DATE OF PREPARATION 09/01/09

Material Safety Data Sheet

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **GRANICRETE CA-FD EPOXY CURING AGENT**

CHEMICAL NAME AND/OR FAMILY DESCRIPTION: MIXTURE
SYNONYMS: NONE
CHEMICAL FAMILY: CYCLOALIPHATIC AMINE
EMPIRICAL FORMULA: MIXTURE
INTENDED USE: EPOXY, CURING AGENT

COMPANY INFORMATION:

GRANICRETE INTERNATIONAL, INC.
3420 S. 7TH STREET
SUITE 6
PHOENIX, AZ 85040
TELEPHONE # (602) 438-9464
CHEM TREC # 800-633-8253

EMERGENCY OVERVIEW:
HMIS HEALTH RATING 3 FLAMMABILITY 1 REACTIVITY 0

Physical form:	**Viscous liquid**
Color:	**Colorless**
Odor:	**Ammoniacal**
Hazards:	**Harmful if swallowed. Corrosive to eyes. Corrosive to skin. Severe eye irritant. Severe respiratory tract irritant. Severe skin irritant. May cause skin sensitization.**
Extinguishing Media:	**Ignition will give rise to a Class B fire. In case of large fire use Alcohol foam, water spray. In case of small fire use carbon dioxide (CO2), dry chemical, dry sand or limestone.**

SECTION 2 INGREDIENTS

COMPOSITION:

CHEMICAL NAME	CAS	%
Benzyl Alcohol	100-51-6	<40
Isophoronediamine (IPD)	2855-13-2	<35
Trimethylhexamethylenediamine (TMD)	25620-58-0	<10

The remaining components are trade secret.

OSHA (ACGIH) EXPOSURE LIMITS

CAS #	TWA		STEL		CEILING	
	ppm	mg/m3	ppm	mg/m3	ppm	mg/m3
100-51-6	N/E (N/E)	N/E (N/E)	N/E (N/E)	N/E (N/E)	N/E (N/E)	N/E (N/E)
2855-13-2	N/E (N/E)	N/E (N/E)	N/E (N/E)	N/E (N/E)	N/E (N/E)	N/E (N/E)
25620-58-0	N/E	N/E	N/E	N/E	N/E	N/E

(N/E)	(N/E)	(N/E)	(N/E)	(N/E)	(N/E)

N/E = Not established. All values in ( ) are U.S. ACGIH (American Conference of Government Industrial Hygienists) – TLV; All others are OSHA – PEL.

SECTION 3 HAZARD IDENTIFICATION

ROUTES OF EXPOSURE:

- Eye Contact
- Ingestion
- Skin Absorption
- Skin Contact

EXPOSURE STANDARDS:

No standards established for the product.
Maintain air contaminant concentrations in the workplace at the lowest feasible levels.

HEALTH HAZARDS:

- Harmful in swallowed.
- Corrosive to eyes.
- Corrosive to skin.
- Severe eye irritant.
- Severe respiratory tract irritant.
- Severe skin irritant.
- May cause skin sensitization.

TARGET ORGANS

- Eye
- Skin
- Respiratory system

SIGNS AND SYMPTOMS OF EXPOSURE (Acute Effects)

Burns of the eye may cause blindness. Contact with the skin may cause dryness (defatting), itching and/or rash. Inhalation of vapors may cause irritation in the respiratory tract. Contact of undiluted product with the eyes or skin quickly causes severe irritation and pain and may cause burns, necrosis and permanent injury. Inhalation of aerosols and mists may severely damage contacted tissue and product scarring. Product is absorbed through the skin and may cause nausea, headache and general discomfort.

SIGNS AND SYMPTOMS OF EXPOSURE (Possible Longer Term Effects)

Repeated and/or prolonged exposure may cause allergic reaction/sensitization.
Repeated and/or prolonged exposures may result in: adverse respiratory effects (such as cough, tightness of chest or shortness of breath); adverse skin effects (such as irritation, rash, or corrosion); adverse eye effects (such as conjunctivitis or corneal damage).
Dryness of nasal passages may be experienced when material is inhaled over a long period of time.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

- Asthma
- Chronic respiratory disease (e.g. Bronchitis, Emphysema)
- Eye disease
- Skin Disorders and Allergies.

CARCINOGENS UNDER OSHA, ACGIH, NTP, IARC, OTHER

This product contains no carcinogens in concentrations of 0.1 percent or greater.

SECTION 4 FIRST AID MEASURES

EYES: Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice.

