



255 Norman.  
Lachine (Montreal), Que  
H8R 1A3

# Material Safety Data Sheet

## EMERGENCY NUMBERS:

(USA) CHEMTREC : 1(800) 424-9300 (24hrs)  
(CAN) CANUTEC : 1(613) 996-6666 (24hrs)  
(USA) Anachemia : 1(518) 297-4444  
(CAN) Anachemia : 1(514) 489-5711

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: B-3 D-2A		Not controlled under TDG (Canada). Not applicable (PIN and PG).

## Section I. Product Identification and Uses

<b>Product name</b>	<b>1-METHYL-2-PYRROLIDINONE</b>	<b>CI#</b>	Not available.
<b>Chemical formula</b>	C5H9NO	<b>CAS#</b>	872-50-4
<b>Synonyms</b>	NMP, N-Methylpyrrolidone, N-Methyl-2-pyrrolidone, AC-6148, GD-6148, 60082, 60070	<b>Code</b>	AC-6148
<b>Supplier</b>	Anachemia Canada. 255 Norman. Lachine (Montreal), Que H8R 1A3	<b>Formula weight</b>	99.14
		<b>Supersedes</b>	
<b>Material uses</b>	For laboratory use only.		

## Section II. Ingredients

Name	CAS #	%	TLV
1) 1-METHYL-2-PYRROLIDINONE	872-50-4	90-100	Not established by ACGIH

### Toxicity values of the hazardous ingredients

1-METHYL-2-PYRROLIDINONE:  
ORAL (LD50): Acute: 3914 mg/kg (Rat). 5130 mg/kg (Mouse).  
DERMAL (LD50): Acute: 8000 mg/kg (Rabbit).  
INTRAPERITONEAL (LD50): Acute: 2472 mg/kg (Rat). 3050 mg/kg (Mouse).

**Section III. Physical Data**

<b>Physical state and appearance / Odor</b>	Clear liquid; mild amine-like odor.
<b>pH (1% soln/water)</b>	7.2-8 @ 100 g/l H <sub>2</sub> O
<b>Odor threshold</b>	Not available.
<b>Percent volatile</b>	100% (V/V)
<b>Freezing point</b>	-25°C
<b>Boiling point</b>	202°C
<b>Specific gravity</b>	1.028 @ 25°C (Water = 1)
<b>Vapor density</b>	3.4 (Air = 1)
<b>Vapor pressure</b>	0.29 mm of Hg (@ 20°C)
<b>Water/oil dist. coeff.</b>	Not available.
<b>Evaporation rate</b>	0.06 (n-Butyl acetate = 1).
<b>Solubility</b>	Miscible in water.

**Section IV. Fire and Explosion Data**

<b>Flash point</b>	CLOSED CUP: 96°C
<b>Flammable limits</b>	LOWER: 1.3% UPPER: 9.5%
<b>Auto-ignition temperature</b>	270°C
<b>Fire degradation products</b>	Oxides of carbon and nitrogen. Hydrocarbons.
<b>Fire extinguishing procedures</b>	Use DRY chemical, carbon dioxide, alcohol-resistant foam or water spray. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Cool containing vessels with flooding quantities of water until well after fire is out.
<b>Fire and Explosion Hazards</b>	Combustible liquid. Vapor may travel considerable distance to source of ignition and flash back, eliminate all sources of ignition. Vapor forms explosive mixture with air. Contact with oxidizers may cause fire and/or explosion. Container explosion may occur under fire conditions or when heated. Sensitive to static discharge. The sensitivity to impact is not available. Emits toxic fumes under fire conditions.

