

Material Safety Data Sheet

CROSSLINKER

Version 3

Print Date 06-02-2005

Issue Date 06-02-2005

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material Name : Crosslinker

Company : Granicrete International

3420 S. 7th Street

Phoenix, AZ 85040

Telephone : (602) 438-9464

Fax : (602) 438-9465

Emergency telephone : PERS: 800-633-8253

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS*

<u>CAS No. /</u> <u>NJRTK No.*</u>	<u>Wt %</u>	<u>Components</u>
64265-57-2	99.70	Polyfunctional aziridine
108-01-0	0.30	2-dimethylaminoethanol
75-55-8	< 0.0001	2-methylaziridine

*Ingredients not precisely identified are either proprietary or non-hazardous; the NJRTK number for the proprietary component(s) is 043574982 followed by the 4/5 digitcode above.

SECTION 3. HAZARDS IDENTIFICATION**

**As defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. See Section 8 for exposure guidelines & Section 11 for toxicology and ingredient specific information.

Emergency Overview

**PALE YELLOW LIQUID; MILD AMINE ODOR;
GASTROINTESTINAL IRRITANT. RESPIRATORY SENSITIZER. SKIN
IRRITANT. RESPIRATORY IRRITANT. SKIN SENSITIZER. EYE CORROSIVE.**

Potential Health Hazards

- Eyes** This product is eye corrosive based on animal studies.
- Skin** This product is a moderate skin irritant based on animal studies. This product induced skin sensitization in an animal study. This product may induce skin sensitization in humans.
- Ingestion** The acute oral toxicity of this material is between 500 and 5000 mg/kg. Relative to other materials, this material is classified as slightly toxic by ingestion. In humans, irritation of the mouth, pharynx, esophagus, and stomach can develop following ingestion of this material.
- Inhalation** Vapors and/or aerosols of this material will probably irritate mucous membranes, eyes, nose, and respiratory passages. This material may induce respiratory allergy/sensitization. Symptoms include: cough, tightness in chest, and/or asthmatic wheezing.
- Chronic Exposure** Aziridine based crosslinkers caused mutations and chromosomal aberrations in several in vitro and in vivo genotoxicity studies. Based on these studies and animal carcinogenicity data on similar substances, this material should be

treated as a potential carcinogen.

SECTION 4. FIRST AID MEASURES

Inhalation

Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Consult medical personnel. If breathing is labored, give oxygen.

Skin contact

Wash off of skin with plenty of soap and water. If redness, itching or burning sensation develops, Get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

Eye contact

Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. Do not attempt to neutralize with chemical agents. Obtain medical attention as soon as possible. Oils or ointments should not be used at this time. Continue the flushing for an additional 15 minutes if a physician is not immediately available.

Ingestion

DO NOT INDUCE VOMITING. Give one or two glasses of water to drink and refer to medical Personnel or take direction from either a physician or a poison control center. Never give anything by mouth to an unconscious person.

Note to physician

Medical personnel should evaluate persons with chronic pulmonary disease before those workers handle this product.

SECTION 5. FIRE FIGHTING MEASURES

Flammable Properties

Flash point: > 100 °C (> 212 °F) Set a Flash cc

Extinguishing agents

Water fog, foam, carbon dioxide, dry chemical, halogenated agents. Water may be used to cool closed containers to prevent pressure buildup.

Specific hazards during fire fighting

Heat/impurities may increase temperature/build pressure/rupture closed containers, spreading fire, increasing risk of burns/injuries.

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus with full face piece and full protective clothing. If contact occurs with material or its solutions, immediately flush with water and remove contaminated clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear skin, eye, and respiratory protection during cleanup.

Methods for cleaning up

Contain spill. Soak up material with absorbent and shovel into a chemical waste container. Decontaminate with 1% acetic acid solution or one part white vinegar to four parts water.

SECTION 7. HANDLING AND STORAGE

Handling

Open containers of CX-100 in well-ventilated areas to avoid exposure to residual propyleneimine that may have collected in the headspace. Avoid breathing vapors or aerosols. Prevent skin and

eye contact. A sensitized individual should not be exposed to the product which caused the sensitization.

Requirements for storage areas and containers

Keep container tightly sealed. Store in a cool, well ventilated area away from heat, sources of ignition, direct sunlight, and incompatible materials.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures

While CX 100 has a very low vapor pressure, precluding significant inhalation exposure under normal conditions, uses which may generate aerosol mists, such as spray application, need to be well controlled to prevent significant inhalation exposure which presents serious health risks such as respiratory sensitization. Where aerosol mists may be generated, the operation should be enclosed as much as possible, with extraction ventilation provided at any required openings. A properly engineered spray booth, equipped with downdraft or lateral flow ventilation, is a possible engineering control measure. Air exhausted from the enclosure should be filtered and discharged to a safe location, preferably outdoors.