SKIN: Remove product and immediately flush affected area with water for at least 15 minutes. Remove contaminated clothing and shoes. Destroy contaminated leather apparel. Cover the affected area with a sterile dressing or clean sheeting and transport for medical care. Do not apply grease or ointments. Control shock, if present. Launder contaminated clothing prior to reuse.

INGESTION: In the event of ingestion, administer 3-4 glasses of milk or water. DO NOT INDUCE VOMITING. Seek medical advice.

INHALATION: Move patient to fresh air. If breathing has stopped or is labored give assisted respiration (e.g. mouth-to-mouth). Supplemental oxygen may be indicated. Prevent aspiration of vomit. Turn victim's head to the side. Seek medical advice.

SECTION 5 FIRE – FIGHTING MEASURES

CHARACTERISTICS:

FLASH POINT (closed cup)	**>93.33C (>199.99F)**
UPPER EXPLOSION LIMIT (UEL)	**No Data**
LOWER EXPLOSION LIMIT (UEL)	**No Data**
AUTOIGNITION TEMPERATURE	**No Data**

FIRE HAZARD CLASSIFICATION (OSHA/NFPA) Class IIIB

EXTINGUISHING MEDIA: Ignition will give rise to a Class B fire. In case of large fire use: water spray, alcohol foam. In case of small fire use: carbon dioxide (CO2), dry chemical, dry sand or limestone.

SPECIAL FIRE FIGHTING PROCEDURES: A face shield should be worn. Firefighters should wear butyl rubber boots, gloves, and body suit and a self-contained breathing apparatus. Retain expended liquids from fire fighting for later disposal.

UNUSUAL OR EXPLOSIVE HAZARDS: May generate toxic or irritating combustion products. Contact of liquid with skin must be prevented. Sudden reaction and fire may result if product is mixed with an oxidizing agent. May generate carbon monoxide gas. May generate toxic nitrogen oxide gases. May generate ammonia gas. Personnel in vicinity and downwind should be evacuated.

SECTION 6 ACCIDENTAL RELEASE MEASURES

FOR ALL TRANSPORTATION ACCIDENTS, CALL PERS AT 800-633-8253.

CONTAINMENT TECHNIQUES (Removal of ignition sources, diking, etc.): Stop the leak, if possible. Reduce vapor spreading with a water spray. Shut off or remove all ignition sources. Construct a dike to prevent spreading (includes molten liquids until they freeze).

CLEAN-UP PROCEDURES: If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Transfer to containers by suction,

preparatory for later disposal. Flush area with water spray. Clean-up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with a vacuum truck.

OTHER EMERGENCY ADVICE: Wear protective clothing, boots, gloves, and eye protection.

SECTION 7 HANDLING AND STORAGE

Precautions to be Taken In…
Handling: Handle in well ventilated work space. Avoid breathing of vapors. Avoid contact with skin or eyes. When handling, do not eat, drink, or smoke.

Storage: Keep away from: acids, oxidizers. Store in steel containers preferably located outdoors, above ground, and surrounded by dikes to contain spills or leaks. Keep away from oxidizers, heat or flames. Do not store in reactive metal containers. Keep in cool, dry, ventilated storage and in closed containers.

Other Precautions: Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations (e.g. OSHA). Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Cancer-causing nitrosamines could be formed.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Protection Equipment (Type)

Eye/Face Protection: Full face shield with goggles underneath.

Hand Protection: Neoprene rubber gloves. Impermeable gloves. Cuffed butyl rubber gloves. Nitrile rubber gloves.

Respiratory Protection: Not required under normal conditions in a well-ventilated workplace.

Protective Clothing: Impervious clothing. Slicker Suit, Rubber boots. Full rubber suit (rain gear). Butyl or latex protective clothing.

Engineering Controls: No specific controls needed.

Work and Hygienic Practices: Provide readily accessible eye wash stations and safety showers. Wash at the end of each workshift and before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated. Use appropriate hand and skin lotions to protect the skin. Discard contaminated leather articles.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:	**Viscous Liquid**
Appearance:	**Colorless**
Odor:	**Ammoniacal**
Boiling Point (degrees C):	**205.00C (401.00F)**
Melting/Freezing Point (degrees C):	**No Data**
Specific Gravity (water=1):	**0.99**
pH:	**Alkaline**
Vapor Pressure:	**<1.00000**
Vapor Density (Air = 1):	**No data**

Solubility in Water (%): **<1.00%**
Molecular Weight: **Mixture**

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Stable

Conditions To Avoid (if unstable): Not applicable

Incompatibility (Materials to Avoid): Mineral acids (i.e. sulfuric, phosphoric, etc.) Organic acids (i.e. acetic acid, citric acid, etc.). Oxidizing Agents (i.e. perchlorates, nitrates, etc.) Reactive metals (i.e. sodium, calcium, zinc, etc.) sodium or Calcium Hypochlorite. CAUTION: 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. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Materials reactive with hydroxyl compounds. Nitrites, nitrosating agents. A reaction accompanied by large heat release occurs wen the product is mixed with acids. Heat generated may be sufficient to cause vigorous boiling creating a hazard due to splashing or splattering of hot material.

