# Chemical Safety Data Sheet MSDS / SDS

# 2-Methylpyrrolidine

Revision Date: 2024-12-21 Revision Number: 1

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

#### **Product identifier**

Product name : 2-Methylpyrrolidine

CBnumber : CB8286691

CAS : 765-38-8

EINECS Number : 212-144-3

Synonyms: 2-methylpyrrolidine,2-methyl-pyrrolidin

### 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 : 400-158-6606

# 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.

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.

P405 Store locked up.

### **Hazard statements**

H225 Highly Flammable liquid and vapour

H302 Harmful if swallowed

# SECTION 3: Composition/information on ingredients

#### **Substance**

Product name : 2-Methylpyrrolidine

Synonyms : 2-methylpyrrolidine,2-methyl-pyrrolidin

CAS : 765-38-8
EC number : 212-144-3
MF : C5H11N
MW : 85.15

# SECTION 4: First aid measures

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

#### General advice

Consult a physician. Show this material 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. 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

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NOx)

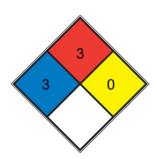
### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### **Further information**

Use water spray to cool unopened containers.

#### **NFPA 704**



Short exposure could cause serious temporary or moderate residual injury (e.g. <u>liquid hydrogen, sulfuric acid, calcium</u>

HEALTH 3

hypochlorite, hexafluorosilicic acid)

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 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, N2)

SPEC.

FIRE

# SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors 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.

### Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet- brushing and place in container for disposal according to local regulations (see section 13).

### Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

### Precautions for safe handling

### Advice on safe handling

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

### Advice on protection against fire and explosion

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

### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

For precautions see section 2.2.

### Conditions for safe storage, including any incompatibilities

### Storage conditions

Store in cool place. 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.

