



Date Revised 2/22/2014

MATERIAL SAFETY DATA SHEET

Section 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Crosslinker C-100

CHEMICAL NAME : TRIMETHYLOLPROPANETRIS(2-METHYL-1-AZIRIDINE)PROPIONATE

SYNONYM: Polyfunctional Aziridine; Trifunctional Aziridine Crosslinker

CAS/TSCA Number: 64265-57-2

ECION/EINECS Number: 264-763-3

MANUFACTURER

NANJING MSN CHEMICAL CO.,LTD

ADDRESS: 827 RUIKAI BUILDING ,101 XIAOSHAN ROAD LIUHE NANJING CITY
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EMERGENCY PHONE NUMBERS ARE +86 25-57015632(CHINA)

Section 2 COMPOSITION / INFORMATION ON INGREDIENTS

PRODUCT/ INGREDIENT:	CAS/TSCA Number	Amount (%)
POLYFUNCTIONAL AZIRIDINE	64265-57-2	>99%
PROPYLENE IMINE	75-55-8	< 100 ppm

Section 3 HAZARD IDENTIFICATION

APPEARANCE Clear to slight amber liquid

ODOR Mild Amine odor

EMERGENCY OVERVIEW

Causes eye irritation and is corrosive. It may cause respiratory tract irritation. It may cause skin irritation and is a skin sensitizer. Harmful if swallowed. To avoid static spark ground equipment and container before transferring.

POTENTIAL HEALTH EFFECTS

Eye Contact:

Causes eye irritation and is corrosive. Symptoms may include tearing, redness and with severe exposure may cause blistering

Skin Contact:

May induce skin sensitization in humans. May induce skin sensitization. Symptoms may include redness, itching, rash and with severe exposure may cause blistering.

Inhalation:

Vapor or mist may cause headaches, nausea, and irritation of nose, throat and lungs. Symptoms may include coughing, wheezing and possible shortness of breath.

Ingestion:



Harmful if swallowed. The acute oral toxicity is between 500 and 5000 mg/kg. May cause pain or discomfort in the mouth, chest and abdomen. Symptoms may include nausea, vomiting, diarrhea, dizziness, drowsiness, faintness, weakness and collapse.

Chronic Exposure:

Repeated Exposure may cause allergic skin reaction. Inhalation may cause allergic respiratory reaction.

No Carcinogenic substances as defined by IARC, NTP, and/or OSHA.

Section 4 FIRST AID MEASURES

Eye Contact:

Immediately flush the eyes with large quantities of running water for at least 15 minutes, while holding 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.

Skin Contact:

Immediately flush with large quantities of running water for at least 15 minutes, and then wash off of skin with plenty of soap and water. If redness, itching or burning sensation develops, get medical attention. Wash (or discard) contaminated clothing. Discard or decontaminate footwear before reuse.

Inhalation:

Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is labored, give oxygen. Obtain medical attention as soon as possible.

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. Obtain medical attention as soon as possible.

Section 5 FIRE FIGHTING MEASURES

FLASH POINT: 280°F (138°C) Pensky-Martens Closed Cup (ASTM D-93)

AUTOIGNITION TEMPERATURE: Not established

EXTINGUISHING MEDIA:

Use water fog, foam, carbon dioxide, dry chemical, halogenated agents. Use a water spray to cool fire-exposed containers.

SPECIAL PROCEDURES:

Wear self-contained positive breathing apparatus (SCBA) and complete personal protective equipment. Remove all ignition sources. Use a water spray to cool fire-exposed containers.

Section 6 ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES:

Emergency clean-up workers should wear protective clothing (see Section 8). Remove any sources of fire, heating elements, etc. Contain spill. Soak up material with absorbent and shovel into a chemical waste container. Decontaminate with weak acid solution such as a 1% acetic acid solution, or one part white vinegar to four parts water.

WASTE DISPOSAL:

Incinerate or dispose of in approved landfill. Dispose of as an aqueous waste after reaction

with weak acid, with approval of local, state or federal agency.

