

Safety Data Sheet
N-Methyl-2-Pyrrolidinone

SECTION I - IDENTIFICATION



**Research
Solutions**[®]

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Product Number 19152
Product Name N-Methyl-2-Pyrrolidinone
Chemical Family
CAS Number 872-50-4
Date Prepared 1/20/1995
Revision Date 4/11/2015
Recommended Use Industrial Use Only

SECTION II - HAZARDOUS IDENTIFICATION

GHS CLASSIFICATION:

Classification

Flammable Liquids	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Specific target organ toxicity, single exposure, R	Category 3
Reproductive Toxicity	Category 1A, 1B

DANGER!

GHS LABEL:



Hazard Statements

H227	Combustible liquid
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H360	May damage fertility or the unborn child

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Precautionary Statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hands and exposed body parts thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+352 IF ON SKIN: Wash with plenty of water/...

P304+340 IF INHALED: Remove victim to fresh air and keep comfortable for breathing.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so - continue rinsing.

P308+313 IF exposed or concerned: get medical advice/attention.

P312 Call a POISON CENTER or a doctor/physician if you feel unwell.

P332+313 If skin irritation occurs: get medical advice/attention.

P337+313 If eye irritation persists get medical advice/attention.

P362+364 Take off immediately all contaminated clothing and wash it before reuse.

P370+378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P403 Store in a well ventilated place.

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container to an approved waste disposal facility.

SECTION III - COMPOSITION/INFORMATION ON INGREDIENTS

The precise composition of this product is proprietary information. In the event of a medical emergency, a complete disclosure will be provided to medical personnel.

Component Name	CAS #	Component%	OSHA PEL	ACGIH TLV
N-Methyl-2-Pyrrolidinone	872-50-4	<= 100%	Not Established (Recommend 100ppm TWA)	Not Established (Recommend 100 ppm TWA)

SECTION IV - FIRST AID MEASURES

Contact with eyes: Flush with water for 15 minutes. Seek immediate medical attention.

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Skin contact: Wash exposed areas with water and mild soap. Remove contaminated clothing immediately and launder before reuse. If irritations persist, seek immediate medical attention.

Inhalation: Remove victim to fresh air. Administer oxygen or artificial respiration if breathing is affected or stopped. Seek immediate medical attention.

Ingestion: If swallowed. Do not induce vomiting. Seek immediate medical attention.

SECTION V - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water fog, foam, CO₂, dry chemical.

Special Fire Fighting Procedures Use self-contained breathing apparatus and full bunker gear in fire areas. Evacuate all unprotected personnel from area. Keep containers cool with water fog to minimize swelling taking care not to spread flames with water used for cooling.

Unusual Fire Fighting Hazards: Vapors may travel considerable distances to a source of ignition where they can ignite, flashback or explode. May create vapor/air explosion hazard indoors, outdoors or in sewers. If container is not properly cooled, it can explode in the heat of a fire.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Personal Precautions: Keep all sources of ignition and hot metal surfaces away from spill or release. Evacuate all unprotected personnel from the area.

Environmental Precautions: Contain spill if it can be done with minimal risk. Prevent liquid from entering drains, sewers or waterways. Notify proper authorities.

Methods for Cleaning Up: Use foam on spills to minimize vapors. Using only non-sparking tools and explosion proof equipment, collect spill on absorbent material and put into approved container.

SECTION VII - HANDLING AND STORAGE

Handling and Storage:

- NFPA Class III B storage.
- Avoid prolonged breathing of mist or vapor. Wash thoroughly after handling. Vent container carefully before opening. Bond and ground all equipment when transferring from one vessel to another. The use of explosion-proof equipment is recommended. "Empty" containers retain residue and/or vapor and may be dangerous. Do not cut, weld, braze, solder, drill, grind or expose such containers to heat, flames, sparks, or other ignition sources. Keep containers tightly closed when not in use.

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SECTION VIII - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

Component Name	CAS #	OSHA PEL	ACGIH TLV
N-Methyl-2-Pyrrolidinone	872-50-4	8 mg/m ³ (Recommend 10 mg/m ³)	8 mg/m ³ (Recommend 10 mg/m ³)

Engineering Controls: Adequate local or mechanical to reduce vapor or mist to below the PEL or TLV.

Monitoring: Follow accepted work practices for handling a flammable material. Do not eat, drink or smoke in areas where this chemical is used or stored. Have eye wash stations and safety showers readily available.

Personal Protective Equipment (PPE)

Eye Protection: Goggles or approved OSHA device with side shields; do not wear contact lenses when handling this product.