Eye protection

Wear chemical tight goggles and full faceshield.

Skin and body protection

Take all precautions to prevent skin contact. Use gloves, arm covers and apron determined to be impervious under the conditions of use. Additional protection, such as full body suit and boots, may be required depending on conditions. Remove contaminated clothing and wash before re-wearing. Wash separately from other laundry. DSM NeoResins employees use neoprene or nitrile gloves during manufacture and packaging of this product.

Respiratory protection

Where engineering measures are not feasible or to provide supplementary respiratory protection, NIOSH certified full facepiece supplied air respirators provide the highest protection. Where the use of supplied air respirators is not feasible, NIOSH certified full facepiece airpurifying respirators equipped with high efficiency filters may be used. All respirator use should be managed under a respiratory protection program meeting the requirements of 29CFR1910.134.

Hygienic measures

Eyewash station and safety shower must be readily available in work area.

Occupational

Components with workplace control parameters

<u>Components</u>	<u>Source</u>	<u>Type</u>	<u>Value</u>	<u>Remarks</u>
2-methylaziridine	NIOSH	Recommended Exposure Limit (REL):	2 ppm 5 mg/m3	
	NIOSH	Skin designation:		Can be absorbed through skin
	OSHA Z1	PEL:	2 ppm 5 mg/m3	
	OSHA Z1	Skin designation:		Can be absorbed through skin

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form : Liquid

Color : Pale yellow

Odor : mild amine

pH : (Basic)

Density : 1.07 g/cm³

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : Avoid contamination with acidic materials, heat, direct sunlight, ultraviolet radiation, strong oxidizing conditions and freezing conditions.

Unstable at elevated temperatures and pressures, or may react with water or acids with some release of energy, but not violently.

Materials to avoid : Acidic materials, anhydrides, strong oxidizers

Hazardous decomposition products

Carbon oxides.
Nitrogen oxides.

Hazardous reactions : Hazardous polymerization may occur if mixed with acidic materials.

SECTION 11. TOXICOLOGICAL INFORMATION

Skin irritation : Moderate skin irritant based on animal studies.

Eye irritation : Eye corrosive based on animal studies. Eye corrosive based on animal studies.

Carcinogenicity : Aziridine based crosslinkers caused mutations and chromosomal aberrations in several in vitro and in vivo genotoxicity studies. Based on these studies and animal carcinogenicity data on similar substances, this material should be treated as a potential carcinogen.

Carcinogenicity:

Sensitization: Skin: known human skin sensitizer based on human experience.
Respiratory: Known respiratory sensitizer

Regulatory List	Chemical	Category / Classification
NTP	N.D.	
IARC	N.D.	
OSHA	N.D.	

SECTION 12. ECOLOGICAL INFORMATION

Additional ecotoxicological remarks: No data.

Environmental fate : No data.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal method : Incinerate in approved facility. Do not incinerate in closed containers. Dilute with clean, low viscosity fuel. Untreated materials should not be

released to the environment. Discarded product is not a hazardous waste under RCRA, but may be regulated by other jurisdictions.

Container disposal : Empty container retains potentially hazardous residue. Observe all hazard precautions. May contain corrosive material. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

SECTION 14. TRANSPORT INFORMATION

Proper shipping name : Not Regulated by US DOT

SECTION 15. REGULATORY INFORMATION

TSCA (TSCA Substances) : All components are on the TSCA Chemical Substances

Control Act) Inventory.

CEPA (Canadian Environmental Protection Act): CEPA (Canadian Environmental Protection Act): All components are on the DSL (Domestic Substances List).

SARA Title III (Emergency Planning and Community Right-To-Know Act): This product does not contain any chemicals subject to the reporting requirements of SARA Section 313.

California Proposition 65 : WARNING. This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS Classifications :

Class D, Division 1A, Very Toxic Material at > 1%.
Class D, Division 2A, Very Toxic Material at > 0.1% .
Class D, Division 2B, Toxic Material at > 1%.

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

SECTION 16. OTHER INFORMATION

Further information:

We assigned NFPA and HMIS ratings to this product based on the hazards of its ingredient(s). Because the customer is most aware of the application of the product, he must ensure that the proper personal protective equipment (PPE) is provided consistent with information contained in the product MSDS.*

NFPA Rating

Health : 3
Fire : 1
Reactivity : 1
Special :

HMIS Rating

Health : 3
Fire : 1
Reactivity : 1
** * :

*This information is intended solely for the use of individuals trained in the particular hazard rating system.

**See appropriate MSDS section.

The information herein is given in good faith but no warranty, expressed or implied, is made.

This MSDS was prepared by the Granicrete International in Phoenix, AZ. For further questions, call during regular business hours (602) 438-9464.