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Effective Date: 12/1/04

Material Safety Data Sheet

MSDS No: 7215

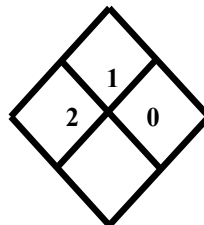
1. PRODUCT IDENTIFICATION

Trade Name: EM-185152

Material Code: EM-185152

Chemical Family: Waterborne Polyurethane

Intended Use: Coatings



NFPA RATING

Health:	2*
Flammability:	1
Reactivity:	0
Personal Protection:	

HMIS RATING

2. COMPOSITION / INFORMATION ON INGREDIENTS

O S H A	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				CARCINOGEN STATUS			
			ACGIH		OSHA		MFR.	IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	121-44-8 Common Name: Concentration	N,N-Diethylethanamine Triethylamine 1.00 - 2.00 % by wt	1 ppm	3 ppm	25 ppm	NE	NE	NR	NR	NR
	Proprietary Concentration	Polyurethane Resin 31.00 - 33.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
	7732-18-5 Common Name: Concentration	Water Water 52.50 - 53.50 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	872-50-4 Common Name: Concentration	1-Methyl-2-Pyrrolidinone N-Methyl-2-pyrrolidinone 12.50 - 13.50 % by wt	NE	NE	NE	NE	NE	NR	NR	NR

NE = Not Established NR = Not Reviewed * = OSHA Hazardous Ingredient

Reference Notes: Refer to Section 8, Subheading "Exposure Guidelines", for additional information concerning exposure limits.

3. HAZARDS IDENTIFICATION

Emergency Overview: Appearance: Translucent Liquid Mild Odor
 Direct contact may cause eye irritation. Vapors may cause eye irritation. Vapors may cause irritation to the respiratory tract.
 Contact may cause skin irritation. Translucent

Route(s) of Entry: Inhalation, skin and eye contact.

Effective Date: 12/1/04

Acute Exposure: EYES: Direct contact with this material may cause eye irritation including tearing and redness. Vapors cause severe eye irritation.

INGESTION: Ingestion is not an anticipated route of exposure for this material in industrial use.

INHALATION: Inhalation of vapor or aerosol may cause severe irritation to the respiratory tract (nose, throat, and lungs).

SKIN: Repeated or prolonged contact may dry and irritate the skin.

Chronic Exposure: 1-Methyl-2-Pyrrolidinone has been shown to cause reproductive and developmental effects at very high maternally toxic doses, in experimental animals. These observations are not thought to be relevant to occupational use.

Carcinogenicity: This material does not contain 0.1% or more of any chemical listed by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or regulated by the Occupational Safety and Health Administration (OSHA) as a carcinogen.

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with large quantities of clean water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists. Wash contaminated clothing before reuse.

Ingestion: Give the victim one or two glasses of water or milk to drink. Never give anything by mouth to an unconscious person. IMMEDIATELY SEEK MEDICAL ATTENTION.

Inhalation: Remove victim to fresh air. Keep warm and quiet. If not breathing, give artificial respiration. If breathing is difficult, give oxygen by trained personnel. GET IMMEDIATE MEDICAL ATTENTION.

5. FIRE FIGHTING MEASURES

Flash Point:	Not applicable
Flammable Limits in Air (Lower):	Not applicable
Flammable Limits in Air (Upper):	Not applicable
Autoignition:	Not applicable

General Hazards: Containers of this material may build up pressure if exposed to heat (fire). See information in Fire Fighting Instructions (below) in this section.

Fire Fighting Extinguishing Media: Use alcohol foam, carbon dioxide, or water spray to extinguish fire.

Fire Fighting Equipment: Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use.

Fire Fighting Instructions: Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazard while extinguishing the blaze. Use water spray to cool fire-exposed containers.

Fire and Explosion Hazards: Closed containers may rupture when exposed to extreme heat.

Hazardous Combustion Products: Combustion may produce carbon monoxide, carbon dioxide and irritating or toxic vapors and gases.

Effective Date: 12/1/04

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: FOR SMALL SPILLS: Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.

LARGE SPILL: Persons not wearing protective equipment (see Section 8) should be excluded from the area of the spill until clean-up has been completed. Prevent spilled material from 1) contaminating soil, 2) entering sanitary sewers, storm sewers, and drainage systems, and 3) entering bodies of water or ditches that lead to waterways. Collect material and place in a closed container.