Skin Protection: Impervious solvent resistant gloves. Impervious apron and work boots recommended where splashing may occur.

Respiratory Protection: Use the proper respirator in areas where the chemical exposure is unknown or above the OSHA PEL or ACGIH TLV.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, Colorless to Light Straw Liquid
Odor	Mild Amine-Like Odor
pH@25°C	7.2 @ 10% in Water
Melting/Freezing Point	-24.4°C (13.6°F)
Flashpoint	199°F (92.8°C), TCC
Specific Gravity	1.025
Solubility	Complete
Auto-Ignition Temperature	-
Decomposition Temperature	-
VOC Content	99.8% Min.
Odor Threshold	-
Boiling Range	202C (421F)
Evaporation Point	0.03 (Butyl Acetate=1)
Flammable Limits - Upper	9.5%
Flammable Limits - Lower	1.3%
Vapor Pressure	0.29 mmHg @ 20C
Vapor Density (Air=1)	3.4 (Air=1)
Viscosity	-

SECTION X - STABILITY AND REACTIVITY

Stability: Stable

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Conditions to Avoid: Prolonged exposure to humid atmosphere

Hazardous Decomposition/Byproducts: CO, CO₂, NO_x, SO_x, and reactive hydrocarbons under extreme fire conditions

Hazardous Polymerization: Will not occur.

Polymerization Conditions to Avoid: None

Incompatibilities: Strong Oxidizers and strong reducing agents.

SECTION XI - TOXICOLOGICAL INFORMATION

Likely Route of Exposure: Contact and inhalation; ingestion possible.

Inhalation: May cause respiratory tract irritation. Inhalation of vapors may cause drowsiness and dizziness.

Eye Contact: Causes eye irritation including stinging, watering and redness which may result in corneal injury.
Will cause severe burns on contact and will damage the eyes.

Skin Contact: Repeated or prolonged contact with large amounts of this material may result in absorption through the skin to produce toxic effects.

Ingestion: Aspiration hazard. Can enter the lungs during swallowing or vomiting and cause chemical pneumonia and edema.
Low degree of toxicity by ingestion.

Acute Toxicity Value: See Health Hazards below.

Chronic (Long Term) Effects: See Health Hazards above.

Toxicity:

Component Name	LD50	LC50
N-Methyl-2-Pyrrolidinone	Oral - Rat - 3,914 mg/kg; Dermal - Rabbit - 8,000 mg/kg	Inhalation - Rat - 4 h - > 5100 ppm

Reproductive Effects Not Applicable

Teratogenicity Not Applicable

Mutagenicity Not Applicable

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Embryotoxicity	Not Applicable
Sensitization to Product	Not Applicable
Synergistic Products	Not Applicable
Carcinogenicity	Not Listed as a Carcinogen

SECTION XII - ECOLOGICAL INFORMATION

Ecotoxicity: Information not available.

Mobility: Information not available.

Degradability: Information not available.

BioAccumulation: Information not available.

SECTION XIII - WASTE DISPOSAL CONSIDERATIONS

Follow Federal, State and local regulations.

SECTION XIV - TRANSPORT INFORMATION

DOT SHIPPING INFORMATION

Proper Shipping Name: Combustible Liquid, N.O.S.

Contains:

Hazard Class and Label:

Identification Number: NA 1993

Packaging Group: III

Other Shipping Info:

SECTION XV - REGULATORY INFORMATION

TSCA STATUS:..... The components of this product are listed on the TSCA Inventory

SARA TITLE III SECTION 302/304 EXTREMELY HAZARDOUS SUBSTANCE:

No chemicals in this material are subject to the reporting requirements.

SARA TITLE III SECTION 311/312 HAZARD CATEGORIZATION:

Acute	Chronic	Fire	Pressure	Reactive
X		X		

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SARA TITLE III SECTION 313 SUPPLIER INFORMATION:

No chemicals in this material are subject to the reporting requirements.

CERCLA SECTION 102(a) HAZARDOUS SUBSTANCE:

No chemicals in this material are subject to the reporting requirements.

CALIFORNIA PROPOSITION 65:

This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

SECTION XVI - OTHER INFORMATION

HMIS Health: 2

HMIS Flammability: 2

HMIS Reactivity: 0

Additional:

Specification Information

Department issuing data sheet: Compliance Department

Email address: tech.service@researchsolutionsgroup.com

Training necessary: Training is required per the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard 29 CFR 1910.1200.

Disclaimer:

** HMIS rating involve data and interpretations that vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this product, all the information contained in this SDS must be considered.

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