

# Safety Data Sheet

## Methyl (N-) Pyrrolidone, CP

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Methyl (N-) Pyrrolidone, CP

**Synonyms/Generic Names:** N-Methyl-2-pyrrolidone; 1-Methyl-2-pyrrolidone; NMP; M-PYROL™; N-Methyl Pyrrolidone

**Product Number:** 5661

**Product Use:** Industrial, Manufacturing or Laboratory use

**Manufacturer:** Columbus Chemical Industries, Inc.  
N4335 Temkin Rd.  
Columbus, WI. 53925

**For More Information:** 920-623-2140 (Monday-Friday 8:00-4:30)  
[www.columbuschemical.com](http://www.columbuschemical.com)

**In Case of Emergency Call:** CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

### 2. HAZARDS IDENTIFICATION

**Hazard Not Otherwise Classified (HNOC):** None

**Target Organ(s):** Respiratory system, Bone marrow, Thymus, Spleen, Lymphatic system.

**Signal Words:** Danger

**Pictograms:**



**GHS Classification:**

Flammable liquids	Category 4
Skin irritation	Category 2
Eye irritation	Category 2A
Reproductive toxicity	Category 1B
Specific target organ toxicity- single exposure- respiratory system	Category 3

**GHS Label Elements, including precautionary statements:**

**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/sparks/open flames/hot surfaces. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use appropriate media to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local regulations.

**Potential Health Effects**

<b>Eyes</b>	Causes eye irritation
<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Ingestion</b>	May be harmful if swallowed

**NFPA Ratings**

<b>Health</b>	2
<b>Flammability</b>	2
<b>Reactivity</b>	0
<b>Specific hazard</b>	Not Available

**HMIS Ratings**

<b>Health</b>	2
<b>Fire</b>	2
<b>Reactivity</b>	0

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
n-Methyl Pyrrolidone	>99	872-50-4	212-828-1	C <sub>5</sub> H <sub>9</sub> NO	99.13 g/mol

**4. FIRST-AID MEASURES**

<b>Eyes</b>	Rinse with plenty of water for at least 15 minutes and seek medical attention.
<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
<b>Skin</b>	Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.
<b>Ingestion</b>	<b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

## 5. FIREFIGHTING MEASURES

<b>Suitable (and unsuitable) extinguishing media</b>	For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
<b>Specific hazards arising from the chemical</b>	Emits toxic fumes (carbon oxides, nitrogen oxides) under fire conditions. Vapor can cause flash fire. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back. (See also Stability and Reactivity section)

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures</b>	See section 8 for recommendations on the use of personal protective equipment.
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to a federal/national or local reporting requirements.
<b>Methods and materials for containment and cleaning up</b>	Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition- No smoking. Take measures to prevent the buildup of electrostatic charge. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

### Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a cool, dry well ventilated area. Keep in a tightly closed plainly-labeled container. Keep away from heat, sparks and flame. Keep away from incompatible materials (see section 10 for incompatibilities). Store under inert gas. Moisture sensitive.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
n-Methyl-2-pyrrolidone	10 ppm	WEEL	AIHA

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

**Personal Protection**

<b>Eyes</b>	Wear chemical safety glasses with a face shield for splash protection.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
<b>Skin</b>	Wear neoprene or rubber gloves, apron and other protective clothing appropriate to the risk of exposure.
<b>Other</b>	Not Available

**Other Recommendations**

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance (physical state, color, etc.)	Colorless to light yellow liquid
Odor	Amine odor
Odor threshold	Not Available
pH	7.7-8
Melting point/freezing point	-24°C (-11.2°F)
Initial boiling point and boiling range	202°C (396°F)
Flash point	96°C (204°F)- Closed cup
Evaporation rate	Not Available
Upper/lower flammability or explosive limit	LEL: 1.3% UEL: 9.5%
Vapor pressure	(@ 20°C) 0 mmHg
Vapor density	(air=1) 3.4
Relative density	1.028 g/mol at 25°C (77°F)
Solubility (ies)	Soluble
Partition coefficient: n-octanol/water	Low Pow: -0.46
Auto-ignition temperature	346.11°C (655°F)
Decomposition temperature	Not available

**10. STABILITY AND REACTIVITY**

<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Will not occur.
<b>Conditions to Avoid</b>	Heat, flames and sparks, moisture, extremes of temperature and direct sunlight. Incompatibilities.
<b>Incompatible Materials</b>	Oxidizing agents, reducing agents, acids, alkalis, moisture
<b>Hazardous Decomposition Products</b>	Carbon oxides, nitrogen oxides.