### Storage class

Storage class (TRGS 510): 3: Flammable liquids

### 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**

# 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.

**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.

# SECTION 9: Physical and chemical properties

# Information on basic physicochemical properties

Odour Threshold No data available  pH No data available  Melting point/freezing point -96.37°C (estimate) Initial boiling point and boiling range 97 - 99 °C at 992 hPa - lit.  Flash point 3 °C - closed cup  Evaporation rate No data available  Flammability (solid, gas) No data available  Upper/lower flammability or explosive No data available  limits  Vapour pressure No data available  Vapour density No data available  Relative density 0,834 g/cm3 at 25 °C - lit. No data available  Water solubility No data available  Partition coefficient: n-octanol/water log Pow: 0,582  Autoignition temperature No data available  Decomposition temperature No data available  Visassity is respective No data available  Decomposition temperature No data available	Appearance	liquid
pH No data available  Melting point/freezing point -96.37°C (estimate)  Initial boiling point and boiling range 97 - 99 °C at 992 hPa - lit.  Flash point 3 °C - closed cup  Evaporation rate No data available  Flammability (solid, gas) No data available  Upper/lower flammability or explosive No data available  limits  Vapour pressure No data available  Vapour density No data available  Relative density 0,834 g/cm3 at 25 °C - lit. No data available  Water solubility No data available  Partition coefficient: n-octanol/water log Pow. 0,582  Autoignition temperature No data available  Decomposition temperature No data available	Odour	No data available
Melting point/freezing point  -96.37°C (estimate)  Initial boiling point and boiling range  97 - 99 °C at 992 hPa - lit.  Flash point  3 °C - closed cup  Evaporation rate  No data available  Flammability (solid, gas)  No data available  Upper/lower flammability or explosive  Iimits  Vapour pressure  No data available  Vapour density  No data available  Relative density  No data available  Water solubility  No data available  Partition coefficient: n-octanol/water  No data available  Decomposition temperature  No data available	Odour Threshold	No data available
Initial boiling point and boiling range 97 - 99 °C at 992 hPa - lit.  Flash point 3 °C - closed cup  Evaporation rate No data available  Flammability (solid, gas) No data available  Upper/lower flammability or explosive Ilimits  Vapour pressure No data available  Vapour density No data available  Relative density 0,834 g/cm3 at 25 °C - lit. No data available  Water solubility No data available  Partition coefficient: n-octanol/water log Pow. 0,582  Autoignition temperature No data available  Decomposition temperature No data available	рН	No data available
Flash point 3 °C - closed cup  Evaporation rate No data available  Flammability (solid, gas) No data available  Upper/lower flammability or explosive No data available  limits  Vapour pressure No data available  Vapour density No data available  Relative density 0,834 g/cm3 at 25 °C - lit. No data available  Water solubility No data available  Partition coefficient: n-octanol/water log Pow. 0,582  Autoignition temperature No data available  Decomposition temperature No data available	Melting point/freezing point	-96.37°C (estimate)
Evaporation rate No data available  Flammability (solid, gas) No data available  Upper/lower flammability or explosive Imits  Vapour pressure No data available  Vapour density No data available  Relative density 0,834 g/cm3 at 25 °C - lit. No data available  Water solubility No data available  Partition coefficient: n-octanol/water log Pow: 0,582  Autoignition temperature No data available  Decomposition temperature No data available	Initial boiling point and boiling range	97 - 99 °C at 992 hPa - lit.
Flammability (solid, gas)  Upper/lower flammability or explosive limits  Vapour pressure  No data available  Vapour density  No data available  Relative density  No data available  Water solubility  No data available  Partition coefficient: n-octanol/water  No data available  No data available  Partition temperature  No data available	Flash point	3 °C - closed cup
Upper/lower flammability or explosive limits  Vapour pressure No data available  Vapour density No data available  Relative density 0,834 g/cm3 at 25 °C - lit. No data available  Water solubility No data available  Partition coefficient: n-octanol/water log Pow: 0,582  Autoignition temperature No data available  Decomposition temperature No data available	Evaporation rate	No data available
Vapour pressure No data available Vapour density No data available Relative density 0,834 g/cm3 at 25 °C - lit. No data available Water solubility No data available Partition coefficient: n-octanol/water log Pow: 0,582 Autoignition temperature No data available Decomposition temperature No data available	Flammability (solid, gas)	No data available
Vapour pressure  No data available  Vapour density  No data available  Relative density  0,834 g/cm3 at 25 °C - lit. No data available  Water solubility  No data available  Partition coefficient: n-octanol/water log Pow. 0,582  Autoignition temperature  No data available  Decomposition temperature  No data available	Upper/lower flammability or explosive	No data available
Vapour density  No data available  Relative density  0,834 g/cm3 at 25 °C - lit. No data available  Water solubility  No data available  Partition coefficient: n-octanol/water log Pow: 0,582  Autoignition temperature  No data available  Decomposition temperature  No data available	limits	
Relative density 0,834 g/cm3 at 25 °C - lit. No data available  Water solubility No data available  Partition coefficient: n-octanol/water log Pow: 0,582  Autoignition temperature No data available  Decomposition temperature No data available	Vapour pressure	No data available
Water solubility No data available Partition coefficient: n-octanol/water log Pow: 0,582 Autoignition temperature No data available Decomposition temperature No data available	Vapour density	No data available
Partition coefficient: n-octanol/water log Pow: 0,582  Autoignition temperature No data available  Decomposition temperature No data available	Relative density	0,834 g/cm3 at 25 °C - lit. No data available
Autoignition temperature No data available  Decomposition temperature No data available	Water solubility	No data available
Decomposition temperature No data available	Partition coefficient: n-octanol/water	log Pow: 0,582
	Autoignition temperature	No data available
Vicegaity, kinamatia, No data available Vicegaity, dynamia, No data available	Decomposition temperature	No data available
viscosity viscosity, kinematic. No data available viscosity, dynamic. No data available	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Explosive properties No data available	Explosive properties	No data available
Oxidizing properties No data available	Oxidizing properties	No data available

# Other safety information

No data available

# 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 oxidizing agents

### Hazardous decomposition products

In the event of fire: see section 5

# SECTION 11: Toxicological information

# Information on toxicological effects

### **Acute toxicity**

Oral

LD50 Oral - 300,1 mg/kg Inhalation

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

**Aspiration hazard** 

No data available

# SECTION 12: Ecological information

### **Toxicity**

No data available

### Persistence and degradability

No data available

### 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

No data available

# **SECTION 13: Disposal considerations**

### Waste treatment methods

### **Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

### Contaminated packaging

Dispose of as unused product.

# **SECTION 14: Transport information**

### **UN** number

ADR/RID: 2924 IMDG: 2924 IATA: 2924

# UN proper shipping name

ADR/RID: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (2-Methylpyrrolidine) IMDG: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (2-Methylpyrrolidine)

Methylpyrrolidine)

IATA: Flammable liquid, corrosive, n.o.s. (2-Methylpyrrolidine)

### Transport hazard class(es)

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

# Packaging group

ADR/RID: II IMDG: II IATA: II

#### **Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no 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

EC Inventory:Listed.

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

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

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

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

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Not Listed. website: https://www.mee.gov.cn/

New Zealand Inventory of Chemicals (NZIoC):Not Listed. website: https://www.epa.govt.nz/

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Not Listed. website: https://emb.gov.ph/

# **SECTION 16: Other information**

### Abbreviations and acronyms

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

CAS: Chemical Abstracts Service

EC50: Effective Concentration 50%

IATA: International Air Transportation Association

IMDG: International Maritime Dangerous Goods

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

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

STEL: Short term exposure limit TWA: Time Weighted Average

### References

[1] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

[2] ChemlDplus, 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

[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.