

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

### *Identification of the product*

N-Methyl pyrrolidone

### *Manufacturer/supplier identification*

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## **2. Hazards identification**

### **Classification of the substance or mixture**

#### **Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Flammable liquids (Category 4)

Acute toxicity, Oral (Category 5)

Skin corrosion/irritation (Category 2)

Serious eye damage/eye irritation (Category 2A)

Reproductive toxicity (Category 1B)

Specific target organ toxicity - single exposure (Category 3), respiratory tract irritation

### **Label elements**

Pictogram



Signal word Danger

### Hazard statement(s)

- H227 Combustible liquid.
- H303 May be harmful if swallowed.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H360 May damage fertility or the unborn child.

### Precautionary statement(s)

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
- P261 Avoid breathing mist or vapors.
- P264 Wash skin thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/ eye protection/ face protection.
- P302 + P352 IF ON SKIN: Wash with plenty of water.
- P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P312	Call a POISON CENTER/ doctor if you feel unwell.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

#### Supplemental Hazard Statements

none

### 3. Composition/information on ingredients

#### *Synonyms*

N-Methyl pyrrolidone

CAS-No.: 872-50-4

*M*: 99.13 g/mol

Molecular formula: C<sub>5</sub>H<sub>9</sub>NO

### 4. First aid measures

#### **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### **In case of skin contact**

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**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. Fire-fighting measures

#### **Suitable extinguishing media**

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

#### **Advice for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

### 6. Accidental release measures

#### **Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

#### **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.

#### **Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 7. Handling and storage

#### **Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

## **Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place.

## **8. Exposure controls and personal protection**

### **Appropriate engineering controls**

General industrial hygiene practice.

### **Personal protective equipment**

#### **Eye/face protection**

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 EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### **Body Protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

## **9. Physical and chemical properties**

**Form:** liquid

**Colour:** colorless

**Odour:** not available

**pH value:** 7.7 ~ 8

**Melting point:** -24°C

**Boiling point:** 202°C

**Ignition temperature:** not available

**Flash point:** 91°C

**Autoignition temperature:** not available

### **Explosion limits**

**lower:** 1.3%

**upper:** 9.5%

**Density :** 1.3g/mL

**Bulk density:** not available

### **Solubility in**

**water (20 °C) :** not available

**diluted acids (20 °C) :** not available

**Thermal decomposition:** not available

## **10. Stability and reactivity**

### **Chemical stability**

Stable under recommended storage conditions.

### **Conditions to avoid**

Heat, flames and sparks.

### **Materials to avoid**

Strong acid, strong oxidizing agent, strong reducing agent.

### **Hazardous decomposition products**

Other decomposition products - no data available

## **11. Toxicological information**

### **Acute toxicity**

LD50 Oral - Rat - 3,914 mg/kg

LC50 Inhalation - Rat - 4 h - > 5100 ppm

LD50 Dermal - Rabbit - 8,000 mg/kg

### **Skin corrosion or irritation**

no data available

### **Serious eye damage or eye irritation**

Eyes - Rabbit

Result: eye irritations

### **Respiratory or skin sensitization**

no data available

### **Germ cell mutagenicity**

no data available

### **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.

### **Specific target organ toxicity - single exposure**

no data available

### **Specific target organ toxicity - repeated exposure**

no data available

### **Aspiration hazard**

no data available

## **12. Ecological information**

### **Toxicity**

Toxicity to fish LC50 - Other fish - 4,000 mg/l - 96 h

LC50 - Leuciscus idus - > 500 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - > 1,000 mg/l - 24 h

### **Persistence and degradability**

Biodegradability

Result: 73 % - Readily biodegradable.

### **Bioaccumulative potential**

no data available

### **Mobility in soil**

no data available

## **13. Disposal considerations**

### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

### **Contaminated packaging**

Dispose of as unused product.

## **14. Transport information**

### **ADR/RID**

UN-Number: - Class: - Packing group: -  
Proper shipping name: Not dangerous goods

### **IMDG**

UN-Number: - Class: - Packing group: -  
Proper shipping name: Not dangerous goods  
Marine pollutant: no

### **IATA**

UN-Number: - Class: - Packing group: -  
Proper shipping name: Not dangerous goods

## **15. Regulatory information**

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

## **16. Other information**

General update.

*Regional representation:*

This information is given on the authorised Safety Data Sheet for your country.