

## Chemical Safety Data Sheet MSDS / SDS

## 1-Methylpyrrolidine

Revision Date:2025-07-26 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## Product identifier

Product name : 1-Methylpyrrolidine  
CBnumber : CB0672357  
CAS : 120-94-5  
EINECS Number : 204-438-5  
Synonyms : N-methylpyrrolidine, 1-METHYLPYRROLIDINE

## Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 Wash hands thoroughly after handling.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P370+P378 In case of fire: Use ... for extinction.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container to.....

#### **Hazard statements**

H225 Highly Flammable liquid and vapour

H302 Harmful if swallowed

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

H332 Harmful if inhaled

H401 Toxic to aquatic life

H411 Toxic to aquatic life with long lasting effects

---

## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: 1-Methylpyrrolidine
Synonyms	: N-methylpyrrolidine, 1-METHYLPYRROLIDINE
CAS	: 120-94-5
EC number	: 204-438-5
MF	: C5H11N
MW	: 85.15

---

## SECTION 4: First aid measures

### **Description of first aid measures**

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### **In case of skin contact**

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### **In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### **If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### **Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

## Indication of any immediate medical attention and special treatment needed

No data available

---

## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media

Dry powder Dry sand

#### Unsuitable extinguishing media

Do NOT use water jet.

### Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>)

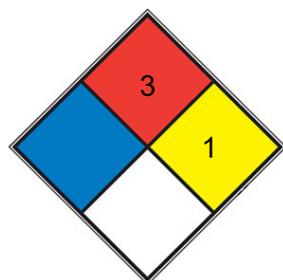
### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### Further information

Use water spray to cool unopened containers.

### NFPA 704



■ HEALTH

■ FIRE 3 Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions. Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, [acetone](#))

■ REACT 1 Normally stable, but can become unstable at elevated temperatures and pressures (e.g. [propene](#))

□ SPEC.

□ HAZ.

---

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### **Methods and materials for containment and cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

### **Reference to other sections**

For disposal see section 13.

---

## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

### **Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

### **Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

---

## **SECTION 8: Exposure controls/personal protection**

### **control parameter**

#### **Hazard composition and occupational exposure limits**

Does not contain substances with occupational exposure limits.

### **Exposure controls**

#### **Appropriate engineering controls**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### **Personal protective equipment**

##### **Eye/face protection**

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,4 mm Break through time: 55 min

Material tested: Camatril? (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

---

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance	colourless liquid
Odour	amine-like
Odour Threshold	No data available d) pH 12,3 at 10,2 g/l at 20 °C Melting point/freezing point Initial boiling point and boiling range Melting point:< -80 °C 76 - 80 °C Flash point -18 °C - closed cup - Regulation (EC) No. 440/2008, Annex, A.9 Evaporation rate No data available Flammability (solid, gas) Upper/lower flammability or explosive limits No data available Upper explosion limit: 9,1 %(V) Lower explosion limit: 1,1 %(V) Vapour pressure 107,46 hPa at 20 °C - OECD Test Guideline 104 Vapour density 2,94 Relative density 0,8 g/mL at 20 °C - Water solubility completely miscible Partition coefficient: n-octanol/water Autoignition temperature Decomposition temperature log Pow: 1,1 at 23 °C - OECD Test Guideline 117 - Bioaccumulation is not expected. 180 °C at 1.013,25 hPa No data available Viscosity No data available Explosive properties No data available Oxidizing properties No data available
Melting point/freezing point	Melting point:< -80 °C
Initial boiling point and boiling range	76 - 80 °C
Flash point	-18 °C - closed cup - Regulation (EC) No. 440/2008, Annex, A.9
Evaporation rate	-7 °F
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	Upper explosion limit: 9,1 %(V) Lower explosion limit: 1,1 %(V)
Vapour pressure	107,46 hPa at 20 °C - OECD Test Guideline 104

Vapour density	2,94
Relative density	0,8 g/mL at 20 °C -
Water solubility	completely miscible
Partition coefficient: n-octanol/water	log Pow: 1,1 at 23 °C - OECD Test Guideline 117 - Bioaccumulation is not expected.
Autoignition temperature	180 °C at 1.013,25 hPa
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

### Other safety information

Relative vapour density

2,94

## SECTION 10: Stability and reactivity

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Incompatible materials

Strong acids, Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)

Other decomposition products - No data available In the event of fire: see section 5

## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 280 mg/kg Remarks: (ECHA)

LC50 Inhalation - Rat - male and female - 4 h - 1,1 - 2,5 mg/l (OECD Test Guideline 403)

#### Skin corrosion/irritation

(OECD Test Guideline 435) Causes poorly healing wounds.

### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Corrosive - 1 h (OECD Test Guideline 405) Causes serious eye damage.

### **Respiratory or skin sensitisation**

No data available

### **Germ cell mutagenicity**

Ames test

Escherichia coli/Salmonella typhimurium Result: negative

### **Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### **Reproductive toxicity**

No data available

### **Specific target organ toxicity - single exposure**

No data available

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

### **Specific target organ toxicity - repeated exposure**

No data available

### **Aspiration hazard**

No data available

### **Additional Information**

RTECS: UY1420500

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### **Toxicity**

LD50 orally in Rabbit: 280 mg/kg

---

## SECTION 12: Ecological information

### **Toxicity**

#### **Toxicity to fish**

semi-static test LC50 - Danio rerio (zebra fish) - 46,4 - 100 mg/l - 96 h

(OECD Test Guideline 203)

#### **Toxicity to daphnia and other aquatic invertebrates**

static test EC50 - Daphnia magna (Water flea) - 7,29 mg/l - 48 h (Directive 67/548/EEC, Annex V, C.2.)

#### **Toxicity to algae**

static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 162,69 mg/l - 72 h

(OECD Test Guideline 201)

static test EC10 - Pseudokirchneriella subcapitata (green algae) - 69,07 mg/l - 72 h

(OECD Test Guideline 201)

#### **Toxicity to bacteria**

static test EC20 - activated sludge - > 100 mg/l - 0,5 h (OECD Test Guideline 209)

### **Persistence and degradability**

Biodegradability aerobic - Exposure time 10 d

Result: 98 % - Readily biodegradable. (OECD Test Guideline 302B)

Biochemical Oxygen Demand (BOD)

Chemical Oxygen Demand (COD)

< 2 mg/g

Remarks: (External MSDS)

1.880 mg/g

Remarks: (External MSDS)

### **Bioaccumulative potential**

No data available

### **Mobility in soil**

No data available

### **Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### **Other adverse effects**

Toxic to aquatic life with long lasting effects.

Additional ecological information

No data available

---

## **SECTION 13: Disposal considerations**

### **Waste treatment methods**

#### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

#### **Contaminated packaging**

Dispose of as unused product.

---

## **SECTION 14: Transport information**

### **UN number**

ADR/RID: 3286 IMDG: 3286 IATA: 3286

### **UN proper shipping name**

ADR/RID: FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (1-Methylpyrrolidine) IMDG: FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.

(1-Methylpyrrolidine)

IATA: Flammable liquid, toxic, corrosive, n.o.s. (1-Methylpyrrolidine)

### **Transport hazard class(es)**

ADR/RID: 3 (6.1, 8) IMDG: 3 (6.1, 8) IATA: 3 (6.1)(8)

### **Packaging group**

ADR/RID: II IMDG: II IATA: II

### **Environmental hazards**

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

### **Special precautions for user**

No data available

---

## SECTION 15: Regulatory information

### **Safety, health and environmental regulations/legislation specific for the substance or mixture**

#### **Regulations on the Safety Management of Hazardous Chemicals**

China Catalog of Hazardous chemicals 2015:Not Listed. website: <https://www.mem.gov.cn/>

#### **Measures for Environmental Management of New Chemical Substances**

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: <https://www.epa.gov/>

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

EC Inventory:Listed.

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

---

## SECTION 16: Other information

### **Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

## References

- 【1】 CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- 【2】 ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- 【3】 ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>
- 【4】 eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- 【5】 ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- 【6】 Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- 【7】 HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- 【8】 IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- 【9】 IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- 【10】 Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.