

## SAFETY DATA SHEET

Preparation Date: 06/03/2015

Revision date 11/30/2018

Revision Number: G4

### 1. Identification

#### Product identifier

**Product code:** M1283  
**Product Name:** 1-METHYL-2-PYRROLIDINONE, ELECTRONIC/CLEANROOM GRADE

#### Other means of identification

**Synonyms:** 1-Methyl-2-pyrrolidinone  
 1-Methyl-2-pyrrolidone  
 1-Methyl-5-pyrrolidinone  
 M-Pyrol  
 1-Methylazacyclopentan-2-one  
 N-Methyl-gamma-Butyrolactam  
 1-Methylpyrrolidinone  
 1-Methylpyrrolidone  
 2-Pyrrolidinone, 1-methyl-  
 Methylpyrrolidone  
 Methyl Pyrrolidone  
 N-Methyl-2-pyrrolidinone  
 N-Methyl-2-pyrrolidone  
 N-Methyl-alpha-pyrrolidone  
 N-Methylpyrrolidinone  
 N-Methylpyrrolidone  
 NMP

**CAS #:** 872-50-4  
**RTECS #** UY5790000  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** Solvent.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Reproductive toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Flammable liquids	Category 4

### Label elements

**Danger**

**Hazard statements**  
Causes skin irritation  
Causes serious eye irritation  
May damage fertility or the unborn child  
May cause respiratory irritation  
Combustible liquid



### Hazards not otherwise classified (HNOC)

Not Applicable

### Other hazards

May be harmful in contact with skin

### **Precautionary Statements - Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
Keep cool

### **Precautionary Statements - Response**

*IF exposed or concerned: Get medical advice/attention*  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of water  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash it before reuse  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

### **Precautionary Statements - Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula:	CAS No	Weight-%
N-Methyl-2-pyrrolidinone	872-50-4	100

### 4. FIRST AID MEASURES

#### First aid measures

<b>General Advice:</b>	National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.
<b>Skin Contact:</b>	Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.
<b>Eye Contact:</b>	Flush eyes with water for 15 minutes. Get medical attention.
<b>Inhalation:</b>	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<b>Ingestion:</b>	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

#### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Irritating to eyes and skin Irritating to respiratory system May cause an allergic skin reaction May be absorbed through the skin in harmful amounts Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea
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#### Indication of any immediate medical attention and special treatment needed

**Notes to Physician:** Treat symptomatically.

#### Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

### 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

<b>Suitable Extinguishing Media:</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Water spray mist or foam.
<b>Unsuitable Extinguishing Media:</b>	High volume water jet. Do not use a solid (straight) water stream as it may scatter and spread fire.

#### Specific hazards arising from the chemical

<b>Hazardous combustion products</b>	Carbon Monoxide, Carbon Dioxide. Nitrogen oxides (NO <sub>x</sub> ).
<b>Specific hazards</b>	Combustible material. May be ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers,

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basements, tanks). Container explosion may occur under fire conditions or when heated. It is combustible when exposed to powerful oxidizers.

### **Special Protective Actions for Firefighters**

#### **Specific Methods:**

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

#### **Special Protective Equipment for Firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## **6. ACCIDENTAL RELEASE MEASURES**

### **Personal precautions, protective equipment and emergency procedures**

#### **Personal Precautions:**

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Remove all sources of ignition.

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

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

#### **Methods for containment**

Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container.

#### **Methods for cleaning up**

Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use clean non-sparking tools to collect absorbed material. Clean contaminated surface thoroughly.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

### **Conditions for safe storage, including any incompatibilities**

#### **Technical Measures/Storage Conditions:**

Hygroscopic. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep away from heat and sources of ignition. Store in a segregated and approved area. Store away from incompatible materials. Store under inert gas.