7. HANDLING AND STORAGE

Signal Word: CAUTION

Handling Information: Avoid inhalation and contact with eyes, skin, and clothing. Remove and wash contaminated clothing before reuse. Wash hands thoroughly after handling and before eating or drinking. Use with adequate ventilation. Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner or properly disposed.

Storage Information: Store in a cool well ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines: The Occupational Safety and Health Administration (OSHA) has established the following 8-hour Time Weighted Average (TWA) Permissible Exposure Limits (PELs): N, N-Diethylethanamine, 25 ppm.

The American Conference of Governmental Industrial Hygenists (ACGIH) has established the following 8-hour Time Weighted Average (TWA) Threshold Limit Values (TLVs) and/or Short-Term Exposure Limits (STELs): N, N, Diethylethanamine, TLV 1 ppm; STEL 3 ppm (skin designation).

The American Industrial Hygiene Association (AIHA) have established, for n-methyl-2-pyrrolidinone, a Workplace Environmental Exposure Level (WEEL) of 10 ppm Time Weighted Average (TWA), with a skin notation, for an 8 hour exposure.

Engineering Controls: Use general ventilation to maintain airborne concentrations to levels that are below regulatory and recommended occupational exposure limits. See occupational exposure limits in Section 2. Local ventilation may be required during certain operations to maintain concentrations below recommended exposure limits.

Eye Protection: Wear 1) safety glasses with side shields and a faceshield or 2) goggles and a faceshield. Facilities storing or utilizing this material should be equipped with an eyewash station and safety shower.

Skin Protection: Wear chemical resistant gloves such as nitrile rubber or butyl rubber with a laminated film glove, such as the Ansell Edmont Barrier®, underneath. If splashing is likely, wear impervious clothing and boots to prevent repeated or prolonged skin contact. Consult your supplier of personal protective equipment for additional instructions on proper usage.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Protection provided by air purifying respirators is limited. Use a positive pressure air-supplied respirator if 1) there is any potential for an uncontrolled release, 2) exposure levels are not known, or 3) during other circumstances where air purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Translucent
Odor:	Mild
Odor Threshold:	Not available

Effective Date: 12/1/04

Physical State:	Liquid
Solubility in Water:	Dispersible
Vapor Pressure:	Not available
Specific Gravity:	1.04 (Water = 1) at 25°C (77 °F)
Boiling Point:	212 - 399° F (100 - 204 ° C)
Freezing Point:	32°F (0 °C) Water
Evaporation Rate:	< 1 (BuAc=1)
Vapor Density:	> 1 (AIR=1)
% Volatile:	68 - 70 % by weight
pH:	7.5 - 9

10. STABILITY AND REACTIVITY

Stability: This material is stable during storage and during its intended use.

Incompatibility: Avoid contact with strong oxidizing agents. Avoid contact with acids.

Hazardous Decomposition Products: Thermal decomposition may form: carbon monoxide, carbon dioxide, and various hydrocarbons.

Hazardous Polymerization: Hazardous polymerization will NOT occur.

Conditions to Avoid: Freezing temperatures (less than 32°F or 0°C). Contamination by those materials referred to under Incompatibility.

11. TOXICOLOGICAL INFORMATION

Acute Eye Toxicity: No information is available.

Acute Skin Toxicity: 1-Methyl-2-Pyrrolidinone: dermal LD50 (rabbit), 8 g / kg. N,N-Diethylethanamine: dermal LD50 (rabbit), 0.57 ml / kg.

Acute Inhalation Toxicity: N,N-Diethylethanamine: inhalation LCLo; (rat) 1,000 ppm / 4 hr.

Acute Oral Toxicity: 1-Methyl-2-Pyrrolidinone: LD50 (rat), 3,914 mg / kg; (rat), 4.2 ml / kg; (mouse), 7,725 mg / kg. N, N,-Diethylethanamine: oral LD50 (rat) 460 mg / kg; (mouse), 546 mg / kg.

Chronic/Carcinogenicity: This material does not contain 0.1% or more of any chemical listed by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or regulated by the United States Occupational Safety and Health Administration (OSHA) as a carcinogen.

The American Conference of Governmental Industrial Hygienists (ACGIH) has adopted the listing of Triethylamine as "A4-Not Classifiable as a Human Carcinogen." There is inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

Teratology: 1-Methyl-2-Pyrrolidinone (NMP) was reported to be fetotoxic and to increase the incidence of skeletal abnormalities when administered dermally to rats during gestation at very high maternally toxic doses. NMP was not fetotoxic or teratogenic in rats exposed to vapors up to 0.36 mg/l during gestation.

