

# MATERIAL SAFETY DATA SHEET

FILE NO.:  
MSDS DATE: 12 /31/ 2008

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## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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PRODUCT NAME(s):       Technicure MDU-11, Technicre MDU-11M  
SYNONYMS:               Methylene Diphenyl Bis (Dimethyl Urea)

MANUFACTURER:        A &C Catalysts, Inc.  
ADDRESS:               1600 W Blancke St. Linden, NJ 07036

EMERGENCY PHONE:    908-474-9393  
FAX PHONE:            908-474-9388

CHEMICAL NAME:        Methylene Diphenyl Bis (Dimethyl Urea)

CHEMICAL FAMILY:     Substituted Ureas

PRODUCT USE:         Epoxy Curing Agent  
PREPARED BY:        DCR

SECTION 1 NOTES:     None

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## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

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### INGREDIENT:

| <u>CAS NO.</u> | <u>% WT</u> | <u>SARA 313 REPORTABLE</u> |
|----------------|-------------|----------------------------|
| 10097-09-3     | 100%        | No                         |

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## SECTION 3: HAZARDS IDENTIFICATION

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### EMERGENCY OVERVIEW:

Mild skin irritant.  
Mild eye irritant.  
Mild respiratory tract irritant.

### ROUTES OF ENTRY:

### POTENTIAL HEALTH EFFECTS

Inhalation : May cause nose, throat, and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.

Eye contact : Contact with eyes may cause irritation.

Skin contact : Mild skin irritation.

### MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

None known.

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## CARCINOGENICITY

Chronic Health Hazard : This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater

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## SECTION 4: FIRST AID MEASURES

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**EYES:** Rinse immediately with plenty of water also under the eyelids for at least 20 minutes. Remove contact lenses.

**SKIN:** Wash off immediately with plenty of water for at least 20 minutes. Wash off with soap and water. Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay.

**INGESTION:** If a person vomits when lying on his back, place him in the recovery position. Prevent aspiration of vomit. Turn victim's head to the side.

**INHALATION:** 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. Move to fresh air.

### NOTES:

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.

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## SECTION 5: FIRE-FIGHTING MEASURES

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### FLASH POINT:

C: >250C

### NFPA HAZARD CLASSIFICATION

HEALTH: 1                      FLAMMABILITY: 0                      REACTIVITY: 0  
OTHER:

### HMIS HAZARD CLASSIFICATION

HEALTH: 1                      FLAMMABILITY: 0                      REACTIVITY: 0  
PROTECTION:

### EXTINGUISHING MEDIA:

Alcohol-resistant foam.  
The product itself does not burn.  
Carbon dioxide (CO2).  
Dry chemical.  
Dry sand.  
Limestone powder.

### SPECIAL FIRE FIGHTING PROCEDURES:

Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

### UNUSUAL FIRE AND EXPLOSION HAZARDS:

Ammonia gas may be liberated at high temperatures. Potential dust explosion hazard. As discussed in NFPA 68 and NFPA 69 standards, mixing any dust that can propagate a deflagration with flammable vapor will increase the hazard rating. Where explosive dusts are contained in equipment, that equipment should contain adequate explosion relief vents, explosion suppression systems, or an oxygen-deficient atmosphere. Care should be taken to prevent the escape of dust from horizontal surfaces. No special precautions required.

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## SECTION 5 NOTES:

The product, as distributed, is noncombustible.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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### ACCIDENTAL RELEASE MEASURES:

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

#### METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

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## SECTION 7: HANDLING AND STORAGE

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### HANDLING AND STORAGE:

Avoid dust formation. Do not breathe vapors/dust. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Avoid contact with eyes. Use only in well-ventilated areas. Use personal protective equipment. When using, do not eat, drink or smoke.

### OTHER PRECAUTIONS:

Keep away from Oxidizers

### SECTION 7 NOTES:

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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### ENGINEERING CONTROLS:

Provide readily accessible eye wash stations and safety showers.

Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

### RESPIRATORY PROTECTION:

Respirator must be worn if exposed to dust. Wear appropriate respirator when ventilation is inadequate.

### EYE PROTECTION:

Dust resistant safety goggles.

Chemical safety glasses.

### Hand PROTECTION:

Nitrile Rubber Gloves.

### SKIN PROTECTION:

Long sleeve shirts and trousers without cuffs.

### OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Provide readily accessible eye wash stations and safety showers. Wash at the end of each workshift and before eating, smoking or using the toilet.

### SECTION 8 NOTES:

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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**APPEARANCE:**

Form : Powder.

