

# SAFETY DATA SHEET

## 1. Identification

**Product identifier** N-METHYLPYRROLIDONE

### Other means of identification

**Product code** 0190070

**CAS number** 872-50-4

**Recommended use** Solvent

**Recommended restrictions** None known.

### Supplier Information

Level 7 Chemical  
255 Sturgis Rd  
Conway, AR 72034  
(855) 927-1777

### Emergency Contact

CHEMTREC (800) 424-9300

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable liquids	Category 4
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	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
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	

### Label elements



**Signal word** Danger

### Hazard statement

H227	Combustible liquid.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360	May damage fertility or the unborn child.

### Precautionary statement

#### Prevention

P262	Do not get in eyes, on skin, or on clothing.
P261	Avoid breathing vapors or mist.
P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from flames and hot surfaces-No smoking.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

#### Response

P301 + P330 + P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P310	Immediately call a poison center/doctor.

P302 + P350 If on skin: Wash with plenty of water.  
 P332 + P313 If skin irritation occurs: Get medical advice/attention.  
 P362 Take off contaminated clothing and wash before reuse.  
 P304 + P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.  
 P312 Call a poison center/doctor if you feel unwell.  
 P308 + P313 If exposed or concerned: Get medical advice/attention.  
 P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337 + P313 If eye irritation persists: Get medical advice/attention.  
 P370 + P378 In case of fire: Use appropriate media to extinguish.

**Storage**

P235 Keep cool.  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed

**Disposal**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**3. Composition/information on ingredients**

**Substances**

Chemical name	Common name and synonyms	CAS number	%
N-Methyl-2-Pyrrolidinone		872-50-4	100

**4. First-aid measures**

**Inhalation** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

**Skin contact** Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Ingestion** Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.

**Most important symptoms/effects, acute and delayed** May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

**Indication of immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information** IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

**5. Fire-fighting measures**

**Suitable extinguishing media** Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical** The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions** In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards** Combustible liquid.



## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

### Methods and materials for containment and cleaning up

Use water spray to reduce vapors or divert vapor cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

### Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from open flames, hot surfaces and sources of ignition. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. Workplace Environmental Exposure Level (WEEL) Guides

Material	Type	Value
N-Methyl-2-Pyrrolidinone (CAS 872-50-4)	TWA	40 mg/m <sup>3</sup>  10 ppm

### Biological limit values

#### ACGIH Biological Exposure Indices

Material	Value	Determinant	Specimen	Sampling Time
N-Methyl-2-Pyrrolidinone (CAS 872-50-4)	100 mg/l	5-Hydroxy-N-methyl-2-pyrrolidinone	Urine	*

\* - For sampling details, please see the source document.

### Exposure guidelines

#### US - California OELs: Skin designation

N-Methyl-2-Pyrrolidinone (CAS 872-50-4)

Can be absorbed through the skin.

#### US WEEL Guides: Skin designation

N-Methyl-2-Pyrrolidinone (CAS 872-50-4)

Can be absorbed through the skin.

**Appropriate engineering controls** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Chemical respirator with organic vapor cartridge and full facepiece.  
**Skin protection**  
**Hand protection** Wear appropriate chemical resistant gloves.  
**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.  
**Respiratory protection** Chemical respirator with organic vapor cartridge and full facepiece.  
**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.  
**General hygiene considerations** Observe any medical surveillance requirements. When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

**Appearance** Clear.  
**Physical state** Liquid.  
**Color** Colorless.  
**Odor** Amine-like odor.  
**pH** Not available  
**Melting point/freezing point** Not determined  
**Initial boiling point and boiling range** 399.2 °F (204 °C) @ 760 mmHg  
**Flash point** 195.8 °F (91.0 °C) Closed Cup  
**Evaporation rate** < 1 (BuAc = 1)  
**Upper/lower flammability or explosive limits**  
**Flammability limit - lower (%)** 1.3 %  
**Flammability limit - upper (%)** 9.5 %  
**Vapor pressure** 0.24 mm Hg at 20 °C  
**Vapor density** > 1 (Air = 1)  
**Solubility(ies)**  
**Solubility (water)** Completely miscible  
**Auto-ignition temperature** 473 °F (245 °C)  
**Other information**  
**Pounds per gallon** 8.641 lb/gal  
**Specific gravity** 1.037