Mutagenicity: 1-Methyl-2-Pyrrolidinone is not mutagenic in the Ames test.

12. ECOLOGICAL INFORMATION

Effective Date: 12/1/04

Ecotoxicity: Triethylamine: LD100 (Creek chub), 80 mg / L / 24 hr. 1-Methyl-2-pyrrolidinone: LC50 (Daphnia Magna), > 1000 mg / L / 96 hr; EC50 (algal), > 500 mg / L / 72 hr.

Environmental Fate: If released on land, triethylamine should slowly volatilize and leach into the soil. It has not been established whether it biodegrades in soil or water. Adsorption to sediment and bioconcentration in aquatic organisms will not be appreciable. Triethylamine will degrade when released in air.

1-Methyl-2-pyrrolidinone, if released to air, will exist in the vapor phase in the ambient atmosphere. It will be degraded as such by reaction with photochemically-produced hydroxyl radicals. If released to soil, it is expected to have a very high mobility. Volatilization from moist soil surfaces is not expected to be an important fate process. If released to water, 1-methyl-2-pyrrolidinone is not expected to adsorb to suspended solids and sediment. It appears to undergo biodegradation in aqueous environments. Volatilization from water surfaces is not expected to be an important fate process.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Not a RCRA hazardous waste. Disposal of this material is not regulated under RCRA. Consult federal, state and local regulations to ensure that this material and its containers, if discarded, is disposed of in compliance with all regulatory requirements.

RCRA Hazard Class: NOT A RCRA HAZARDOUS WASTE: When discarded in its purchased form, this material would not be regulated as a RCRA Hazardous waste under 40 CFR 261.

14. TRANSPORT INFORMATION

DOT / IATA / IMDG / TDG: Bulk and Non-Bulk

Proper Shipping Name:

NOT REGULATED

15. REGULATORY INFORMATION

Occupational Safety and Health Act (OSHA): This material is classified as a hazardous chemical under the criteria of the US Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III: Section 304 - CERCLA: Triethylamine (CAS# 121-44-8): Reportable Quantity = 5,000 lb.

SARA Title III: Section 311/312 - Hazard Communication Standard (HCS): This material is classified as an IMMEDIATE HEALTH HAZARD and DELAYED HEALTH HAZARD under the US Superfund Amendment and Reauthorization Act (Section 311/312).

SARA Title III: Section 313 Toxic Chemical List (TCL): 1-Methyl-2-Pyrrolidinone (CAS # 872-50-4) N, N-Diethylethanamine (CAS # 121-44-8)

TSCA Section 8(b) - Inventory Status: All components of this material are listed on the US Toxic Substances Control Act (TSCA) inventory.

TSCA Section 12(b) - Export Notification: N-Methylpyrrolidone (CAS # 872-50-4) is subject to the US Toxic Substances Control Act (TSCA) Section 12(b) Export Reporting requirements.

Australian Inventory Status: This product contains one or more chemicals currently not on the Australian Inventory of Chemical Substances.

Canadian Inventory Status: All components of this material are listed on the Canadian Domestic Substances List (DSL).

Effective Date: 12/1/04

Canadian WHMIS: This material is classified by the Canadian Workplace Hazardous Material Information System as: D2A (materials causing other toxic effects, very toxic material) D2B (materials causing other toxic effects, toxic material)

European Inventory Status (EINECS): All components are either listed or are exempt from being listed, on the EINECS chemical inventory. The polymer portion of this product is manufactured from reactants which are listed on EINECS and meets the EINECS definition of an exempt polymer.

Korean Inventory Status: This product contains one or more chemicals currently not on the Korean Chemical Substances List.

California Proposition 65: W A R N I N G: This material contains a chemical known to the State of California to cause birth defects or other reproductive harm. The California Safe Drinking Water and Toxic Enforcement Act of 1986 requires that clear and reasonable warning be given prior to exposing any person to this chemical: N-Methylpyrrolidone (CAS# 872-50-4)

Additional Canadian Regulatory Information: This product contains the following chemical(s) listed on the WHMIS Ingredient Disclosure List at or above the specified concentration limit: N, N-Diethylethanamine (CAS # 121-44-8)

16. OTHER INFORMATION

MSDS No:	7215
Reason Issued:	New
Prepared By:	Product Safety & Compliance Department
Approved By:	
Title:	

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