Section 7 HANDLING AND STORAGE

General Handling:

Wear protective clothing. (See Section 8) Open containers in a well-ventilated area to avoid exposure to residual Propyleneimine that may have collected in 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.

Storage:

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

Section 8 EXPOSURE CONTROL / PERSONAL PROTECTION



Safety Glasses



Gloves



Vapor Respirator

EYE AND FACE PROTECTION:

Wear chemical tight goggles and full face shield.

RESPIRATORY PROTECTION:

Protect against inhaling vapors or aerosols by local exhaust or hood. Where engineered measures are not feasible, for non spray applications an air purifying respirator with organic vapor cartridge may be worn. For spray applications an NIOSH certified full face piece supplied-air respirators provide the highest protection. Where the use of supplied-air respirators is not feasible, NIOSH certified full face piece air purifying respirators equipped with high efficiency filters may be used. For fire-fighting or other emergency situations use a NIOSH/MSHA approved positive pressure self-contained breathing apparatus.

PROTECTIVE CLOTHING:

Use gloves, arm covers and apron determined to be impervious under the conditions of use. Additional protection, such as full body suite and boots may be required depending on conditions. Remove contaminated clothing and wash before re-wearing.

ADDITIONAL PROTECTIVE MEASURES:

Local exhaust should be used when appropriate to control employee exposure. Safety showers and eyewash facilities must be immediately available. Employees should wash their hands and face before eating, drinking, or using tobacco products.

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Color:	Pale yellow
Odor:	Slight amine
Odor Threshold	Not established
pH:	>8
Melting Point	< -10°C (14° F)
Boiling Point:	Not established
Vapor Density:	Greater than air



Specific Gravity: 1.1
Solubility in Water: Soluble

Section 10 STABILITY AND REACTIVITY

Conditions To Avoid:

This material is stable. 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.

Incompatible Materials:

Acidic materials, anhydrides, strong oxidizers.

Hazardous Polymerization:

May occur if mixed with acidic materials.

Hazardous Decomposition Products:

Carbon oxides, Nitrogen oxides

Section 11 TOXOLOGICAL INFORMATION

PRODUCT/ INGREDIENT	ORAL LD50 (Rat)
Polyfunctional Aziridine	500 - 5000 mg/kg
DERMAL LD50 (Rat)	INHALATION LD50 ((Rat)
Not available	Not available

Sensitization

Known human skin sensitizer based on human experience. Known respiratory sensitizer.

Chronic Toxicity

None known

Carcinogenicity

Not listed as a carcinogenic by IRAC, NTP or ACGIH or regulated as a carcinogen by OSHA. Positive mutagenicity activity has been reported for aziridine-based crosslinkers.

Corrosivity

Corrosive to the eyes

Eye Irritation

Eye corrosive based on animal studies.

Skin Irritation

Moderate skin irritant based on animal studies.

Section 12 ECOLOGICAL INFORMATION

No Ecological data available.

Section 13 DISPOSAL CONSIDERATIONS

Disposal Method:

According to RCRA, it is the responsibility of the waste generator to ensure proper disposal. Disposal of this material should be in accordance with local, state / provincial and federal regulations. The unused product as manufactured is a RCRA non-hazardous waste in accordance with 40 CFR261.

Container Disposal:



Empty container may contain product residue. Observe all personal protection precautions found in Section 8 when handling. Also, observe all product handling cautions as listed in this MSDS.

Section 14 TRANSPORT INFORMATION

DOT (US)

Not dangerous goods.

IMDG

Not dangerous goods.

IATA

Not dangerous goods.

Section 15 REGULATORY INFORMATION

Federal regulations

Registration status:

Chemical/TSCA, US released/listed

OSHA hazard category: No corrosion to skin and/or eyes; Toxic-dermal;

Toxic-oral

Section 16 OTHER INFORMATION

NFPA RATINGS

Health =3

Fire =1

Reactivity =1

This information is based on our present knowledge and represents best opinion as to the proper use and handling of the product under normal, foreseeable circumstances. Any use of the product which is not in conformance with this data sheet or product label or which involves the use of this product in combination with any other product or process is the responsibility of the user.