

### 1. PRODUCT & IDENTIFICATION

#### Company

Curecrete Distribution, Inc.  
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Springville, UT 84663 USA

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[www.curecrete.com](http://www.curecrete.com)

**Emergency Telephone Number: Call CHEMTREC Day or Night, Within USA or Canada 1-800-424-9300**

**Outside USA or Canada: Call 1-703-527-3887 (collect calls accepted)**

**Use only for hazardous materials (or dangerous goods) incident - spill, leak, fire, exposure, or accident.**

Molecular formula: C(5)H(9)NO  
Chemical Family: heterocyclic, amides  
Synonyms: NMP Technical

### 2. HAZARDS IDENTIFICATION

#### *EXPOSURE LIMITS*

#### Emergency overview

##### WARNING:

COMBUSTIBLE LIQUID.

Irritating to eyes and skin.

INGESTION MAY CAUSE GASTRIC DISTURBANCES.

A component of this product has been shown to be developmentally toxic in animal studies.

Use with local exhaust ventilation.

Avoid contact with the skin, eyes and clothing.

Wear a NIOSH-certified (or equivalent) organic vapor respirator.

Wear chemical resistant protective gloves.

Wear NIOSH-certified chemical goggles.

Wear protective clothing.

Eye wash fountains and safety showers must be easily accessible.

State of matter: liquid

Color: clear, colorless

Odor: mild, amine-like

#### Potential health effects

##### **Primary routes of exposure:**

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

##### **Acute toxicity:**

Of low toxicity after single injection. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

##### **Irritation / corrosion:**

Eye contact causes irritation. Skin contact causes irritation. Causes temporary irritation of the respiratory tract. EU-classification.

##### **Assessment other acute effects:**

Causes temporary irritation of the respiratory tract.

##### **Sensitization:**

Skin sensitizing effects were not observed in animal studies.

**Chronic toxicity:**

**Carcinogenicity:** In long term studies in which the substance was given by inhalation, a carcinogenic effect was not observed. In long term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed. In long term studies in rodents exposed to high doses, a tumorigenic effect was found; however, these results are thought to be due to a rodent specific liver effect that is not relevant to humans. The whole of the information available provides no indication of a carcinogenic effect.

**Repeated dose toxicity:** After repeated exposure the prominent effect is local irritation. The substance may cause damage to the testes after repeated inhalation of high doses.

**Reproductive toxicity:** As shown in animal studies, the product may cause damage to the testes after repeated high exposures that cause other toxic effects.

**Teratogenicity:** The substance caused malformations/developmental toxicity in laboratory animal.

**Genotoxicity:** The substance was not mutagenic in bacteria. No mutagenic effect was found in various tests with mammalian cell culture and mammals.

**Medical conditions aggravated by overexposure:**

Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product. See MSDS section 11 – Toxicological information.

**Potential environmental effects**

**Terrestrial toxicity:**

Study scientifically not justified.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
872-50-4	>= 99.8 %	N-Methylpyrrolidone
60544-40-3	<= 0.4 %	Pyrrolidinone, dimethyl-

**4. FIRST AID MEASURES**

**General advice:**

Remove contaminated clothing.

**If inhaled:**

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

**If on skin:**

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

**If in eyes:**

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Seek medical attention.

**If swallowed:**

Rinse mouth and then drink plenty of water. Induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

**5. FIRE-FIGHTING MEASURES**

Flash Point:	196° F (91°C)	(ASTM D93)
Autoignition:	473° F (245°C)	
Lower explosion limit:	1.3%(V)	(air)
Upper explosion limit:	9.5%(V)	
Flammability:	not readily ignited	
Self-ignition temperature:		not self-igniting.

**Suitable extinguishing media:**

Water spray, dry powder, carbon dioxide, foam

**Hazards during fire-fighting:**

Carbon monoxide, carbon dioxide, nitrous gases

Under certain conditions in case of fire other hazardous combustion products may be generated.

**Protective equipment for fire-fighting:**

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

**Further information:**

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions:**

Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

**Environmental precautions:**

This product is not regulated by RCRA. This product is not regulated by CERCLA ('Superfund').

**Cleanup:**

Spills should be contained, solidified, and placed in suitable containers for disposal.

For small amounts: Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with regulations.

For large amounts: Pump off product.

**7. HANDLING & STORAGE****Handling****General advice:**

If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

**Protection against fire and explosion:**

No explosion proofing necessary.

**Storage****General advice:**

Ensure thorough ventilation of stores and work areas. Keep away from sources of ignitions – No smoking. Avoid all direct contact with the substance/product.

Avoid contact with skin and eyes. Wear suitable gloves and eye/face protection.

**Protection against fire and explosion:**

The products is combustible.

**Storage:**

Containers should be stored tightly sealed in a dry place.

**8. EXPOSURE CONTROLS & PERSONAL PROTECTION****Advice on system design:**

Provide local exhaust ventilation to maintain recommended P.E.L.

**Personal protective equipment****Respiratory protection:**

Wear a NIOSH-certified (or equivalent) organic vapor respirator. Observe OSHA regulations for respirator use (29 CFR 1910.134).