Hazardous Decomposition Products (from burning, heating, or reaction with other materials): Carbon Monoxide in a fire; Carbon Dioxide in a fire; Ammonia when heated; Nitrogen Oxides in a fire. Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm). Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. Nitrosamines. Aldehydes. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic.

Hazardous Polymerization: Will not occur.

Conditions To Avoid (if polymerization may occur): Not applicable.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY EFFECTS DATA: Oral LD50 (rat): 1000.00 mg/kg (estimate)

ACUTE DERMAL TOXICITY (LD50, RABBIT): >2800.00 MG/KG (estimate)

ACUTE INHALATION TOXICITY (LC50, RAT): No data

OTHER DATA: Toxicity data from similar products.

OTHER ACUTE EFFECTS: No data

IRRITATION EFFECTS DATA: Corrosive to the eyes of a rabbit. Severe irritant to the skin of a rabbit.

CHRONIC/SUBCHRONIC DATA: No delayed, subchronic or chronic test data are known.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity: No Data

Environmental Fate: 2855-13-2 ISOPHORONEDIAMINE; Biodegradable
3236-53-1 TRIMETHYLHEXAMETHYLENEDIAMINE: Biodegradable

Additional Information: No Data

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Comply with all Federal, State and Local Regulations.

SECTION 14 TRANSPORTATION INFORMATION

DOT NON-BULK SHIPPING NAME: **Amines, liquid, corrosive, n.o.s. (Trimethyl-hexamethylenediamines)// 8//UN2735//PGII**

DOT BULK SHIPPING NAME: **Refer to Bill of Lading**

IMO SHIPPING NAME: **Refer to Bill Of Lading**

ICAO/IATA SHIPPING DATA: **Amines, liquid, corrosive, n.o.s. (Trimethyl-hexamethylenediamines)// 8//UN2735//II// shipment per 49 CFR 171.11**

SECTION 15 REGULATORY INFORMATION

US FEDERAL REGULATIONS:

Toxic Substances Control Act (TSCA): All components are included in the EPA Toxic Substance Control Act (TSCA) Chemical Substance inventory.

OSHA Hazard Communication Standard (29CFR1910.1200 Hazard Class(es): Corrosive. Sensitizer.

EPA SARA Title III Section 312 (40CFR370) Hazard Class: Immediate Health Hazard. Delayed health hazard.

EPA SARA Title III Section 313 (40CFR370) Toxic Chemicals Above "de minimis" level are: NONE

State Regulations:

PROPOSITION 65 SUBSTANCES component(s) known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986": None

NEW JERSEY TRADE SECRET REGISTRY NUMBER(S): 05995500-(H2074U)

SECTION 16 INTERNATIONAL REGULATIONS

CANADA

DSL: Included on Inventory
WHMIS Hazard Classification: Class D Division 2B, Class E Corrosive
WHMIS Trade Secret Registry Number(s): 1135-007
WHMIS Hazardous Ingredients: Isophoronediamine (IPD)
Trimethylhexamethylenediamine (TMD)
Benzyl Alcohol
WHMIS Symbols: Test tube/hand, Stylized T

EUROPEAN ECONOMIC COMMUNITY (EEC):

EINECS/ELINCS MASTER INVENTORY: Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer

EEC Symbol: Corrosive (C)

EEC Risk and Safety Phrases:

Harmful by inhalation and in contact with skin and if swallowed (R20/21/22). In case of accident or if you feel unwell, seek medical, seek medical advice immediately (show the label where possible) (S45)
In case of contact with eyes, rinse immediately with plenty of water and seek Medical advice (S26). Wear suitable protective clothing, gloves and eye/ Face protection (S36/37/39).

AUSTRALIA AICS: Included on Inventory.

JAPAN MITI: Not on Inventory

PHILIPPINES PICCS: Included on Inventory

KOREA ECL: Included on Inventory

CHINA SEPA: Included on Inventory

SECTION 17 OTHER INFORMATION 9-01-2009

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