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## Material Safety Data Sheet

### N-Methyl-Pyrrolidone

#### Section 1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

**Product Name:** N-Methyl-Pyrrolidone / N-Methyl-2-Pyrrolidone / NMP /  
 1-Methyl-Pyrrolidone / 1-Methyl-2-Pyrrolidone / Pyrol – M / N-pyrrolidone

**CAS Number:** 872-50-4

**Formula:** C<sub>5</sub>H<sub>9</sub>NO

**Contact info. for emergency:** [0086 138 55110495](tel:008613855110495) (24-hours hotline)

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#### Section 2. COMPOSITION/INFORMATION ON INGREDIENTS

##### Composition:

Name	CAS No.	% by weight
N-Methyl-Pyrrolidone	872-50-4	≥99.8

#### Section 3. HAZARDS IDENTIFICATION

##### GHS Classification

Flammable Liquids Category 4 Eye irritation Category 2A

Reproductive toxicity Category 1B

Specific target organ systemic toxicity - single exposure Category 3

GHS Classification Scale (1= severe hazard; 4= slight hazard)

##### Label elements



Hazard symbols :

**Section 4. FIRST AID MEASURES**

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Ingestion:** Do not induce vomiting unless directed by medical personnel. If vomiting occurs naturally, have victim lean forward. Never give anything by mouth to an unconscious person. Get medical aid.

**Skin Contact:** Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention.

**Eye Contact:** Check for and remove contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention.

**Notes to Physician:** Treat symptomatically and supportively.

**Section 5. FIRE-FIGHTING MEASURES****Flammable properties**

Flash point : 196 °F (91 °C)

Autoignition temperature : 473 °F (245 °C)

**Fire fighting**

SMALL FIRE: Use dry chemical, CO<sub>2</sub>, water spray or regular foam.

LARGE FIRE: Use water spray, water fog or regular foam. Do not use straight streams.

NOTE: Do not use solid water stream.

**Section 6. ACCIDENTAL RELEASE MEASURES****Personal precautions:**

Keep people away from and upwind of spill/leak. Remove all sources of ignition. It is good practice in industrial hygiene to avoid contact with solvents by using appropriate protective measures whenever possible. Pay attention to flashback. Take precautionary measures against static discharges.

**Environmental Precautions:**

Prevent product from entering drains. Dispose of contents/container in accordance with local regulation.

**Section 7. HANDLING AND STORAGE**

**Precautions:** Always use proper personal protective equipment as described in section 8. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Remove contaminated clothing and wash before reuse. Empty containers contain product residue (liquid and vapor) and can be dangerous. Use with adequate ventilation. Avoid breathing vapor or mist.

**Storage:** Store away from ignition sources. Keep in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

**Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas.

**Individual protection measures:**

**Eye/Face Protection** Face-shield. Wear a positive-pressure supplied-air respirator with full facepiece.

**Skin and Body Protection** Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Respiratory protection** If irritation is experienced, NIOSH approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

**General hygiene considerations** Regular cleaning of equipment, work area and clothing.

**Section 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State and Appearance:** Clear, colorless liquid.

**Odor:** Amine-like, mild odor

**Molecular Formula:** C<sub>5</sub>H<sub>9</sub>NO

**Molecular Weight:** 99.13

**Auto-ignition Temperature:** 245°C

**Flash Point:** 91°C

**PH:** 8.5 - 10.0 (100 g/L H<sub>2</sub>O)

**Boiling Point:** 202 °C

**Freezing/Melting Point:** -24°C

**Specific Gravity:** 1.030 g/cm<sup>3</sup>

**Solubility:** Soluble

**Section 10. STABILITY AND REACTIVITY****Chemical stability :**

Stable under recommended storage conditions.

**Conditions to avoid :**

In contact with moisture, this hygroscopic (i.e., absorbs water from the air) material may degrade or become contaminated. Heat, sparks, open flame, other ignition sources, and oxidizing conditions.

**Materials to avoid :**

Strong oxidizing agents. Strong reducing agent. Moisture and humidity.

**Section 11. TOXICOLOGICAL INFORMATION**

**LD50 oral rat:** 3914 mg/kg

**LD50 dermal rat:** 7000 mg/kg

**LD50 dermal rabbit:** 8000 mg/kg

**Eye irritation** May cause eye irritation with susceptible persons

**Skin irritation** May cause skin irritation and/or dermatitis sensitization Did not cause sensitization on laboratory animals.

**Section 12. ECOLOGICAL INFORMATION**

No environmental hazard is anticipated provided that the material is handled and disposed of with due care and attention.

**Section 13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method** Dispose of in accordance with local regulations.

**Contaminated packaging** Empty containers should be taken for local recycling, recovery or waste disposal.

**Section 14. TRANSPORT INFORMATION**

IATA No information available.

IMO No information available.

ID/ADR No information available.

**Section 15. REGULATORY INFORMATION**

Labelling in accordance with EC directives 67/548/EEC and 1999/45/EEC

Keep out of reach of children

In case of fire and/or explosion do not breathe fumes

**Section 16. OTHER INFORMATION**

**Important Notice:** The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

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If you have any questions, please contact us by follow:

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