Color : White.

Odor : Odorless.

Relative density : 0.99 (water = 1)

VAPOR PRESSURE: 4.9E-11 Pa at 25°C Directive 92/69 Method A4

Density : 1.06

pH : Neutral.

Melting point/range : 216-229 °C

Flash point : > 100 °C

Autoignition temperature : >380 °C

SOLUBILITY IN WATER: 45 mg/l at 20°C Directive 92/69 Method A6

**SECTION 9 NOTES:**

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## SECTION 10: STABILITY AND REACTIVITY

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STABLE

UNSTABLE

**STABILITY:**

Stable under normal conditions.

**CONDITIONS TO AVOID (STABILITY):**

Oxidizing agents.

Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:**

Nitric Acid

Ammonia.

Nitrogen Oxides.

Toxic cyanates.

Carbon monoxide.

Carbon dioxide (CO<sub>2</sub>).

**HAZARDOUS POLYMERIZATION:**

Will Not Occur

**CONDITIONS TO AVOID (POLYMERIZATION):**

**SECTION 10 NOTES:**

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## SECTION 11: TOXICOLOGICAL INFORMATION

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**TOXICOLOGICAL INFORMATION:**

Ingestion : LD50 >2000 mg/kg

Species : Rat.

Inhalation : No data is available on the product itself.

Skin. : LD50 : > 5,000 mg/kg

Species : Rabbit.

Method : Estimated.Acute

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Eye irritation/corrosion : Mild eye irritation.

Acute dermal  
irritation/corrosion  
: Mild skin irritation.

## Chronic Health Hazard

Absorption of this product into the body leads to the formation of methemoglobin.

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### SECTION 12: ECOLOGICAL INFORMATION

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#### ECOLOGICAL INFORMATION:

ACUTE TOXICITY FOR FISH: LC<sub>50</sub> > 30.2mg/l (96h) (Oncorhynchus mykiss) No adverse effects observed during the test

ACUTE TOXICITY FOR DAPHNIA: EC<sub>50</sub> > 39.8 mg/l (48h) (Daphnia magna) Not toxic to Daphnia at 39.8 mg/l

ALGAL GROWTH INHIBITION: EbC<sub>50</sub> (72h): 9.14 mg/l

ErC<sub>50</sub> (72h): 29.4 mg/l

No observed effect concentration (growth): 5.90 mg/l

No observed effect concentration (biomass): 5.90mg/l

No microscopic abnormalities of the cells were detected after treatment with U52.

#### INHIBITION OF AEROBIC

#### MICROBIAL ACTIVITY:

IC<sub>50</sub> (3h) >100 mg/l (No observed effect after 3 hours)

READY BIODEGRADABILITY: 3% Degradation after 28 days

HYDROLYSIS: **PH K (hours – 1) Te ½ (Days)**

4 4.31 x 10<sup>-4</sup> 67

7 3.99 x 10<sup>-4</sup> 72

#### SECTION 12 NOTES:

ECU Code: R52/53, harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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### SECTION 13: DISPOSAL CONSIDERATIONS

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#### WASTE DISPOSAL METHOD:

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations

#### SECTION 13 NOTES:

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### SECTION 14: TRANSPORT INFORMATION

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RID/ADR

Non-hazardous for road transport.

IMDG

Non-hazardous for sea transport.

IATA

Non-hazardous for air transport.

DOT

Not dangerous goods

#### SECTION 14 NOTES:

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### SECTION 15: REGULATORY INFORMATION

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OSHA Hazard Communication Standard (29 CFR 1910.1 200) Hazard Class(es)

No OSHA Hazards.

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## Regulatory list

USA TSCA Included on Inventory.

EU EINECS Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.

Canada DSL Included on Inventory.

Australia AICS Included on Inventory.

Japan ENCS Included on Inventory.

South Korea ECL Included on Inventory.

China SEPA Included on Inventory.

Philippines PICCS Included on Inventory.

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

No SARA Hazards.

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level

None.

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.

## CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

S-PHRASES: 22 24/25

Do not breathe dust. Avoid contact with skin and eyes.

Not hazardous according to Directive 67/548/EEC.

## COUNTRY SPECIFIC INFORMATION

Germany

WGK: 1

SWITZERLAND

SWISS POISON CLASS: 5

## SECTION 16: OTHER INFORMATION

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### OTHER INFORMATION:

HMIS Rating

Health : 1

Flammability : 0

Physical hazard : 0

### DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. A&C Catalysts, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.