Osmose MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET: **MITC-FUME**

SECTION I

MSDS NUMBER:	30-UTL
MSDS CODE	UTL
SYNONYMS:	MITC; METHYL ISOTHIOCYANATE
MANUFACTURED FOR:	Osmose Utilities Services, Inc.
DIVISION:	N/A
EPA REGISTRATION NUMBER:	EPA REG. NO. 69850-1-75341
EMERGENCY PHONE	CHEMTREC: 1(800) 424-9300
OTHER CALLS:	(716) 882-5905
ADDRESS:	980 Ellicott Street, Buffalo, NY 14209
MSDS PREPARED BY:	Terri Muchow
DATE PREPARED **DATE LAST REVISED:**	February 6, 2003 April 30, 2007

ADDITIONAL INFORMATION

CHEMTREC'S EMERGENCY TELEPHONE NUMBER IS TO BE USED ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

TRADE NAME: MITC-FUME® INGREDIENT NAME	CAS	OSHA PEL	ACGIH TLV	OTHER	%
Methylisothiocyanate	556-61-6	N/A	N/A	RQ 100 lbs. (CERCLA) RQ 500 lbs (SARA)	97.0

ADDITIONAL INFORMATION

INTERNAL EXPOSURE: The manufacturers of this material have established an internal exposure limit value of 0.07 ppm as an 8-hour time weighted average. The basis for the exposure limit is irritation of the eyes, skin and mucous membranes. A skin notation is warranted due to the evidence that MITC-FUME can penetrate the skin and cause systemic toxicity.

SECTION III - CHEMICAL CHARACTERISTICS

BOILING POINT	MELTING POINT	FREEZING POINT	SPECIFIC GRAVITY (H_20 - 1)	PERCENT VOLATILE BY VOLUME	THEORETICAL VOC CONTENT (PERCENT OF WEIGHT)
245°F	96°F	N/A	I.07	100%	N/A
WEIGHT PER GALLON	pH:	VAPOR PRESSURE	VAPOR DENSITY (Air = 1)	DENSITY	EVAPORATION RATE BASIS (N-BUAC) = 1
8.91 lbs/gal.	N/A	19 mm of HG	> 1	N/A	1
SOLUBILITY IN WATER: 3-5 G/L AT 68°F			REACTIVITY IN WATER: N/A		
APPEARANCE AND ODOR:	Colorless to slightly yellow solidified melt with pungent, irritating odor as of horseradish.				

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	METHOD	FLAMMABLE LIMITS IN AIR (%)	AUTOIGNITION TEMPERATURE
95F° (35C)	CLOSED CUP	UPPER - 30% LOWER - 2.5%	698° F

NFPA CODES	HEALTH	3	***HMIS CODES:***	HEALTH	3
	FLAMMABILITY	3		FLAMMABILITY	3
	REACTIVITY	1		REACTIVITY	1
	OTHER	N/A		PROTECTION	H
EXTINGUISHER MEDIA:	Water Fog, Foam, CO_2, Dry Chemical				

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SPECIAL FIRE FIGHTING PROCEDURES. Evacuate enclosed and surrounding areas. If smoke and fumes cannot be avoided, use proximity suit and self-contained breathing apparatus. Use water spray to cool containers and disperse vapors. Keep spills away from sources of ignition.
UNUSUAL FIRE AND EXPLOSION HAZARDS. Burning material releases toxic nitrous oxide and sulfur dioxide gases. Product vapor forms explosive mixtures with air; prevent build-up of electrostatic charges, sparks, and open flame.

SECTION V - REACTIVITY DATA

IS THIS CHEMICAL STABLE UNDER NORMAL CONDITIONS OF HANDLING/STORAGE (Y/N)? Y
CONDITIONS TO AVOID (REGARDING STABILITY): Heat and/or direct sunlight. Presence of water, especially above 140°F
INCOMPATIBILITY (MATERIALS TO AVOID): Avoid contact with oxidizing materials, water above 140°F, iron, PVC, and rubber (hoses).
HAZARDOUS DECOMPOSITION PRODUCTS. Carbon oxysulfide, hydrogen sulfide and methylamine may be formed upon contact with hydrolyzing agents (e.g. water). Violent reactions and formation of sulfur dioxide occur upon reaction with oxidants.
HAZARDOUS POLYMERIZATION POSSIBLE (Y/N)? N
CONDITIONS TO AVOID (REGARDING POLYMERIZATION): N/A

SECTION VI - HEALTH HAZARDS

ROUTES OF ENTRY: Skin, Oral, Inhalation, Eye
SIGNS AND SYMPTOMS OF ACUTE OVEREXPOSURE. Fatal if inhaled or absorbed through skin. May be fatal if swallowed. Corrosive (rabbit - eye). Causes irreversible eye damage and skin burns. All kinds of exposure cause severe irritations of skin and mucous membranes with burning pains and risk of sensitization and of corneal opacities. Short term contact mostly subsides without lasting consequences. Addition of organic solvents enhances penetration through skin.
CHRONIC OVEREXPOSURE. No chronic effects are known for humans.
CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN?:

- NATIONAL TOXICOLOGY PROGRAM (Y/N): N
- IARC MONOGRAPHS (Y/N): N
- OSHA (Y/N): N

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE. Conjunctivitis of the eye, dermatitis of the skin, asthma and respiratory diseases.
TOXICITY DATA: Oral LD50: 67 mg/kg, (Rat) Inhalation LC50: 1900 mg/M3, (1 hour).

