

 **MATERIAL SAFETY DATA SHEET****NUVO AUSTRALIA PTY LTD**

(ACN 089 731 617)

324/ 23 MILTON PARADE**MALVERN VIC 3144 AUSTRALIA****PHONE: (03) 9822 2209****FAX: (03) 9822 2109****EMERGENCY No. 0419 341 095 any time****http://www.nuvo.com.au****PRODUCT: N-METHYL 2-PYRROLIDONE****PRODUCT NAMES: N-Methyl 2-Pyrrolidone****OTHER NAMES: NMP**

1-Methyl 2-pyrrolidone

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UN NUMBER:**HAZCHEM CODE:****PACKAGING GROUP:****USES:****DANGEROUS GOODS:****CLASS & SUB RISK:****POISONS SCHEDULE:**Not applicable**STATEMENT OF HAZARDOUS NATURE:**

Not classified as hazardous according to criteria of Worksafe Australia

PHYSICAL DESCRIPTION/PROPERTIES:

APPEARANCE/ODOUR	:	clear liquid, amine-like odour
BOILING POINT (°C)	:	202°C
MELTING POINT(°C)	:	-23°C
FLASH POINT(°C)	:	91°C (DIN 51757)
DENSITY	:	1026 kg/m ³ at 25°C
FREEZE POINT	:	-11°C
VAPOUR PRESSURE	:	<1 mm/Hg at 20°C
RELATIVE VAPOUR DENSITY:	:	3.4 (air = 1)
VISCOSITY	:	1.796 mPa's at 20°C
SOLUBILITY IN WATER	:	miscible
IGNITION TEMPERATURE	:	245°C (DIN 51794)
EXPLOSIVE LIMITS	:	1.3-9.5
Log P octanol / water	:	-0.727 at 20°C

INGREDIENTS:

CHEMICAL ENTITY	CAS No.	PROPORTION
N-methyl 2-pyrrolidone	872-50-4	100%

1. HEALTH HAZARD INFORMATION**Health Effects:****Acute:****Swallowed**

Ingestion may cause vomiting, nausea and diarrhoea.

Eyes

Severe eye irritant.

Skin

Irritating to skin.

Inhaled

At elevated concentration: inhalation of vapour or fumes can cause severe breathing difficulties.

Chronic:

Effects are not known.

MATERIAL SAFETY DATA SHEET**PRODUCT: N-METHYL 2-PYRROLIDONE****2. FIRST AID****Swallowed**

Rinse mouth. Give 500ml water to drink. Never induce vomiting and never administer anything by mouth to an unconscious person. Seek medical attention.

Eyes

Flush with lukewarm water for 15 minutes. Retract eyelids often. Seek immediate medical attention.

Skin

Clothing that has become saturated with the product must be removed immediately because the product is absorbed through the skin. After contact with skin, wash immediately with plenty of water. Seek medical attention if ill-effect or irritation develops.

Inhaled

Remove victim to fresh air. Allow the victim to rest. If breathing is difficult, give oxygen. Obtain medical attention if breathing difficulty persists.

Advice to doctor**3. PRECAUTIONS FOR USE****Exposure standards**

OEL – TWA: 100 ppm (400mg/m³)

Engineering controls

Use with adequate local exhaust ventilation.

Personal protection

Protective goggles

Protective gloves

Personal protection comments

Avoid inhaling aerosols and vapours. Avoid contact with eyes and skin. Keep away from food and drink stuffs. Employ good hygiene practices when using. Wash hands thoroughly after handling. A safety shower and eyewash fountain should be available in all work areas.

Flammability

Not flammable under normal conditions of use.

4. SAFE HANDLING INFORMATION**Storage conditions**

Store in mild or stainless steel, aluminium, or nickel containers. Keep container tightly closed, in a well-ventilated place and remove sources of ignition. Ensure adequate ventilation and, if necessary, exhaust ventilation when handling or transferring the product. Store away from strong oxidisers

Spills & disposal

Contain and clean up any spills as soon as possible, using an inert absorbent material. Sweep or shovel into appropriate container for disposal. Dilute residues and flush. Ensure effluent complies with applicable regulations.

Fire/Explosion Hazard

In case of fire use CO₂, dry powder, foam, or water mist. Wear respiratory protection equipment. Do not let contaminated extinguishing water enter the soil, groundwater or surface waters. Thermal decomposition generates nitrogen oxides, carbon monoxide, carbon dioxide. May decompose on contact with moist air or water. Stable under normal conditions.

5. OTHER INFORMATION**Toxicological Information:**

Toxicity by ingestion LD50 (mg/kg): 3600 < LD50 < 7000 (rat)

Toxicity by skin contact LD50 (mg/kg): 8000 (rabbit)

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Other toxicological information: Pharmaceutical applications make use of the properties of NMP as a penetration enhancer for a more rapid transfer of substances through the skin.

LC50 Golden orfe (mg/l/48h): 4600 < LC50 < 10000
TOC: 600 mg/g NMP (DIN38409, part 3)
COD: 1600 mg/g NMP (DIN38409, part 1)
BOD: 1100 mg/g NMP (DIN38409, part 51)

Reference:
SISAS Material Safety Data Sheet 90100015 (February 1998)

CONTACT POINT: Emergency response No. 0419 341 095 (all hours)

DISCLAIMER: The information given in this data sheet is based on data supplied by the manufacturer and is, to the best of our knowledge, true and accurate, but any recommendations or suggestions that may be made are without guarantee, since the conditions of use are beyond our control. The information and recommendations offered are for the user's consideration and it is the user's responsibility to satisfy themselves that they are suitable and complete for this particular purpose. We recommend that the safety and handling information presented in this data sheet be passed on, in an appropriate format, to your customers and handlers.