#### **Incompatible Materials:**

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Oxidizing agents  
 Reducing agents  
 Acids  
 Bases

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**National occupational exposure limits**

**United States**

Formula:	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
N-Methyl-2-pyrrolidinone	872-50-4	None	None	None	10 ppm TWA

**Canada**

Formula:	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
N-Methyl-2-pyrrolidinone	872-50-4	None	None	400 mg/m <sup>3</sup> TWA	None

**Australia and Mexico**

Formula:	CAS No	Australia	Mexico
N-Methyl-2-pyrrolidinone	872-50-4	75 ppm STEL 309 mg/m <sup>3</sup> STEL 25 ppm TWA 103 mg/m <sup>3</sup> TWA	None

**Appropriate engineering controls**

**Engineering measures to reduce exposure:**

Ensure adequate ventilation Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

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

**Personal Protective Equipment**

- Eye protection:** Goggles
- Skin and body protection:** Long sleeved clothing  
Chemical resistant apron  
Gloves
- Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and

immediately after handling the product When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Liquid	<b>Appearance:</b> No information available.	<b>Color:</b> Colorless. Light yellow.
<b>Odor:</b> Mild. Amine-like.	<b>Taste</b> No information available.	<b>Formula:</b> C5-H9-N-O
<b>Molecular/Formula weight (g/mole):</b> 99.14	<b>Flammability (solid, gas)</b> Combustible	<b>Flashpoint (°C/°F):</b> 92.778 °C/199 °F 95.556 °C/204 °F
<b>Flash Point Tested according to:</b> Closed cup Open cup	<b>Autoignition Temperature (°C/°F):</b> 346.11 °C/655 °F	<b>Lower Explosion Limit (%):</b> 1.3%
<b>Upper Explosion Limit (%):</b> 9.5%	<b>Melting point/range(°C/°F):</b> -24 °C/-11.2 °F	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 202 °C/395.6 °F	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> No information available
<b>Specific gravity:</b> 1.026	<b>pH</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> 0.032-0.039 at 20 deg. C 0.05 at 25 deg. C
<b>Evaporation rate:</b> 0.06 (Butyl acetate = 1)	<b>Vapor density:</b> 3.4	<b>VOC content (g/L):</b> 1026
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> -0.54	<b>Viscosity:</b> No information available
<b>Miscibility:</b> Miscible with water Miscible with Castor Oil Miscible with lower alcohols Miscible with ketones Miscible with Ethyl Acetate Miscible with Chloroform Miscible with Benzene	<b>Solubility:</b> Moderately soluble in aliphatic hydrocarbons and dissolves many organic and inorganic compounds	

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents

Reactive with acids

Reacts with strong bases

Reacts with reducing agents

Hygroscopic. It absorbs moisture from the air

It reacts with chlorinating agents (e.g. cobalt chloride, thionyl chloride, phosphorous oxychloride, pentachlorophosphorous) to form the amide

It reacts with sulfur and carbon disulfide at high temperatures and pressures

### Chemical stability

**Stability:** Hygroscopic. Stable under recommended storage conditions.

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**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Ignition sources. Incompatible materials. Exposure to moist air.

**Incompatible Materials:** Oxidizing agents  
Reducing agents  
Acids  
Bases

**Hazardous decomposition products:** Carbon monoxide. Carbon dioxide. Nitrogen oxides (NOx).

**Other Information**

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**

Skin. Eyes. Inhalation. Ingestion.

### Acute Toxicity

### Component Information

N-Methyl-2-pyrrolidinone

CAS No | 872-50-4

**LD50/oral/rat =** 3914 mg/kg Oral LD50 Rat (LOLI; RTECS)  
3598 mg/kg (EU Chemicals Bureau IUCLID dataset)\_

**LD50/oral/mouse =** 5130 mg/kg (RTECS)  
7725 mg/kg (EU Chemicals Bureau IUCLID dataset)

**LD50/dermal/rabbit =** 8 g/kg (RTECS; LOLI)  
2000-4000 mg/kg (EU Chemicals Bureau IUCLID dataset)

**LD50/dermal/rat =** 2500-5000 mg/kg

**LC50/inhalation/rat =** 3.1 mg/L Inhalation LC50 Rat 4 h (LOLI)  
3.1-8.8 mg/l 4 h (EU Commission Chemicals Bureau IUCLID dataset)

