SAFETY DATA SHEET

Date August 29, 2012

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **DMI (1,3-Dimethyl-2-imidazolidinone)**

COMPANY IDENTIFICATION:
Fine & Performance Chemicals Division
Mitsui Chemicals, Inc.
Shiodome City Center
1-5-2, Higashi-Shimbashi, Minato-ku
Tokyo 105-7117, Japan
Telephone: +81-3-6253-3553 Telefax: +81-3-6253-4236

Mitsui Chemicals America, Inc.
800 Westchester Avenue,
Suite N607, Rye Brook, NY 10573, USA
Telephone: +1-914-253-0777 Telefax: +1-914-253-0790

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
Clear, colorless liquid with characteristic odor.
Possible developmental hazard – contains material that may cause birth defects.
May cause central nervous depression.
May cause testis damage through prolonged or repeated exposure.

OSHA STATUS (USA):
This product is classified as hazardous under OSHA regulations.

POTENTIAL HEALTH EFFECTS
Route(s) of Entry: Inhalation, Ingestion, Eye contact, Skin contact/absorption.

INHALATION:
Vapors and/or mists which may be formed at elevated temperatures may be irritating to eyes and respiratory tract, and may be harmful if inhaled.

INGESTION:
May be harmful if swallowed.

SKIN CONTACT:
Causes skin irritation. Excessive exposure may result in central nervous system effects.

EYE CONTACT:
Causes severe eye irritation.

CARCINOGENICITY:
NTP : Not listed.
IARC: Not listed.
OSHA: Not regulated.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	%	CAS No.
1,3-Dimethyl-2-imidazolidinone	> 98	80-73-9

SYNONYMS: 1,3-Dimethylimidazolidin-2-one
2-Imidazolidinone, 1,3-dimethyl-

Hazardous components according to OSHA HCS:
1,3-Dimethyl-2-imidazolidinoe.

4. FIRST AID MEASURES

INHALATION:
If you feel unwell, remove to fresh air immediately. Get medical attention if cough or other symptoms develop.

EYE CONTACT:
Immediately flush eyes with plenty of water for several minutes. Part eyelids with fingers to assure complete flushing. Check for and remove contact lenses if easily possible. Get medical attention if irritation persists.

SKIN CONTACT:
Immediately remove contaminated clothing and shoes. Flush skin with large amounts of water, clean off with soap and water. Get medical attention if symptoms develop.

INGESTION:
Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Keep the affected person warm and at rest. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: water jet, water fog, foam, dry chemical, CO_2, dry sand.
Initial fire: dry chemical, CO_2, dry sand.
Large fire: water or foam.
UNSUITABLE EXTINGUISHING MEDIA: Not specified.

FLAMMABLE PROPERTIES:
Emits toxic fumes under fire conditions.

FIRE FIGHTING INSTRUCTIONS:
Keep unnecessary and unprotected personnel away. Shut off supply if possible. Remove containers to safe place if possible. Keep surrounding areas cool by spraying water. Fight fire from an upwind position.

FIRE FIGHTING EQUIPMENT:
Respiratory and eye protection required for fire-fighting personnel. Full protective equipment and self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires.

HAZARDOUS COMBUSTION PRODUCTS:
Carbon oxides, nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:
Keep unnecessary and unprotected personnel away. Wear appropriate personal protective equipment as specified in Section 8. Keep upwind, evacuate downwind.

ENVIRONMENTAL PRECAUTIONS:
Do not flush into sewer, river or any body of water.

CONTAINMENT/CLEAN-UP METHODS:
Absorb or cover with dry earth, sand or other non-combustible material and transfer to sealable containers. Large spills:
Dike far ahead of liquid spill for later disposal.
Stop leak if possible without personal risk.
Avoid runoff to sewers or waterways.

7. HANDLING AND STORAGE

HANDLING

Technical Measures:

Use only in well-ventilated area. Keep away from heat, sparks, and flame. Use explosion-proof electrical equipment and take precautions against build-up of electrostatic charges as necessary.
Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Wear appropriate personal protective equipment. Provide hand and eye wash station near work area. Wash thoroughly after handling.

Ventilation:

Use only under local exhaust or general ventilation.

Safe Handling Advice:

Do not handle until all safety precautions have been read and understood. Prevent leak and spill. Avoid vapor formation. Do not fall, drop, shock or drag the container. Avoid contact with eye, skin or clothing. Avoid inhalation and ingestion. Use only in well-ventilated area or outdoors.

STORAGE

Storage Conditions:

Protect from direct sunlight. Store in dark and well-ventilated area. Keep away from heat, flame, and all sources of ignition. Keep container tightly closed. Keep away from strong oxidizers, etc. Store in a segregated and approved area.

Packaging Material:

Iron drum or metal can.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS:

ACGIH-TLV: Not established.
OSHA-PEL : Not established.