**Section V. Toxicological Properties**

<b>Routes of entry</b>	Inhalation and ingestion. Eye contact. Skin contact.
<b>Effects of Acute Exposure</b>	Harmful by ingestion, inhalation or skin absorption. Irritant. Target organs: spleen, eyes, skin, bone marrow, thymus, lymphatic system.
<b>Eye</b>	Causes severe irritation. IRRITATION: EYE-RABBIT 100 mg MODERATE.
<b>Skin</b>	Human experience has demonstrated severe dermatitis (e.g. blisters, cracking, edema, and redness) upon prolonged or repeated contact. Harmful if absorbed through the skin.
<b>Inhalation</b>	Material is irritating to mucous membranes and upper respiratory tract. May cause headache, nausea, vomiting, dizziness.
<b>Ingestion</b>	Ingestion will cause adverse health effects. Causes gastrointestinal irritation. Difficulty breathing, diarrhea, nausea, vomiting.

**Section V. Toxicological Properties**

**Effects of Chronic Overexposure** Repeated or prolonged contact with NMP can cause severe dermatitis. Animal embryotoxic. Repeated or prolonged exposure to the substance can produce target organs damage. Carcinogenic effects: Not available. Mutagenic effects: Not available. Toxicity of the product to the reproductive system: Not available. To the best of our knowledge, the chemical, physical, and toxicity of this substance has not been fully investigated.

**Section VI. First Aid Measures**

**Eye contact** Immediately flush eyes with copious quantities of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Seek immediate medical attention.

**Skin contact** Immediately flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. If irritation occurs or persists seek medical attention. Wash contaminated clothing before reusing. Discard contaminated clothing and shoes.

**Inhalation** Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Call a physician.

**Ingestion** If conscious, wash out mouth with water. Have conscious person drink several glasses of water to dilute. Induce vomiting as directed by medical personnel. Seek immediate medical attention. Never give anything by mouth to an unconscious or convulsing person.

**Section VII. Reactivity Data**

**Stability** Stable. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination.

**Hazardous decomp. products** Not available.

**Incompatibility** Reducing agents, acids, oxidizing agents, bases, chlorinated solvents, carbon disulfide, sulfur.

**Reaction Products** Not available. Hazardous polymerization will not occur.

## Section VIII. Preventive Measures

1-METHYL-2-PYRROLIDINONE

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**Protective Clothing in case of spill and leak** Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

**Spill and leak** Evacuate the area. Eliminate all sources of ignition. Stay upwind: Keep out of low areas. Absorb on sand or vermiculite and place in a closed container for disposal. Use non-sparking tools. Ventilate area and wash spill site after material pick up is complete. DO NOT empty into drains. DO NOT touch damaged container or spilled material. Runoff to sewer may create fire or explosion hazard.

**Waste disposal** Burn in a chemical incinerator equipped with an after burner and scrubber. According to all applicable regulations. Harmful to aquatic life at low concentrations. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.

**Storage and Handling** Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not wash down the drain. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Keep away from direct sunlight or strong incandescent light. Keep container tightly closed and dry. Manipulate under an adequate fume hood. Take precautionary measures against electrostatic discharges. Ground the container while dispensing. Ground all equipment containing material. Use explosion proof equipment. Use non-sparking tools. Watch for accumulation in low confined areas. Empty containers may contain a hazardous residue. Handle and open container with care. Take off immediately all contaminated clothing. This product must be manipulated by qualified personnel. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

## Section IX. Protective Measures

**Protective clothing** Face shield and splash goggles. Impervious gloves (neoprene), apron, coveralls, and/or other resistant protective clothing. Sufficient to protect skin. NMP penetrates rubber. A OSHA/MSHA jointly approved respirator is advised in the absence of proper environmental controls. Do not wear contact lenses. Make eye bath and emergency shower available. Ensure that eyewash station and safety shower is proximal to the work-station location.

**Engineering controls** Use in a chemical fume hood. Use explosion-proof ventilation equipment. Do not use in unventilated spaces.

## Section X. Other Information

**Special Precautions or comments** Combustible liquid! Embryotoxic! Irritant! Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use in a chemical fume hood. Keep away from heat, sparks and flame. Handle and open container with care. Container should be opened only by a technically qualified person.  
RTECS NO: UY5790000 (1-Methyl-2-pyrrolidinone).



NFPA

Prepared by MSDS Department/Département de F.S..

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