Material Safety Data Sheet

EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)
INFORMATION PHONE: 1-480-984-7608

I. CHEMICAL PRODUCT AND COMPANY DATA

PRODUCT: **SEWER SHIELD 100, COMPONENT A**

CHEMICAL FAMILY: EPOXY RESIN MIXTURE

REVISION DATE: 3/05

MANUFACTURER: ENVIRONMENTAL COATINGS
4702 E. Virginia Street
Mesa, Arizona 85215

II. COMPOSITION / INFORMATION ON INGREDIENTS

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

		EXPOSURE LIMITS			
INGREDIENT	CAS. NO.	TLV	STEL	PEL	CONTENT
EPOXY NOVOLAC RESIN	28064-14-4	N/E	N/E	N/E	>80%
GLYCIDYL DILUENT	2461-15-6	N/E	N/E	N/E	<20%
COLLOIDAL SILICA	67762-90-7	N/E	N/E	N/E	<10%

∗N/E = *NOT ESTABLISHED*

III. HAZARDS IDENTIFICATION

HMIS Hazard Rating No. 2 (Moderate)

PRIMARY ROUTE OF ENTRY: *INHALATION, DERMAL, EYES*

EFFECTS OF OVER EXPOSURE:

INHALATION: Vapors from product may cause irritation to the nose, throat, and respiratory tract. Coughing and chest pains may result. High vapor concentrations may produce CNS depression.

EYES: Product may cause severe irritation.

SKIN CONTACT: Product may cause irritation, redness and discomfort which is transient.

SKIN ABSORPTION: No known information available.

INGESTION: Not expected to be a relevant route of exposure. Product may be slightly toxic if ingested.

CHRONIC: Repeated exposure may cause skin sensitization, skin irritation, and dermatitis. Pre-existing eye, skin, and respiratory disorders may be aggravated by exposure of this product.

IV. FIRST AID MEASURES

INHALATION: Remove victim from exposure. If difficulty with breathing, administer oxygen. If breathing has stopped, administer artificial respiration. Seek medical attention.

EYES: Flush eyes with water for 15 minutes, lifting upper and lower lids occasionally. Seek medical attention.

SKIN: Immediately remove contaminated clothing. Wash thoroughly with soap and water for at least 15 minutes. If irritation occurs, get medical attention. Do not re-use clothing until thoroughly cleaned.

INGESTION: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek medical attention.

V. FIRE FIGHTING METHODS

HMIS Hazard Rating No. 1 (Slight)

Flash Point: >200° F **METHOD:** SETAFLASH

AUTO-IGNITION TEMP.: Not available

LIMITS OF FLAMMABILITY: LEL: Not available **UEL:** Not available

EXTINGUISHING MEDIA: Use water fog, dry chemical or CO_2.

SPECIAL FIRE FIGHTING PROEDURES AND PRECAUTIONS: Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture.

VI. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/ LEAKS: Clean up personnel must be equipped with self-contained breathing apparatus, rubber gloves and protective clothing. Dike and contain the spill. Soak up residue with an absorbent such as clay, sand or other suitable material. Dispose of the absorbent material in accordance with federal, state and local regulations. Residual resin may be removed with hot soapy water.
WASTE DISPOSAL METHOD: Dispose in compliance with federal, state and local regulations.

VII. HANDLING AND STORAGE

HANDLING: Keep away from open flames and high temperatures.

STORAGE: Store in a well ventilated area.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Avoid prolonged or repeated breathing of vapors. Use a NIOSH approved respirator to prevent overexposure. In accord with 29 cfr 1910.134, use a full face, air supplying respirator or an air-purifying respirator for organic vapors.

PROTECTIVE CLOTHING: Do not get on skin or clothing. Wear chemical resistant protective clothing, gloves, and boots. Wear chemical goggles to prevent contact with eyes.

ADDITIONAL PROTECTIVE MEASURES: Use explosion proof ventilation to control vapors or mists concentrations. Eye wash fountains and safety showers should be available for emergency use.

