

Material Safety Data Sheet

1-METHYLPYRROLIDINE

Section 1 - Chemical Product and Company Identification

MSDS Name: 1-Methylpyrrolidine

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	EC no	EINECS/ELINCS
120-94-5	1-Methylpyrrolidine	204-438-5	NA

Section 3 - Hazards Identification

3.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225
 Acute toxicity, Oral (Category 3), H301
 Acute toxicity, Inhalation (Category 4), H332
 Skin corrosion (Sub-category 1A), H314
 Long-term (chronic) aquatic hazard (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

3.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word



Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

SimSon Pharma Limited

P301 + P310 + P330

IF SWALLOWED: Immediately call a POISON CENTER/doctor.
Rinse mouth.

P303 + P361 + P353

F ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

3.3 Other hazards

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.

Section 4 - First Aid Measures

4.1 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.

4.2 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

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5 - Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Dry powder Dry sand

Unsuitable extinguishing media

Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO_x)

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SimSon Pharma Limited

Section 6 - Accidental Release Measures

6.1 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.

6.2 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.

6.3 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).

6.4 Reference to other sections

For disposal see section 13.

Section 7 - Handling and Storage

7.1 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.

7.2 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.

7.3 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

8.1 Control parameters

Components with workplace control parameters

8.2 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

SimSon Pharma Limited

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.

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

9.1 Information on basic physical and chemical properties

a) Appearance	Form: liquid
b) Odour	Colour: colourless
c) Odour Threshold	Amine- like
d) pH	No data available
e) Melting point/freezing point	12,3 at 10.2 g/l at 20 °C
f) Initial boiling point and boiling range	Melting point/range: < -80 °C
g) Flash point	76 – 80 °C
h) Evaporation rate	-18°C – closed cup – Regulation(EC)No. 440/2008,Annex,A.9
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available.
	Upper explosion limit: 9,1 % (V)
	Lower explosion limit: 1,1 %(V)

SimSon Pharma Limited

k) Vapour pressure	107,46 hPa at 20°C –OECD Test Guideline
l) Vapour density	2,94
m) Relative density	0,8g/ml at 20 °C-
n) Water solubility	completely miscible
o) Partition coefficient: n-octanol/water	log Pow: 1,1 at 23 °C – OECD Test Guideline 117- Bioaccumulation is not expected.
p) Auto-ignition temperature	180 °C at 1,013 hPa
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

9.2 Other safety information

Relative vapour density	2,94
-------------------------	------

Section 10 - Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Strong acids, Strong oxidizing agents

10.6 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

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 280 mg/kg

Remarks: (ECHA)

SimSon Pharma Limited

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

Skin corrosion/irritation

Skin - In vitro study

Result: Corrosive

(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.

Section 12 - Ecological Information

12.1 Toxicity

Toxicity to fish	semi-static test LC50 - Danio rerio (zebra fish) (OECD Test Guideline 203)	- 46,4 - 100 mg/l	96 h
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) (Directive 67/548/EEC, Annex V, C.2.)	- 7,29 mg/l	- 48 h
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) (OECD Test Guideline 201)	-162,69 mg/l	- 72 h

SimSon Pharma Limited

	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 (OECD Test Guideline 209)	- > 100 mg/l	- 0,5 h

12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 10 d Result: 98 % - Readily biodegradable. (OECD Test Guideline 302B)
Biochemical Oxygen Demand (BOD)	< 2 mg/g Remarks: (External MSDS)
Chemical Oxygen Demand (COD)	1.880 mg/g Remarks: (External MSDS)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 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.

12.6 Other adverse effects

Toxic to aquatic life with long lasting effects.
 Additional ecological information.

Section 13 - Disposal Considerations

13.1 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

14.1 UN number

ADR/RID: 3286

IMDG: 3286

IATA: 3286

14.2 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)

SimSon Pharma Limited

B/307, Sarita Building, Prabhat Industrial Estate, Nr. Dahisar Toll Naka, Dahisar (E), Mumbai-400 068
 Telefax: 91-22-40068689 E mail: info@simsonpharma.com

14.3 Transport hazard class(es)

ADR/RID: 3 (6.1, 8)

IMDG: 3 (6.1, 8)

IATA: 3 (6.1)(8)

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

14.6 Special precautions for user

No data available

Section 15 - Regulatory Information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

REACH - Restrictions on the manufacture, :
placing on the market and use of certain dangerous
substances, preparations and articles
(Annex XVII)

REACH - Restrictions on the manufacture, :
placing on the market and use of certain dangerous
substances, preparations and articles (Annex XVII)

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

Section 16 - Other Information

Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H411	Toxic to aquatic life with long lasting effects.

Further information

The above information is believed to be correct but does not support to be all inclusive and shall be used only as a guide.
The information in this document is based on the present state of our knowledge and is applicable to the product with
Regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

SimSon Pharma Limited