**11. TOXICOLOGICAL INFORMATION****Acute Toxicity***n*-Methyl Pyrrolidone

<b>Skin</b>	LD50 Dermal- rabbit-8,000 mg/kg
<b>Eyes</b>	Not Available
<b>Respiratory</b>	LDLO Inhalation- rat- 4 h- > 5100 ppm
<b>Ingestion</b>	LD50 Oral- rat- 3,914 mg/kg

**Carcinogenicity**

<b>IARC</b>	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>ACGIH</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
<b>NTP</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
<b>OSHA</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Signs & Symptoms of Exposure**

<b>Skin</b>	Skin irritation
<b>Eyes</b>	Eye irritation
<b>Respiratory</b>	Burning sensation of mucous membranes, dizziness, difficulty breathing, drowsiness, disorientation, headache, narcosis, vertigo, convulsions, and coma.
<b>Ingestion</b>	Nausea, vomiting, staggering gait, delirium, weakness.

<b>Chronic Toxicity</b>	May cause damage to the following organs: blood, kidneys, lymphatic system, Urinary system, bone marrow.
<b>Teratogenicity</b>	Damage to fetus is possible
<b>Mutagenicity</b>	Mutagenic for bacteria and/or yeast
<b>Embryotoxicity</b>	Not Available
<b>Target Organ(s)</b>	Respiratory system, Bone marrow, Thymus, Spleen, Lymphatic system.
<b>Reproductive Toxicity</b>	Not Available
<b>Respiratory/Skin Sensitization</b>	Not Available

**12. ECOLOGICAL INFORMATION****Ecotoxicity***n*-Methyl Pyrrolidone

<b>Aquatic Vertebrate</b>	Aquatic fish; LC50- other fish- 4,000 mg/l- 96 h LC50- Leuciscus idus (Golden orfe)- > 500 mg/l – 96 h
<b>Aquatic Invertebrate</b>	EC50- Daphnia magna (Water flea) - > 1,000 mg/l – 24 h
<b>Terrestrial</b>	Not Available

<b>Persistence and Degradability</b>	Biodegradability Result: 90%- Readily biodegradable
<b>Bioaccumulative Potential</b>	Not Available
<b>Mobility in Soil</b>	Not Available
<b>PBT and vPvB Assessment</b>	Not Available
<b>Other Adverse Effects</b>	Not Available

**13. DISPOSAL CONSIDERATIONS**

<b>Waste Residues</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
<b>Product Containers</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

## 14. TRANSPORT INFORMATION

US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IDMG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

## 15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	Listed: n-Methyl Pyrrolidone
Rhode Island: Hazardous Substance List	Not Listed
Massachusetts: Toxic or Hazardous Substance List, Right to Know	Not Listed
Pennsylvania: Hazardous Substance List	Not Listed
New Jersey: Right to Know Hazardous Substance List	Listed: n-Methyl Pyrrolidone
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Fire Hazard, Acute Health Hazard, Chronic Health Hazard.
SARA 312	Fire Hazard, Acute Health Hazard, Chronic Health Hazard.
SARA 313	Listed: n-Methyl Pyrrolidone
WHMIS Canada	Class B3: Flammable and combustible material – Combustible liquid. Class D2B: Poisonous and infectious material 0 Other effects – Toxic.

## 16. OTHER INFORMATION

Revision	Date
Original	08/27/2012
Revision 1	10/29/2013
Revision 2	10/21/2015
Revision 3	10/22/2021

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