IX. Physical And Chemical Properties

Water/Oil Distribution Coefficient:	N/AV	Odor:	Slight
Boiling Point (°C):	N/AV	Solubility in Water:	Negligible
Percent Volatile:	0.1%	Specific Gravity:	1.13
Freezing Point (°C):	N/AV	pH:	N/AV
Vapor Pressure mmHg @ 20° C	<10	Evaporation Rate:	N/AV
Vapor Density	>Air		
Odor Threshold:	N/AV		
Appearance:	Clear liquid		

N/AV = Not Available ca. = Approximate

X. STABILITY AND REACTIVITY

HMIS Hazard Rating No. 0

STABILITY: Stable, hazardous polymerization will not occur

CONDITIONS AND MATERIALS TO AVOID: Avoid heat, flame and contact with strong oxidizing agents. Contamination with strong acids, bases, amines and mercaptans may cause an exothermic polymerization. Do not store or handle in aluminum equipment at temperatures above 120 °F.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, aldehydes and acids may be formed during combustion.

XI. TOXICITY INFORMATION

HMIS Hazard Rating No. 2 (MODERATE)

PRIMARY ROUTE OF ENTRY: *INHALATION, DERMAL, EYES*

EFFECTS OF OVEREXPOSURE

INHALATION: May cause irritation on the respiratory tract.

LC(50) INHAL. N/AV
EYES: May be severely irritating to the eyes
SKIN CONTACT: May be irritating to the skin. In some individuals it may cause sensitization.
SKIN ABSORPTION: No information available.

INGESTION: Not expected to be a relevant route of entry. May be slightly toxic if ingested.

LD(50) ORAL

CAS. NO.	
25068-38-6:	11.4 gm/kg (rat)
2461-15-6:	7.8 gm/kg (rat)

CHRONIC: Product does not contain chemicals considered to be carcinogenic by NTP, IARC, or OHSA.

This product contains residual (<5ppm) quantities of epichlorohydrin (ECH) (CAS NO. 106-89-8). It is very unlikely that normal work practices with this product could result in measurable ECH concentrations in the workplace atmosphere. Nevertheless, you should be aware that ECH has been reported to produce cancer in laboratory animals and to produce mutagenic changes in bacteria and cultured human cells. It has been classified by IARC as a probable human carcinogen. It has been classified as an anticipated human carcinogen by NTP.

XII. ECOLOGICAL INFORMATION

Marine Pollutant: NL
(NL = Not Listed; P = Moderate; PP = Severe; ND = Not Determined)

XIII. DISPOSAL CONSIDERATIONS

Dispose in a manner which complies with local, state and federal regulations.

XIV. TRANSPORT INFORMATION

DOT/UN SHIPPING NAME: Not regulated

DOT HAZARD CLASS: Not regulated

Shipping Name: Not Regulated **Emergency Response Guide:** 128

XV. REGULATORY INFORMATION

Components are listed on the EPA/TSCA inventory of chemical substances.

TITLE III SECTION 302: No reportable materials.

TITLE III SECTION 311/312: Health hazard: Immediate
Physical hazard: Fire

TITLE III SECTION 313: No reportable materials.

XVI. OTHER INFORMATION

Information contained in this MSDS refers only to the specific material designated and does not relate to any process or to use with any other materials. This information is based on data believed to be reliable as of the date hereof. It is furnished without warranty of any kind express or implied. Since actual use is beyond our control, no guarantee, express or implied, and no liability is assumed by LEE INFRASTRUCTURE in conjunction with the use of this information. Nothing herein is to be construed as a recommendation to infringe any patents.

