



Material Safety Data Sheet

LA0241
N-Methyl 2-Pyrrolidone

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Id: LA0241

Product Name: N-Methyl 2-Pyrrolidone

Synonyms: 1-Methyl-2-pyrrolidinone; 2-Pyrrolidinone, 1-Methyl-; N-Methyl-2-pyrrolidinone

Chemical Family: None Known

Application: Solvent. Pigment dispersant, CO2 removal, petroleum refining.

Distributed By:

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Prepared By: The Safety, Health and Environment Department of Univar Canada Ltd.

Preparation date of MSDS: 08/May/2015

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
N-methyl-2-pyrrolidone 872-50-4	99.8	Dermal LD50 (Rabbit) 2000 mg/kg Dermal LD50 (Rat) 2500 mg/kg Inhalation LC50 (Rat) 3.1 mg/L /4hr Oral LD50 (Rat) 3598 mg/kg

Note: No additional remark.

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye Contact: Causes moderate eye irritation. Will cause painful burning or stinging or eyes and lids, watering of eyes and inflammation of conjunctiva.

Skin Contact: Prolonged or repeated contact causes cracking, edema and redness. Causes severe dermatitis.

Inhalation: If misted or at high concentrations, may cause pallor, nausea, anesthetic or narcotic effects.

Ingestion: Abdominal discomfort, nausea and vomiting may occur.

4. FIRST AID MEASURES

Eye Contact: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Skin Contact: Wash with soap and water. Remove contaminated clothing and launder before reuse.

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Notes to Physician: Treatment based on sound judgment of physician and individual reactions of patient.

5. FIRE FIGHTING MEASURES

Flash Point: 91 °C / 195.8 °F

Flash Point Method: Closed cup.

Autoignition Temperature: 270°C /518°F

Flammable Limits in Air (%): Lower: 1.3% Upper: 9.5%

Extinguishing Media: Use DRY chemicals, CO₂, alcohol foam or water spray.

Special Exposure Hazards: Combustible. This product can produce flammable vapors which may travel to a source of ignition and flash back. May form flammable/explosive vapor-air mixture.

Hazardous Decomposition/Combustion Materials (under fire conditions): Carbon monoxide. Oxides of nitrogen. Smoke. Partially oxidized hydrocarbon fragments.

Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment.

NFPA RATINGS FOR THIS PRODUCT ARE: HEALTH 2, FLAMMABILITY 2, INSTABILITY 0

HMIS RATINGS FOR THIS PRODUCT ARE: HEALTH 2, FLAMMABILITY 2, REACTIVITY 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Wear appropriate protective equipment.

Environmental Precautionary Measures: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Consult local authorities.

Procedure for Clean Up: Isolate hazard area and restrict access. Stop leak only if safe to do so. Remove ignition sources and work with non-sparking tools. Small spills: soak up with absorbent material and scoop into containers. Large spills: prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material, place in appropriate container and flush with water.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use with adequate ventilation. Keep away from heat, sparks and flame. Avoid frequent opening and closing of containers and repeated exposure to air as explosive peroxides may be formed. Keep the containers closed when not in use. Store, transfer and handle under a blanket of nitrogen. Before closing partially empty containers, blanket with dry nitrogen. Empty containers may contain hazardous product residues. Do not cut, drill, grind, weld or perform similar operations on or near containers. Take precautionary measures against static discharges.

Storage: Store in a cool, dry, well ventilated area, away from heat and ignition sources. Place away from incompatible materials. Store in accordance with good industrial practices.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Local exhaust ventilation as necessary to maintain exposures to within applicable limits.

Respiratory Protection: If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved respirator. In case of spill or leak resulting in unknown concentration, use a NIOSH approved supplied air respirator.

Gloves:

Impervious gloves. Neoprene gloves. Butyl rubber gloves.

Skin Protection: Normal work coveralls.

Eyes: Chemical goggles; also wear a face shield if splashing hazard exists.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
N-methyl-2-pyrrolidone	Not available.	Not available.	Not Available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid.

Color: Clear

Odor: Mild amine odor.

pH 7.20 @ 10% Solution

Specific Gravity: 1.027

Boiling Point: 204°C /399.2°F

Freezing/Melting Point: -24°C / -11.92°F

Vapor Pressure: 0.29 mmHg @ 20 C

Vapor Density: 3.40

% Volatile by Volume: Non Volatile

Evaporation Rate: 0.03

Solubility: Miscible in water.

VOCs: Not Available.

Viscosity: 1.67 cSt @ 20°C

Molecular Weight: 99.1

Other: Not Available.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: None known.

Materials to Avoid: Strong oxidizing agents. Reducing agents. Acids. Alkalis.

Hazardous Decomposition Products: Under fire conditions: Carbon monoxide. Oxides of nitrogen. Smoke. Partly oxidized hydrocarbon fragments.

Additional Information:

Contact with strong acids and bases may cause hydrolysis.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion: Abdominal discomfort, nausea and vomiting may occur.

Skin Contact: Prolonged or repeated contact causes cracking, edema and redness. Causes severe dermatitis.

Inhalation: If misted or at high concentrations, may cause pallor, nausea, anesthetic or narcotic effects.

Eye Contact: Causes moderate eye irritation. Will cause painful burning or stinging or eyes and lids, watering of eyes and inflammation of conjunctiva.

Additional Information: Material was found to be a fatiguing agent but not a sensitizer.

Acute Test of Product:

Acute Oral LD50: Not Available.

Acute Dermal LD50: Not Available.

Acute Inhalation LC50: Not Available.

Carcinogenicity:

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
N-methyl-2-pyrrolidone	Not listed.	Not listed.

Carcinogenicity Comment: No additional information available.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity: Not Available.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
N-methyl-2-pyrrolidone	LC50 832 mg/l, 96h (Bluegill sunfish) LC50 4000 mg/l, 96h (Golden orfe)	EC50 >4000 mg/l, 48h (Daphnia)	500 mg/L EC50 Desmodesmus subspicatus 72 h

Other Information: Material is readily biodegradable. Does not bioaccumulate.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: COMBUSTIBLE LIQUID, N.O.S. (N-Methyl-2-pyrrolidone)

DOT Hazardous Class 3

DOT UN Number: NA1993

DOT Packing Group: III

DOT Reportable Quantity (lbs): Not Available.

Note: This material is exempt from all DOT regulations governing the transport of hazardous materials when it is reclassified as a combustible liquid and shipped in non-bulk quantities.

Marine Pollutant: No.

TDG (Canada):

TDG Shipping Name: Not Regulated.

Hazard Class: Not Applicable.

UN Number: Not Applicable.

Packing Group: Not Applicable.

Note: No additional remark.

Marine Pollutant: No.

15. REGULATORY INFORMATION

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

Note: Not available.

U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
N-methyl-2-pyrrolidone	Not Listed.	Not Listed.	Listed

California Proposition 65: Listed.

MA Right to Know List: Listed.

New Jersey Right-to-Know List: Listed.

Pennsylvania Right to Know List: Listed.

WHMIS Hazardous Class:
B3 COMBUSTIBLE LIQUIDS
D2B TOXIC MATERIALS



16. OTHER INFORMATION

Additional Information:

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Disclaimer:

NOTICE TO READER:

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END OF MSDS