>	<i>International Maritime Dangerous Goods</i>
<b>LD50/LC50</b>	<i>Lethal Concentration/Dose, 50 percent</i>
<b>OSHA</b>	<i>Occupational Safety and Health</i>
<b>SARA</b>	<i>Superfund Amendments and Reauthorization Act</i>
<b>TDG</b>	<i>Transportation of Dangerous Goods</i>
<b>WEEL</b>	<i>Workplace Environmental Exposure Levels</i>
<b>WHMIS</b>	<i>Workplace Hazardous Materials Information System</i>
<b>TWA</b>	<i>Time-Weighted Average</i>

**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.*

**Epoxytec products are designed for industrial use only.**