Material Safety Data Sheet

EMERGENCEY PHONE: 1 – 800- 424-9300 (CHEMTREC)
INFORMATION PHONE: 1 – 480 983-1212

I. CHEMICAL PRODUCT AND COMPANY DATA

PRODUCT: **SEWER SHIELD 100, COMPONENT B**

CHEMICAL FAMILY: AMINE MIXTURE

REVISION DATE: 3/2005

MANUFACTURER: ENVIRONMENTAL COATINGS
4702 E. Virginia Street
Mesa, Arizona 85215

II. COMPOSITION / INFORMATION ON INGREDIENTS

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

		EXPOSURE LIMITS			
INGREDIENT	CAS. NO.	TLV	STEL	PEL	CONTENT
POLYAMINE	*	N/E	N/E	N/E	<75%
ALKYL PHENOL	84852-15-3	N/E	N/E	N/E	<10%
ALIPHATIC AMINE	111-40-0	4.2 mg/m3	N/E	10 – 30 ppm	<10%
COLLOIDAL SILICA	67762-90-7	N/E	N/E	N/E	<5%
BISPHENOL A	80-05-7	N/E	N/E	N/E	<5%

* the chemical identity is being withheld in accordance of CFR 1910.1200.
N/E=NOT ESTABLISHED

III. HAZARDS IDENTIFICATION

HMIS Hazard Rating No. 3 (HIGH)
PRIMARY ROUTE OF ENTRY: *INHALATION, DERMAL, EYES*
EFFECTS OF OVER EXPOSURE:

INHALATION: Vapors/mist may be corrosive to upper respiratory tract. Repeated or prolonged exposure can result in lung damage. Lung damage may be evidenced by shortness of breath and may be accompanied by chronic cough.

EYES: Product may cause irritation to the eyes. Corrosive to the eyes and may cause severe damage including blindness.

SKIN CONTACT: Corrosive to the skin. May cause skin sensitization.

SKIN ABSORPTION: No known information available.

INGESTION: Not expected to be a relevant route of exposure. However, may cause permanent damage to mouth, throat and stomach.

CHRONIC: Repeated exposure may cause skin sensitization, or sensitization to the respiratory tract and development of an asthmatic reaction to future exposure. Preexisting eye, skin, and respiratory disorders may be aggravated by exposure of this product.

IV. FIRST AID MEASURES

INHALATION: Remove victim from exposure. If difficulty with breathing, administer oxygen. If breathing has stopped, administer artificial respiration. Seek medical attention.

EYES: Flush eyes with water, lifting upper and lower lids occasionally for 15 minutes. Seek medical attention.

SKIN: Immediately remove contaminated clothing. Wash thoroughly with soap and water for at least 15 minutes. If irritation occurs, get medical attention. Do not re-use clothing until thoroughly cleaned.

INGESTION: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Give one glass of water unless victim is drowsy, convulsing or unconscious. Seek medical attention.

V. FIRE FIGHTING METHODS

HMIS Hazard Rating No. 1 (Slight)

Flash Point: >200^{o} F **METHOD:** SETAFLASH

AUTO-IGNITION TEMP.: Not available

LIMITS OF FLAMMABILITY: LEL: Not available **UEL:** Not available

EXTINGUISHING MEDIA: Use water fog, dry chemical or CO_2.

SPECIAL FIRE FIGHTING PROEDURES AND PRECAUTIONS: Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup, which could result in container rupture. Delayed lung damage can be experienced after exposure to combustion product. Nitrogen oxides and nitrogen containing organic compounds may be released upon combustion.

VI. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/ LEAKS: Danger. Corrosive. Prevent all bodily contact with spilled material. Clean up personnel must be equipped with self-contained breathing apparatus, rubber gloves and protective clothing. Dike and contain the spill. Soak up residue with an absorbent such as clay, sand or other suitable material. Dispose of the absorbent material in accordance with federal, state and local regulations. Residual resin may be removed with hot soapy water.
WASTE DISPOSAL METHOD: Dispose in compliance with federal, state and local regulations.

VII. HANDLING AND STORAGE

HANDLING:
Keep away from open flames and high temperatures.

