

## 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** N-methyl-2-pyrrolidone
- **Manufacturer/Supplier:**  
Petrochem Middle East FZE  
PO Box 17028,  
Jebel Ali Free Zone  
Dubai, UAE  
Ph +971 4 8839222; Fax +971 4 8834133
- **Further information obtainable from:** Product safety department.
- **Information in case of Emergency** Product safety department.

## 2 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Description**  
872-50-4 N-methyl-2-pyrrolidone
- **Identification number(s)**
- **EINECS Number:** 212-828-1
- **Index number:** 606-021-00-7

## 3 Hazards identification

- **Hazard description:**



Xi Irritant

- **Information concerning particular hazards for human and environment:**  
R 36/38 Irritating to eyes and skin.

## 4 First aid measures

- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

## 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**  
During heating or in case of fire poisonous gases are produced.
- **Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

- **Person-related safety precautions:** Mount respiratory protective device.

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- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Dilute with plenty of water.

## 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special requirement
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

### 872-50-4 N-methyl-2-pyrrolidone

WEEL (USA)	10 ppm Skin
WEL (Great Britain)	Short-term value: 309 mg/m <sup>3</sup> , 75 ppm Long-term value: 103 mg/m <sup>3</sup> , 25 ppm Sk

- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

· **General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Amine-like

· **Change in condition**

**Melting point/Melting range:** -24°C  
**Boiling point/Boiling range:** 202°C

· **Flash point:** 93°C

· **Ignition temperature:** 270°C

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

<b>Lower:</b>	1.3 Vol %
<b>Upper:</b>	9.5 Vol %

· **Vapour pressure at 20°C:** 0.3 hPa

· **Density at 20°C:** 1.026 g/cm<sup>3</sup>

· **Solubility in / Miscibility with water:** Fully miscible.

· **pH-value (100 g/l) at 20°C:** 1. basisch

· **Viscosity:**

**Dynamic at 25°C:** 1.65 mPas

## 10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Dangerous reactions** No dangerous reactions known.

· **Dangerous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

Oral	LD50	3914 mg/kg (rat)
Dermal	LD50	8000 mg/kg (rabbit)

· **Primary irritant effect:**

· **on the skin:** Irritant to skin and mucous membranes.

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- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

## 12 Ecological information

- **General notes:**  
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## 13 Disposal considerations

- **Product:**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

## 15 Regulatory information

- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**



Xi Irritant

- **Risk phrases:**  
36/38 Irritating to eyes and skin.
- **Safety phrases:**  
2 Keep out of the reach of children.  
41 In case of fire and/or explosion do not breathe fumes.



# Safety Data Sheet

## According to 91/155 EEC

Printing date 24.06.2009

Revision: 23.06.2009

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### 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing MSDS:** Product safety department

· **Contact:**

*Mr. Menon*

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)*

*ICAO: International Civil Aviation Organization*

*ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

UAE