ENGINEERING CONTROLS:

Provide general ventilation. Use closed system or local exhaust ventilation. Provide safety shower and eye wash station near work area.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection	: Chemical cartridge respirator with organic vapor cartridge.
Hand protection	: Protective gloves.
Eye protection	: Safety glasses, goggles, face shield.
Skin and body protection	: Safety helmet, protective clothing, safety boots, apron.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	: Liquid.
APPEARANCE	: Clear, colorless liquid.
ODOR	: Characteristic odor.
pH	: Not available.
BOILING POINT	: 226 °C [1)]
MELTING POINT	: 8.2 °C [1)]
FLASH POINT	: 120 °C (open cup)[1)]
AUTOIGNITION TEMPERATURE	: 300 °C [1)]
FLAMMABLE LIMITS	: 1.3 – 8.4 % [1)]
VAPOR PRESSURE	: 2.67 kPa (at 110.5 °C)[1)]
VAPOR DENSITY	: Not available.
SPECIFIC GRAVITY	: 1.05 – 1.06 (at 25 °C)[1)]
SOLUBILITY	: Miscible in water.[1)]
Log Pow	: -0.31
DECOMPOSITION TEMPERATURE	: Not available.

10. STABILITY AND REACTIVITY

STABILITY	: Stable for normal storage and handling.
HAZARDOUS REACTIONS	: Reacts with strong oxidizers.
CONDITIONS TO AVOID	: Heat.
MATERIALS TO AVOID	: Strong oxidizers, etc.[1)]

HAZARDOUS DECOMPOSITION PRODUCTS:
Carbon oxides, nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:
Skin rabbit LD_{50} >2000 mg/kg [1)]

SKIN CORROSION/IRRITATION:
Rabbit Mild (P.I.I.= 0.5)[1)]

SERIOUS EYE DAMAGE/EYE IRRITATION: Not available.

RESPIRATORY SENSITIZATION: Not available.

SKIN SENSITIZATION: Not available.

GERM CELL MUTAGENICITY:
Ames test Negative [1)]
Chromosome aberration test Negative [1)]

CARCINOGENICITY: See Section 2.

REPRODUCTIVE TOXICITY:
Rat: Low viability index of offspring and low body weight of live offspring during lactation were observed at dosing levels toxic to parental animals (100 mg/kg/day).

SPECIFIC TARGET ORGAN TOXICITY:
Single Exposure : Not available.
Repeated Exposure : Rat oral (28 days):
Effect on testis at 150 mg/kg/day.
NOEL 6 mg/kg/day.[1)]

ASPIRATION HAZARD: Not available.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:
Medaka LC_{50} 2400 ppm/48hr [1)]
Daphnia magna EC_{50} >100 mg/L/48hr (immobilization)[1)]
Alga EC_{50} >100 mg/L/72hr (growth inhibition)[1)]

PERSISTENCE/DEGRADABILITY:
Nonbiodegradable.

BIOACCUMULATION POTENTIAL:
Low.

13. DISPOSAL CONSIDERATIONS

WASTE FROM RESIDUES:
Whatever cannot be saved for recovery may be burned in an approved incinerator or disposed in approved waste facility. Ensure compliance with local, state, federal and national regulations.

CONTAMINATED PACKAGING:
Empty the container completely before disposal.

14. TRANSPORT INFORMATION

UN number : None.
UN class : Not regulated.

15. REGULATORY INFORMATION

UNITED STATES
TSCA STATUS:
This product complies with all applicable rules or orders under TSCA.
This product is subject to SNUR under 40 C.F.R. section 721.9892 and to 12(b) export notification reporting requirements.

Sec 721.9892 Alkylated urea
(a)Chemical substance and significant new uses subjected to reporting.
(1)The chemical substance identified generically as an alkylated urea (PMN P-93-1649) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.
(2)The significant new uses are :
(i) Protection in the workplace. Requirements as specified in Sec. 721.63(a)(1),(a)(3),(b) (concentration set at 1.0 percent), and (c).
(ii) Hazard communication program. Requirements as specified in Sec. 721.72(a),(b),(c),(d),(e) (concentration set at 1.0 percent),(f),(g)(1)(iii), (g)(1)(ix), (g)(2)(i), (g)(2)(iii), (g2)(v), and (g)(5).
(iii)Industrial, commercial, and consumer activities. Requirements as specified in Sec. 721.80(1) and (g).
(b)Specific requirements. The provision s of subpart A of this part apply to this section except as modified by this paragraph.
(1)Recordkeeping. Recordkeeping requirements as specified in Sec. 721.125(a) through (i) are applicable to manufacturers., importers, and processors of this substance.
(2)Limitations or revocation of certain notification requirements. The provisions of Sec. 721.185 apply to this section.
(3)Determining whether a specific use is subject to this section. The provisions of Sec. 721.525(b)(1) apply to this section.
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CERCLA REPORTABLE QUANTITY: None.

SARA Title III:
SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: None.
SECTION 311/312 HAZARDOUS CATEGORIES:
Immediate health hazard, Delayed health hazard.
SECTION 313 TOXIC CHEMICALS: None.

CALIFORNIA PROPOSITION 65:
This product contains no chemicals known to the state of California to cause cancer and reproductive toxicity.

16. OTHER INFORMATION

References:
1) In-house data
- SRC PhysProp Database
- JETOC/KASHIN (Japan Chemical Industry Ecology-Toxicology & Information Center, 1997)
- Combined Repeat Dose and Reproductive/Developmental Toxicity Screening Test (METI, 2009)

This SDS was prepared in compliance with USA OSHA Hazard Communication Standard (29 CFR 1910.1200).

To the best of our knowledge, the information contained herein is accurate.
However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.