

MATERIAL SAFETY DATA SHEET

Date November 7, 2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATIONProduct Name : **DMI (1,3-Dimethyl-2-imidazolidinone)**

Fine & Performance Chemicals Division.

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	%	CAS No.	EC No.
1,3-Dimethyl-2-imidazolidinone	98	80-73-9	201-304-8

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

Classification according to EC regulations:

Xn;R22 Xi;R36/38

* Occupational exposure limits are, if available, listed in Section 8.

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

Clear, colorless liquid with characteristic odor.

Causes skin and eye irritation.

May be harmful by inhalation and if swallowed.

May cause central nervous system depression.

May adversely affect the developing fetus.

POTENTIAL HEALTH EFFECTS

Routes of entry : inhalation, ingestion, eye contact,
skin contact/absorption.

Eye : Causes severe eye irritation.

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

Ingestion : May be harmful if swallowed.

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.

Carcinogenicity :

NTP Not listed.

IARC Not listed.

OSHA Not regulated.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not available.

4. FIRST AID MEASURES

EYE CONTACT :

Immediately flush eyes with plenty of water for at least 15 minutes and get medical attention.

Part eyelids with fingers to assure complete flushing. Check for and remove contact lenses if easily possible.

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 :

Rinse mouth with water and give 1 or 2 glasses of water or milk. Get medical attention immediately. Induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious or convulsing person.

INHALATION :

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep the affected person warm and at rest. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES : See Section 9.

EXTINGUISHING MEDIA : Dry chemical, alcohol-resistant foam, CO₂

EXTINGUISHING MEDIA WHICH MUST NOT BE USED : Not available.

GENERAL HAZARD :

Combustible liquid. Material may burn, producing irritating and poisonous gases.

FIRE FIGHTING INSTRUCTIONS:

Keep unnecessary and unprotected personnel away. Shut off the supply if possible without personal risk. Remove containers to safe place if possible. Use water spray to cool fire-exposed containers. Fight fire from an upwind position.

FIRE-FIGHTING EQUIPMENT

Respiratory and eye protection required for fire fighting personnel. Full protective equipment and a 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:

Keep unnecessary and unprotected personnel away. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Stop leak if possible without personal risk. Keep upwind, evacuate people downwind.

ENVIRONMENTAL PRECAUTIONS:

Do not let this chemical enter the environment.

CLEAN-UP METHODS:

Use non-sparking tools and equipment. 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.

7. HANDLING AND STORAGE

HANDLING

Technical Measures:

Use in well-ventilated area. Keep away from heat, sparks, and flame. Use explosion-proof electrical equipment. Take precautions against build-up of electrostatic charges. 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.

Precautions:

Use only under local exhaust or general ventilation.

Safe Handling Advice:

Use explosion-proof electrical equipment. Take precautions against build-up of electrostatic charges.

STORAGE:

Storage Conditions:

Protect from direct sunlight. Store in cool, dark, well-ventilated place. Keep away from heat, flame, and all sources of ignition. Store in a segregated and approved area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS:

None is established for this material.

ENGINEERING CONTROLS :

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

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection :

Chemical cartridge respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Hand Protection :

Wear protective gloves.

Eye Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye protection regulations in 29 CFR 1910.133 or equivalent.

Protective Clothing :

Wear impervious protective clothing including safety boots, apron or coveralls to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	: Clear, colorless liquid.
ODOR	: Characterisitc odor.
BOILING POINT	: 226 °C
MELTING POINT	: 8.2 °C
FLASH POINT	: 120 °C
AUTOIGNITION TEMPERATURE	: 300 °C
FLAMMABLE LIMITS	: 1.3-8.4 %
VAPOR PRESSURE	: 2.67 kPa(110.5 °C)
SPECIFIC GRAVITY	: 1.05-1.06 (25 °C)
SOLUBILITY IN WATER	: Soluble
Log Pow	: -0.23

10. STABILITY AND REACTIVITY

STABILITY : Stable under normal conditions.

INCOMPATIBILITIES : Strong oxidizers.

CONDITION TO AVOID : Heat, flames, ignition sources.

HAZARDOUS DECOMPOSITION PRODUCTS :

Carbon oxides, nitrogen oxides in fire.

HAZARDOUS POLYMERIZATION : Will not occur

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY :

Oral	rat	LD ₅₀	1190 µl/kg
Skin	rabbit	LD ₅₀	>2000 mg/kg
Intraperitoneal	mouse	LD ₅₀	2840 mg/kg

LOCAL EFFECTS :

Eye irritation	rabbit	100 mg	Severe
Skin irritation	rabbit		Mild

SUBCHRONIC TOXICITY

Oral rat NOEL 30 mg/kg/D/28 day

REPRODUCTIVE TOXICITY:

No data is available on the product itself.
Based on analogy of this substance to similar substance, tetramethylurea, United States Environmental Protection Agency is concerned for developmental toxicity to exposed workers.

MUTATION DATA :

Ames test Negative
Chromosome aberrations Negative

12. ECOLOGICAL INFORMATION

ECOTOXICITY :

Orange-red killifish LC₅₀ 2400 ppm/48hr
Daphnia EC₅₀(48hr, immobilization) NOEC >100 mg/l
Alga EC₅₀(48hr, growth inhibition) NOEC >100 mg/l

BIODEGRADATION : Nonbiodegradable.

BIOACCUMULATION : Low accumulation.

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 Hazard Class :Not regulated as a hazardous material.
UN Number :None

15. REGULATORY INFORMATION

UNITED STATES

OSHA Status :

This product is hazardous under the criteria of Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

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), (g)(2)(v), and (g)(5).

(iii) Industrial, commercial, and consumer activities. Requirements as specified in Sec. 721.80(1) and (g).

(b) Specific requirements. The provisions 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.

EUROPEAN UNION

EU STATUS :

This substance is listed on EINECS.

Labeling according to EC Directive:

Hazard Symbols : Xn Harmful

Risk Phrases :

R22- Harmful if swallowed.

R36/38- Irritating to eyes and skin.

Safety Phrases :

S20- When using do not eat or drink.

S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

16. OTHER INFORMATION

This MSDS was prepared in compliance with EU Directive 91/155/EEC as amended by 2001/58/EC and 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 which exist.