STORAGE:
Store in ventilated area

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Do not breath vapors/mists. Use a NIOSH approved respirator to prevent overexposure. In accord with 29 cfr 1910.134, use a full face, air supplying respirator or an air-purifying respirator for organic vapors. Avoid breathing vapors which may be produced under some conditions such as application of uncured material in large surfaces.

PROTECTIVE CLOTHING: Do not get on eyes, skin or clothing. Wear chemical resistant protective clothing, gloves, and boots. Wear chemical goggles or glasses with safety side shields to prevent contact with eyes.

ADDITIONAL PROTECTIVE MEASURES: Use ventilation to control vapors or mists concentrations. Eye wash fountains and safety showers should be available for emergency use.

IX. Physical And Chemical Properties

		Water/Oil Distribution Coefficient:	N/AV
Boiling Point (^{o}C):	N/AV	Solubility in Water:	Negligible
Percent Volatile:	0.1%	Specific Gravity:	1.20
Freezing Point (^{o}C):	N/AV	pH:	N/AV
Vapor Pressure mmHg @ 20^{o} C	N/AV	Evaporation Rate:	N/AV
Vapor Density	>AIR	Odor:	Ammonical
Odor Threshold:	N/AV		
Appearance:	Amber liquid		

N/AV = Not Available ca. = Approximate

X. STABILITY AND REACTIVITY

HMIS Hazard Rating No. 0

STABILITY: Stable Hazardous polymerization will not occur

CONDITIONS AND MATERIALS TO AVOID: Avoid heat, flame and contact with strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Nitrogen oxides, carbon monoxide and unidentified organic compounds may be formed during combustion.

XI. TOXICITY INFORMATION

HMIS Hazard Rating No. 3 (High)

PRIMARY ROUTE OF ENTRY: *INHALATION, DERMAL, EYES*

EFFECTS OF OVEREXPOSURE

INHALATION: Vapors may be corrosive to upper respiratory tract.

LC(50) INHAL. N/av

EYES: May cause sever damage including blindness.

SKIN CONTACT: Corrosive to the skin. In some individuals it may cause sensitization.

SKIN ABSORPTION: No information available.

INGESTION: Not expected to be route of entry. May cause permanent damage to mouth, throat, and stomach.

LD(50) ORAL

CAS. NO.	
84852-15-3	58 g/kg (rat)
111-40-0	3.99 g/kg (rat)

CHRONIC: Product does not contain chemicals considered to be carcinogenic by NTP, IARC, ACGIH, or OHSA.

XII. ECOLOGICAL INFORMATION

Marine Pollutant: NL
(NL = Not Listed; P = Moderate; PP = Severe; ND = Not Determined)

XIII. DISPOSAL CONSIDERATIONS

Dispose in a manner which complies with local, state and federal regulations.

XIV. TRANSPORT INFORMATION

DOT SHIPPING NAME: POLYAMINES, LIQUID, CORROSIVE, N.O.S., (ALKALINE AMINE)

DOT HAZARD CLASS: CLASS 8 (CORROSIVE LIQUID), PGIII

DOT PLACARD: CORROSIVE

OTHER REQUIREMENTS: UN1760, CLASS 60

XV. REGULATORY INFORMATION

COMPONENTS ARE LISTED ON THE EPA/TSCA	INVENTORY OF CHEMICAL SUBSTANCES
TITLE III SECTION 302:	No reportable materials.
TITLE III SECTION 311/312:	Health hazard: Immediate Physical hazard: Fire
TITLE III SECTION 313:	No reportable materials.

XVI. OTHER INFORMATION

Information contained in this MSDS refers only to the specific material designated and does not relate to any process or to use with any other materials. This information is based on data believed to be reliable as of the date hereof. It is furnished without warranty of any kind express or implied. Since actual use is beyond our control, no guarantee, express or implied, and no liability is assumed by LEE INFRASTRUCTURE in conjunction with the use of this information. Nothing herein is to be construed as a recommendation to infringe any patents.