EMERGENCY AND FIRST AID PROCEDURES

EMERGENCY PHONE NUMBER OF MANUFACTURER: 1-(800) 424-9300

1. INHALATION: Move victim to fresh air If heavy exposure, apply artificial respiration and/or oxygen and call a physician immediately. Inhalation of anti-inflammatory sprays, local anesthetics, if appropriate.
2. EYE CONTACT Flush with plenty of water and, at intervals, rinse with 5% aqueous sodium bicarbonate solution. Call an Ophthalmologist immediately for further treatment (hydrocortisone eye-drops at 1/2 hour intervals).
3. SKIN CONTACT Remove contaminated clothing and absorb remaining product from skin by means of cotton pads, paper towels, or similar. Clean contaminated skin areas carefully with plenty of water or 5% sodium bicarbonate solution. Give medical treatment as for acute dermatitis.
4. INGESTION: Drink promptly a large quantity of milk, egg whites, gelatin solution or a large quantity of water or aqueous sodium sulfate solution. Do not administer alcohol or castor oil. Do not induce vomiting. Remove contents in stomach by gastric lavage and catharsis. Rinse stomach, if possible (physician - possible mucosal damage may contra-indicate use of gastric lavage!), check function of organs and treat as appropriate for symptoms of poisoning.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

SHIPPING DESCRIPTION: **Preservatives, Wood, NOI, Liquid in inner containers in boxes.**
NMF 161490 Methyl isothiocyanate, 6.1, UN2477, PGI
This Package Conforms to Conditions and Limitations Specified in 49 CFR 173.4 and DOT-SP 11900.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE. Store only in closed original container to prevent leakage. Store in cool, well ventilated, locked areas away from food and foodstuff, out of reach of children and irresponsible persons. Avoid exposure to heat and/or direct sunlight.
OTHER PRECAUTIONS. Do not drop container or slide across sharp objects.
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Cover with cold water. Product will solidify. Recycle, if possible or add solid scale in small amounts to drum with 10% aqueous ammonia solution. Product will react with ammonia to form N-Methyl thiourea.

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WASTE DISPOSAL METHODS. Wood treated with MITC-FUME IS NOT a hazardous waste. If unused MITC-FUME is disposed of it may be considered a hazardous waste (as per RCRA) because of its ignitability. Disposal of such material should be conducted by an EPA permitted facility. Questions regarding disposal can be directed to EPA's RCRA Hotline at (800) 424-9346. Always dispose in accordance with all Federal, State and Local Laws.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: Under normal use, there is no need for respiratory protection. If MITC-FUME is to be used in an enclosed area, a positive pressure supplied air respirator equipped with full face piece should be used during any operation where there Is potential for release of this product to workplace air.
VENTILATION REQUIREMENTS. Yes
OTHER: Refer to "Industrial Ventilation" by ACGIH for a manual of recommended practices.
PROTECTIVE GLOVES. Rubber or neoprene (limited protection, replace frequently)
EYE PROTECTION: Goggles, safety glasses, or face shield.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT Acid-resistant non-porous overalls or aprons.
WORK/HYGIENIC PRACTICES. Remove contaminated clothing immediately and launder before reuse. Heavily contaminated clothing should be disposed of. Wash thoroughly after handling, before eating or smoking.

ADDITIONAL INFORMATION

SARA/TITLE III ;SECTION 312 - HAZARD CATEGORIES:

Immediate (Acute) Health: YES Reactive Hazard: NO
Delayed (Chronic) Health: NO Sudden Release of Pressure: NO
Fire Hazard: YES

SECTION 302:
Methylisothiocyanate is listed as an Extremely Hazardous Substance under Section 302 of SARA, and has a threshold limit value of 500 pounds.
SECTION 304:
SARA requires notification to the appropriate Federal, State and local authorities of releases of hazardous or extremely hazardous quantities equal to or greater than the Reportable Quantity of 500 pounds.
SECTION 311 & 312:
MITC-FUME is subject to Sections 311 and 312 of SARA. A material safety data sheet for this product should be submitted to your local fire department, Local Emergency Planning Committee and your State Emergency Response Commission. This product should also be included in your Tier II Inventory Form reporting.
SECTION 313:
On November 30, 1994, the Environmental Protection Agency added Methyl isothiocyanate to its list of chemicals subject to Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986. Section 313 reporting for the newly listed chemicals and chemical categories will be required beginning with the 1995 calendar year. The first reports of the added chemicals must be submitted to EPA and States by July 1, 1996.

N/A = Not Applicable

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