**LC50/inhalation/mouse =** No information available

**Other LD50 or LC50 information =** No information available

### Product Information

**LD50/oral/rat =**

**Value - Acute Tox Dermal =** 3914 mg/kg

**LD50/oral/mouse =**

**Value - Acute Tox Oral =** 5130 mg/kg

**LD50/dermal/rabbit**

**Value - Acute Tox Dermal =** 2000-4000 mg/kg

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**LD50/dermal/rat**

VALUE - Acute Tox Dermal = 2500-5000 mg/kg

**LC50/inhalation/rat**

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = 3.1 mg/l

**LC50/Inhalation/mouse**

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

**Symptoms**

**Skin Contact:** Causes skin irritation.

**Eye Contact:** Causes serious eye irritation. Moderately irritating to the eyes.

**Inhalation** Irritating to respiratory system.

**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause abdominal pain.

**Aspiration hazard** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** Prolonged or repeated inhalation may cause difficulty breathing, shortness of breath, and pulmonary edema. Prolonged or repeated inhalation may affect the kidneys. Prolonged or repeated inhalation may affect metabolism (weight loss). Prolonged or repeated inhalation may affect the blood (changes in white blood cell count). Prolonged or repeated ingestion may affect the spleen. Prolonged or repeated ingestion may affect the liver, and kidneys. Prolonged or repeated ingestion may affect the blood (changes in serum composition). Prolonged or repeated ingestion may affect the blood (changes in platelet count). Prolonged or repeated inhalation or ingestion may affect the central nervous system (somnolence, muscle weakness, headache, dizziness). Prolonged skin contact may cause skin irritation and/or dermatitis. Symptoms of skin irritation may include skin rash, blisters, and redness. Prolonged or repeated skin contact may cause dryness of the skin.

**Sensitization:** No information available.

**Mutagenic Effects:** May affect genetic material  
Experiments with bacteria and/or yeast have shown mutagenic effects

**Carcinogenic effects:** Not considered carcinogenic.

Formula:	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
N-Methyl-2-pyrrolidinone	872-50-4	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

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**Reproductive toxicity** May damage fertility or the unborn child

**Reproductive Effects:** May impair fertility  
**Developmental Effects:** May cause adverse developmental effects based on animal data  
**Teratogenic Effects:** May cause birth defects (teratogenic effects) based on animal test data  
 Showed teratogenic effects in animal experiments

**Specific Target Organ Toxicity**

**STOT - single exposure** STOT - single exposure. respiratory system.  
**STOT - repeated exposure** No information available.  
**Target Organs:** Central nervous system. Skin. Liver. Kidneys. Blood. Respiratory system. Spleen. Bone Marrow. Thymus.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** Aquatic environment.

*N-Methyl-2-pyrrolidinone - 872-50-4*

**Algae/aquatic plants** 500 mg/L EC50 Desmodesmus subspicatus 72 h  
**Fish** 1072 mg/L LC50 Pimephales promelas 96 h static 1  
 1400 mg/L LC50 Poecilia reticulata 96 h static 1  
 4000 mg/L LC50 Leuciscus idus 96 h static 1  
**Crustacea** 832 mg/L LC50 Lepomis macrochirus 96 h static 1  
 4897 mg/L EC50 Daphnia magna 48 h

**Persistence and degradability:** Readily biodegradable ( 90% )

**Bioaccumulative potential:** No information available.

**Mobility in soil** No information available

**Other adverse effects** No information available.

**13. DISPOSAL CONSIDERATIONS**

**Disposal Methods**

**Waste from residues / unused products:**  
 Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**  
 Empty containers should be taken for local recycling, recovery or waste disposal.

Formula:	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
N-Methyl-2-pyrrolidinone	872-50-4	None	None	None	None

**14. TRANSPORT INFORMATION**

**DOT**

<b>UN-No:</b>	Not Regulated
<b>Proper Shipping Name:</b>	No information available
<b>Hazard Class</b>	No information available
<b>Subsidiary Class</b>	No information available
<b>Packing group:</b>	No information available
<b>Emergency Response Guide Number</b>	No information available
<b>Marine Pollutant</b>	No data available
<b>DOT RQ (lbs):</b>	No information available
<b>Special Provisions</b>	No Information available
<b>Symbol(s):</b>	No information available
<b>Description:</b>	No information available

**TDG (Canada)**

<b>UN-No:</b>	Not Regulated
<b>Proper Shipping Name:</b>	No information available
<b>Hazard Class</b>	No information available
<b>Subsidiary Risk:</b>	No information available
<b>Packing Group:</b>	No information available
<b>Marine Pollutant</b>	No Information available
<b>Description:</b>	No information available

