

Safety Data Sheet n-METHYL-2-PYRROLIDONE

SDS no. C73CGMBO • Version 1.0 • Date of issue: 2023-04-15

SECTION 1: Identification

GHS Product identifier

Product name n-METHYL-2-PYRROLIDONE

Product number MA108

Other means of identification

1-METHYL-2-PYRROLIDONE

Recommended use of the chemical and restrictions on use

Laboratory reagent.

Supplier's details

Name ChemSupply Australia Pty Ltd
Address 38-50 Bedford Street
5013 Gillman South Australia
Australia

Telephone 08 8440 2000
email www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Serious eye damage/eye irritation, Cat. 2A
- Skin corrosion/irritation, Cat. 2
- Specific target organ toxicity following single exposure, Cat. 3
- Toxic to reproduction, Cat. 2

GHS label elements, including precautionary statements

Pictograms



Signal word

Warning

Hazard statement(s)

H315
H319
H335
H361

Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation
Suspected of damaging fertility or the unborn child [effect, route]

Precautionary statement(s)

P202
P271
P280
P302+P352
P304+P340
P305+P351+P338

P312
P332+P313
P337+P313
P362+P364
P403+P233
P405
P501

Do not handle until all safety precautions have been read and understood.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of water/soap
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor/physician if you feel unwell.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 99.13

Components

Component	CAS no.	Concentration
N-METHYL-2-PYRROLIDONE (EC no.: 212-828-1; Index no.: 606-021-00-7)	872-50-4	100 - 100 % (weight)
CLASSIFICATIONS: Toxic to reproduction, Cat. 1B; Specific target organ toxicity following single exposure, Cat. 3; Skin corrosion/irritation, Cat. 2; Serious eye damage/eye irritation, Cat. 2A. HAZARDS: H315 - Causes skin irritation; H319 - Causes serious eye irritation; H335 - May cause respiratory irritation; H360D - May damage the unborn child. [SCLs/M-factors/ATEs]: STOT SE 3; H335: C ≥ 10 %		

SECTION 4: First-aid measures

Description of necessary first-aid measures

If inhaled

Move to fresh air in case of accidental inhalation of vapors. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing
or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus.

In case of skin contact

Remove contaminated clothing and wash affected skin with soap and water. If signs of poisoning appear, treat as for inhalation. Obtain medical attention. Wash contaminated clothing before reuse. Contaminated combustible material, e.g. clothing ignites more readily and burns fiercely.

In case of eye contact

If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.

If swallowed

Rinse mouth. Do not induce vomiting. Immediately make victim drink water (two glasses at the most) Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus. Obtain medical attention. Never give anything by mouth to an unconscious person.

Personal protective equipment for first-aid responders

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Most important symptoms/effects, 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 immediate medical attention and special treatment needed, if necessary

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Use dry chemical, alcohol-resistant foam, CO2 or water spray.

Specific hazards arising from the chemical

Hazards from Combustion Products: Irritating and highly toxic gases, fumes and vapours.

Combustible. Vapors may form explosive mixture with air. Flash back possible over considerable distance.

Special protective actions for fire-fighters

Wear SCBA and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Wear a positive-pressure supplied-air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

Environmental precautions

Contain or absorb leaking liquid with sand or earth, consults an expert. Prevent liquid entering sewers, basements and workpits. If substance has entered a water course or sewer or contaminated soil, inform respective authorities.

Methods and materials for containment and cleaning up

May react with combustible substances creating fire or explosion hazard and formation of toxic fumes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Soak up with inert absorbent material (e.g. sand, silica gel). Prevent liquid entering sewers, basements and workpits; vapor may create explosive atmosphere. Transfer to covered steel drums. Dispose of promptly.

SECTION 7: Handling and storage

Precautions for safe handling

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Wear a positive-pressure supplied-air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

Conditions for safe storage, including any incompatibilities

May react with combustible substances creating fire or explosion hazard and formation of toxic fumes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Soak up with inert absorbent material (e.g. sand, silica gel). Prevent liquid entering sewers, basements and workpits; vapor may create explosive atmosphere. Transfer to covered steel drums. Dispose of promptly.

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection

Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection: Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Colourless liquid.
Color	No data available.
Odor	Amine.
Odor threshold	No data available.
Melting point/freezing point	-24 °C
Boiling point or initial boiling point and boiling range	202 °C at 1013 hPa
Flammability	Combustible
Lower and upper explosion limit/flammability limit	Explosion Limit - Upper: 9.5% (V) Explosion Limit - Lower: 1.3% (V)
Flash point	91°C
Explosive properties	Not explosive.
Auto-ignition temperature	245°C

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Decomposition temperature	No data available.
Oxidizing properties	No oxidizing properties.
pH	8.5-10.0 at 20°C
Kinematic viscosity	Viscosity: 1.8 mPa.s at 20°C
Solubility	Solubility in Water: 1000g/l at 25°C
Partition coefficient n-octanol/water (log value)	log Pow: -0.46
Vapor pressure	0.32 hPa at 20°C
Evaporation rate	No data available.
Density and/or relative density	Density: 1.030 g/ml at 20°C
Relative vapor density	3.42
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

Other Information: Taste: Sharp saline taste.

SECTION 10: Stability and reactivity

Reactivity

Hygroscopic. Sensitive to light. Explosible with air in a vaporous/gaseous state.

Chemical stability

Stable under ordinary conditions of use and storage.

Possibility of hazardous reactions

The substance can react dangerously with strong oxidizing agents, strong acids, nitric acid.

Conditions to avoid

Strong heating.

Incompatible materials

Strong oxidizing agents, strong acids, nitric acid.

Unsuitable working materials: Various plastic.

Hazardous decomposition products

Nitrogen oxides, carbon monoxide, carbon dioxide (Hazardous decomposition products from under fire condition).

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Acute Toxicity - Oral: LD50 (oral, rat): 3598 mg/kg.

Acute Toxicity - Inhalation: LC50 (inhalation, rat): 5.1 mg/l/4 h.

Ingestion: Symptoms : Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Pain, vomiting, diarrhea.

Inhalation: Symptoms: irritation in the respiratory tract.

Skin corrosion/irritation

Acute Toxicity - Dermal: LD50 (dermal, rabbit): 8000 mg/kg.

Skin: Irritations, danger of skin absorption.

Serious eye damage/irritation

Eye: Irritations.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Bacterial mutagenicity; Ames test is negative.

Carcinogenicity

Noncarcinogenic in animal experiments.

Reproductive toxicity

May cause harm to the unborn child.

Specific target organ toxicity (STOT) - single exposure

May cause respiratory irritation.

Specific target organ toxicity (STOT) - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

No data available.

SECTION 12: Ecological information

Toxicity

Acute Toxicity - Fish: LC50 *L.macrochirus* : 832 mg/l/96h.

Acute Toxicity - Daphnia: EC50 *Daphnia magna*: 4897 mg/l/48h.

Acute Toxicity - Algae: IC50 *Desmodesmus subspicatus*: >500 mg/l/72h.

Acute Toxicity - Bacteria: EC50 Bacteria : >9000 mg/l/48h.

Persistence and degradability

>90 % /20d. Readily biodegradable.

Bioaccumulative potential

log Pow: -0.46 (experimental)

No bioaccumulation is to be expected (log P o/w <1)

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Sewage disposal

log Pow: -0.46 (experimental)

No bioaccumulation is to be expected (log P o/w <1)

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP

Poison Schedule: S6

SECTION 16: Other information

Further information/disclaimer

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)