1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: NMP
Product Name: N-Methyl-2-pyrrolidone
Company Name: SWD URETHANE
539 S. Drew St.
Mesa, AZ 85210,
Web site address: www.swdurethane.com
Emergency Contact: CHEMTREC
(800) 424-9300

2. HAZARDS IDENTIFICATION

Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2A
Specific Target Organ Toxicity (single exposure), Category 3
Toxic To Reproduction, Category 1B
Flammable Liquids, Category 4

GHS Signal Word: Danger
GHS Hazard Phrases:
H227 - Combustible liquid.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H360 - May damage fertility or the unborn child.
GHS Precaution Phrases:
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 dust/fume/gas/mist/vapors/spray.
P264 - Wash skin thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
GHS Response Phrases:
P302+352 - IF ON SKIN: Wash with plenty of soap and water.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+313 - IF exposed or concerned: Get medical attention/advice.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P332+313 - If skin irritation occurs, get medical advice/attention.
P337+313 - If eye irritation persists, get medical advice/attention.
P362+364 - Take off contaminated clothing and wash it before reuse.
GHS Storage and Disposal Phrases:
P403+235 - Store in cool/well-ventilated place.
P405 - Store locked up.
P501 - Dispose of contents/container to to an approved waste disposal plant.
### Potential Health Effects (Acute and Chronic):

Chronic: Prolonged or repeated skin contact may cause dermatitis. Adverse reproductive effects have been reported in animals. Testicular effects in rats were noted after repeated, high-dose oral and inhalation exposures. (BASF) Human occupational exposure has been associated with chronic eye irritation, headaches, and irritant contact dermatitis. Airborne concentrations of 49 to 83 ppm are intolerable.

Inhalation:
Inhalation of material may be harmful.

Skin Contact:
Causes skin irritation. May be harmful if absorbed through the skin. Not expected to cause an allergic skin reaction. Because of the high permeability rate of N-methylpyrrolidone in human skin, prolonged exposures should be avoided.

Eye Contact:
Can cause severe eye irritation.

Ingestion:
May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>872-50-4</td>
<td>N-Methyl-2-pyrrolidone (2-Pyrrolidinone, 1-Methyl-; 1-Methylazacyclopentan-2-one)</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**Emergency and First Aid Procedures:**

**In Case of Inhalation:**
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**In Case of Skin Contact:**
In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

**In Case of Eye Contact:**
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

**In Case of Ingestion:**
If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**Signs and Symptoms Of Exposure:**
Nausea, vomiting, diarrhea. Central nervous system depression.

**Note to Physician:**
Treat symptomatically and supportively.

### 5. FIRE FIGHTING MEASURES

**Flash Pt:**
91.00 C

**Explosive Limits:**
LEL: 1.3 UEL: 9.5

**Autoignition Pt:**
346.00 C

**Suitable Extinguishing Media:**
Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Unsuitable Extinguishing Media:**
Solid streams of water or high volume water jet may spread fire.

**Fire Fighting Instructions:**
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Combustible liquid and vapor.

**Flammable Properties and Hazards:**
No data available.
6. ACCIDENTAL RELEASE MEASURES

Environmental Precautions:
Prevent spreading over a wide area. Do not let product enter drains.

Steps To Be Taken In Case Material Is Released Or Spilled:
Use proper personal protective equipment as indicated in Section 8.

Steps To Be Taken In Case Material Is Released Or Spilled:
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Provide ventilation.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:
Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep away from heat and flame. Avoid breathing dust, mist, or vapor.

Precautions To Be Taken in Storing:
Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Partial Chemical Name</th>
<th>OSHA TWA</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
</table>

Respiratory Equipment (Specify Type):
Respiratory protection is not required. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Eye Protection: Wear chemical splash goggles.

Protective Gloves: Wear appropriate gloves to prevent skin exposure.

Other Protective Clothing: Wear appropriate protective clothing to prevent skin exposure.

Engineering Controls (Ventilation etc.): Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical States: | [ ] Gas [ X ] Liquid [ ] Solid |
| Melting Point: | -24.00 C |
| Boiling Point: | 202.00 C |
| Flash Pt: | 91.00 C |
| Evaporation Rate: | No data. |
| Flammability (solid, gas): | No data available. |
| Explosive Limits: | LEL: 1.3 UEL: 9.5 |
| Vapor Pressure (vs. Air or mm Hg): | No data. |
| Vapor Density (vs. Air = 1): | No data. |
| Specific Gravity (Water = 1): | 1.030 at 20.0 C |
| Solubility in Water: | No data. |
| Percent Volatile: | No data. |
| Autoignition Pt: | 346.00 C |
10. STABILITY AND REACTIVITY

Stability: Unstable [ ] Stable [ X ]
Conditions To Avoid - Instability: Light, ignition sources, Excessive heat.