**10. Stability and reactivity**

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.  
**Chemical stability** Material is stable under normal conditions. Stable under normal conditions.  
**Possibility of hazardous reactions** Hazardous polymerization does not occur.  
**Conditions to avoid** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Suitable precautions should be utilized if using this product at temperatures above the flash point. Contact with incompatible materials.  
**Incompatible materials** Strong oxidizing agents. Strong reducing agents. Moisture and humidity.  
**Hazardous decomposition products** No hazardous decomposition products are known.



## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause drowsiness and dizziness. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

### Information on toxicological effects

**Acute toxicity** Harmful if swallowed.

<b>Product</b>	<b>Species</b>	<b>Test Results</b>
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N-Methyl-2-Pyrrolidinone (CAS 872-50-4)

#### Acute

#### **Dermal**

LD50	Rabbit	8000 mg/kg
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**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

### Respiratory or skin sensitization

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** Not classifiable as to carcinogenicity to humans.

#### **IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed.

#### **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

Not regulated.

#### **US. National Toxicology Program (NTP) Report on Carcinogens**

Not listed.

**Reproductive toxicity** Possible reproductive hazard. May damage fertility or the unborn child.

**Specific target organ toxicity - single exposure** May cause respiratory irritation. May cause drowsiness and dizziness.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and degradability** No data is available on the degradability of this substance.

### Bioaccumulative potential

#### **Partition coefficient n-octanol / water (log Kow)**

-0.46 Estimated

**Mobility in soil** No data available.

**Other adverse effects** The product contains volatile organic compounds which have a photochemical ozone creator potential.

### 13. Disposal considerations

- Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
- Local disposal regulations** Dispose in accordance with all applicable regulations.
- Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
- Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
- Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

#### DOT BULK

- UN number** NA1993
- Proper shipping name** Combustible Liquid, n.o.s., (N-Methyl Pyrrolidinone)
- Hazard class** Combustible Liquid
- Packing group** III
- ERG code** 128

#### DOT NON-BULK

Not regulated in a container less than 119 gallons.

### 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

#### SARA 304 Emergency release notification

Not regulated.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

##### SARA 302 Extremely hazardous substance

Not listed.

##### SARA 311/312

Yes

##### Hazardous chemical

##### Classified hazard categories

Flammable (gases, aerosols, liquids, or solids)  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Reproductive toxicity  
Specific target organ toxicity (single or repeated exposure)

##### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
N-Methyl-2-Pyrrolidinone	872-50-4	100

#### Other federal regulations

##### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

##### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Contaminate candidate list



## US state regulations

### California Proposition 65



**WARNING:** This product can expose you to N-Methyl-2-Pyrrolidinone, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### California Proposition 65 - CRT: Listed date/Developmental toxin

N-Methyl-2-Pyrrolidinone (CAS 872-50-4)

Listed: June 15, 2001

### US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

N-Methyl-2-Pyrrolidinone (CAS 872-50-4)

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 12-04-2014

**Revision date** 11-06-2018

**Version #** 03

### Disclaimer

The supplier cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. This information is based on data available to us and is accurate and reliable to the best of our knowledge at the time of printing. However, no warranty is expressed or implied regarding the accuracy or completeness of the information contained herein. Final determination of the suitability of this material for the use contemplated is the sole responsibility of the user. Buyer assumes all risk and liabilities. Buyer accepts and uses this material on these conditions.

### Revision information

This document has undergone significant changes and should be reviewed in its entirety.