**ADR**

<b>UN Number</b>	-
<b>Proper Shipping Name:</b>	No information available
<b>Transport hazard class(es)</b>	No information available
<b>Packing group</b>	No information available
<b>Subsidiary Risk:</b>	No information available

**IMDG**

<b>UN-No:</b>	Not Regulated
<b>Proper Shipping Name:</b>	No information available
<b>Hazard Class:</b>	No information available
<b>Subsidiary Risk:</b>	No information available
<b>Packing Group:</b>	No information available
<b>Marine Pollutant</b>	No information available

**RID**

<b>UN Number</b>	Not Regulated
<b>Proper Shipping Name:</b>	No information available
<b>Transport hazard class(es)</b>	No information available
<b>Subsidiary Risk:</b>	No information available
<b>Packing group</b>	No information available

**ICAO (air)**

<b>UN-No:</b>	Not Regulated
<b>Proper Shipping Name:</b>	No information available
<b>Hazard Class</b>	No information available
<b>Subsidiary Risk:</b>	No information available
<b>Packing Group:</b>	No information available

**IATA**

<b>UN Number</b>	Not Regulated
<b>Proper Shipping Name:</b>	No information available

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**Transport hazard class(es)** No information available  
**Subsidiary Risk:** No information available  
**Packing group** No information available  
**Precautionary Statements - Response** IF exposed or concerned  
**Special Provisions** No information available

## 15. REGULATORY INFORMATION

### International Inventories

Formula:	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia AICS	EINECS-No.
<i>N-Methyl-2-pyrrolidinone</i>	872-50-4	PresentACTIVE	Present KE-25324	Present	(5)-113	Present	Present	Present 212-828-1

### U.S. Regulations

*N-Methyl-2-pyrrolidinone*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 3716  
**New Jersey (EHS) List:** 3716 500 lb TPQ  
**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present  
**Pennsylvania RTK:** Present

### California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

**WARNING:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm (See table below)

Formula:	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>N-Methyl-2-pyrrolidinone</i>	872-50-4	Not Listed	developmental toxicity	Not Listed	Not Listed

### CERCLA/SARA

Formula:	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
<i>N-Methyl-2-pyrrolidinone</i>	872-50-4	None	None	None	None	1.0 % de minimis concentration

### U.S. TSCA

Formula:	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
<i>N-Methyl-2-pyrrolidinone</i>	872-50-4	Not Applicable	Not Applicable

### Canada

### WHIMIS 2015 - GHS Classifications

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WHMIS 2015 Hazard Classification Information:

Component  
N-Methyl-2-pyrrolidinone  
872-50-4 ( 100 )

WHMIS 2015 Hazard Classification  
Flammable liquids - Category 4: H227 Combustible liquid.;  
Serious Eye Damage/Eye Irritation - Category 2B: H320 Causes eye irritation.;  
Reproductive Toxicity - Category 1: H360 May damage fertility or the unborn child.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

#### DSL/NDSL

Formula:	CAS No	Canada (DSL)	Canada (NDSL)
N-Methyl-2-pyrrolidinone	872-50-4	Present	Not Listed

Formula:	CAS No	CEPA Schedule I - Toxic Substances
N-Methyl-2-pyrrolidinone	872-50-4	Not listed
Formula:	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
N-Methyl-2-pyrrolidinone	872-50-4	Not listed

#### EU Classification

##### EU GHS - SV - CLP 1272/2008

Formula:	CAS No	EU GHS - SV - CLP (1272/2008)
N-Methyl-2-pyrrolidinone	872-50-4	

##### EU - CLP (1272/2008)

#### R-phrase(s)

R61 - May cause harm to the unborn child  
R36/37/38 - Irritating to eyes, respiratory system and skin

#### S -phrase(s)

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)  
S53 - Avoid exposure - obtain special instructions before use

Formula:	CAS No	Classification	Concentration Limits:	Safety Phrases
N-Methyl-2-pyrrolidinone	872-50-4	Xi; R36/37/38 Repr.Cat.2; R61	5%<=C: Repr.Cat.2; R61 10%<=C: Xi; R36/37/38	S53 S45

The product is classified in accordance with Annex VI to Directive 67/548/EEC

#### Indication of danger:

Xi - Irritant

**Xi**



## 16. OTHER INFORMATION

**Preparation Date:** 06/03/2015  
**Revision date** 11/30/2018  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**