Incompatibility - Materials To Avoid:
- Strong oxidizing agents, Strong acids, Bases, Strong reducing agents, Humid air.

Hazardous Decomposition or Byproducts:
- Nitrogen oxides, Carbon monoxide, Carbon dioxide.

Possibility of Hazardous Reactions:
- Will occur [ ] Will not occur [ X ]

Conditions To Avoid - Hazardous Reactions:
- No data available.

11. TOXICOLOGICAL INFORMATION

Toxicological Information: Epidemiology: No data available.

CAS# 872-50-4:
Acute toxicity, LD50, Oral, Rat, 3914. MG/KG.
Results:
Behavioral: Food intake (animal).
Nutritional and Gross Metabolic: Weight loss or decreased weight gain.


Acute toxicity, LD50, Skin, Species: Rabbit, 8.000 GM/KG.
Results:
Gastrointestinal: Nausea or vomiting.
Behavioral: Muscle weakness.


Carcinogenicity/Other Information: CAS# 872-50-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Carcinogenicity/Other Information:

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>872-50-4</td>
<td>N-Methyl-2-pyrrolidone (2-Pyrrolidinone, 1-Methyl-1-Methylazacyclopentan-2-one)</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

General Ecological Information: No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of in accordance with all applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

GHS Classification:
- Skin Corrosion/Irritation, Category 2 - Warning! Causes skin irritation
- Serious Eye Damage/Eye Irritation, Category 2A - Warning! Causes serious eye irritation
- Specific Target Organ Toxicity (single exposure), Category 3 - Warning! May cause respiratory irritation, or may cause drowsiness and dizziness
- Toxic To Reproduction, Category 1B - Danger! May damage fertility or the unborn child
- Flammable Liquids, Category 1B - Danger! Combustible liquid
N-Methyl-2-pyrrolidone

SAFETY DATA SHEET

1. IDENTIFICATION

2. HAZARDS IDENTIFICATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

4. first AID MEASURES

5. MORTALITY AND FIRST AID TREATMENTS

6. FIRE FIGHTING MEASURES

7. ACCIDENTAL RELEASE MEASURES

8. HANDLING AND STORAGE

9. EXPOSURE LIMITS

10. STABILITY AND REACTIVITY

11. TOXICological INFORMATION

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

14. TRANSPORT INFORMATION

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>S. 302 (EHS)</th>
<th>S. 304 RQ</th>
<th>S. 313 (TRI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>872-50-4</td>
<td>N-Methyl-2-pyrrolidone (2-Pyrrolidinone, 1-Methyl-; 1-Methylazacyclopentan-2-one)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Other US EPA or State Lists

CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 4 Test, 12(b); CA PROP.65: Yes; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes - 3716; NY Part 597: No; PA HSL: Yes - 1; SC TAP: No; WI Air: No

International Regulatory Lists

Canadian DSL: Yes; Canadian NDSL: No

16. OTHER INFORMATION

Revision Date: 05/05/2015

Hazard Rating System:

Health: 2
Flammability: 2
Physical: 0
PPE

HMIS:

NFPA:

Flammability
Instability
Health
Special Hazard

Additional Information About This Product:

No data available.

While the information and recommendations in this publication are given to the best of our knowledge, and information at the date of publication, nothing herein is to be construed as a warranty, expressed or otherwise. In all cases, it is the responsibility of the user to determine the applicability of such information, and recommendations or the suitability of any product for its own particular purpose.

The product may present hazards and should be used with caution. While certain hazards are described in this Safety Data Sheet, no guarantee is made that these are the only hazards that exist. Hazards, toxicity and behavior of the products may differ when used with other materials and are dependent upon the manufacturing conditions.
circumstances or other processes. Such hazards, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED SWD EMPLOYEE SHALL PROVIDE, OR MAKE AVAILABLE, DATA SHEETS FOR SWD PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF SWD. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET OR QUESTIONS REGARDING THIS DATA SHEET SHOULD BE DIRECTED TO SWD AT 800-828-1394.