**Hand protection:**

Chemical resistant protective gloves should be worn to prevent all skin contact. Wear butyl rubber (butyl) – 0.7 mm coating thickness. Consult glove manufacturer for testing data.

**Eye protection:**

Tightly fitting safety goggles (chemical goggles), or safety glasses with side-shields. Wear face shield if splashing hazard exists.

**Body protection:**

Cover as much of the exposed skin as possible to prevent all skin contact such as head protection, apron, protective boots and a chemical protection suit.

**General safety and hygiene measures:**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with the skin, eyes and clothing. Females in early pregnancy must never be exposed to the substance. Under no circumstances should the product come into contact with the skin of pregnant women or be inhaled by them. Eye wash fountains and safety showers must be easily accessible. Wash soiled clothing immediately. When using do not eat, drink or smoke. Gloves must be inspected regularly and prior to each use. Replace if necessary (pinhole leaks).

## 9. PHYSICAL / CHEMICAL PROPERTIES

Form:	liquid	
Odor:	mild, amine-like	
Color:	clear	
pH value:	8.5 – 10	(100 g/l, 20°C) 68°F
Melting point:	-23.6 °C (-10.5°F)	(760 mmHg)
Boiling point:	204.3 °C (400°F)	(760 mmHg)
Vapor pressure:	0.32 hPa	(20°C)68°F (measured)
Density:	1.028 g/cm <sup>3</sup>	(25°C) 77°F (DIN 51757)
Vapor density:		not determined
Partitioning coefficient n-octanol/water (log Pow):	-0.46	(25°C) 77°F (OEC Guideline 107)
Viscosity, dynamic:	1.661 mPa.s	(25.00 °C) 77°F
Solubility in water:		Literature data, miscible
Solubility (qualitative):	miscible	
	Solvent(s): organic solvents	
Molar mass:	99.13 g/mol	

## 10. STABILITY & REACTIVITY

**Conditions to avoid:**

Avoid all sources of ignition: heat, sparks, open flame.

**Substances to avoid:**

Strong acids, oxidizing agents.

**Hazardous reactions:**

Exothermic reaction. Reacts with strong acids and alkalies.  
Reacts with oxidizing agents.

**Decomposition products:**

Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxides

**Thermal decomposition:**

Approx.. > 300°C / 572°F

No decomposition if used as directed. Prolonged thermal loading can result in products of degradation being given off. If products is heated above decomposition temperature toxic vapors may be released.

**Corrosion to metals:**

No corrosive effect on metal.

**Oxidizing properties:**

Not fire-propogating (other)

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral:

Type of value: LD50  
Species: rat (male/female)  
Value: 4,150 mg/kg (OECD Guideline 401)  
Literature data.

#### Inhalation:

Type of value: LC50  
Species: rat (male/female)  
Value: > 5.1m g/l (OECD Guideline 403) Exposure  
time: 4 h  
An aerosol was tested.  
Limit concentration test only (LIMIT test). No mortality was observed.

#### Dermal:

Type of value: LD50  
Species: rat (male/female)  
Value: > 5,000 mg/kg (OECD Guideline 402)  
Literature data.

### Irritation / corrosion

#### Skin:

Species: rabbit  
Result: Slightly irritating.  
Method: Draize test  
Literature data. The European Union (EU) has classified this substance with 'Irritating to skin' (R38).

#### Eye:

Species: rabbit  
Result: Irritant  
Method: Draize test

### Sensitization

Mouse Local Lymph Node Assay (LLNA)  
Species: Mouse  
Result: Non-sensitizing.  
Method: OECD Guideline 429  
The product has not been tested. The statement has been derived from products of a similar structure or composition.

### Repeated dose toxicity

Experimental/calculated data:  
rat by inhalation 2 Week 10 dose  
  
rat by inhalation 2 Week 10 dose  
  
rat by inhalation 2 Week 10 dose

### Aspiration Hazard:

Not applicable

## 12. ECOLOGICAL INFORMATION

### Fish

Acute:  
static  
Salmo gairdneri, syn. O. mykiss/LC50 (96 h): > 500 mg/l  
The details of the toxic effect relate to the nominal concentration.

Chronic:  
Study scientifically not justified.

### **Aquatic invertebrates**

Acute:  
DIN 38412 Part 11 static  
Daphnia magna/EC50 (24 h): > 1,000 mg/l  
The details of the toxic effect relate to the nominal concentration.

Chronic:  
OECD Guideline 202, part 2 semistatic Daphnia magna (NOEC) 21 d 12.5 mg/l  
The details of the toxic effect relate to the nominal concentration.

### **Aquatic plants**

Toxicity to aquatic plants:  
DIN 38412 Part 9 green algae/EC50 (72h): 500 mg/l  
The details of the toxic effect relate to the nominal concentration.

### **Microorganisms**

Toxicity to microorganisms:  
DIN EN ISO 8192 aquatic  
Activated sludge, industrial/EC50 (0.5 h): > 600 mg/l  
The details of the toxic effect relate to the nominal concentration.

### **Degradability / Persistence**

#### **Biological / Abiological Degradation**

Test method:	OECD Guideline 301C;ISO 9408;92/69/EEC, C.4-F (aerobic), Inoculum conforming to MITI
Method of analysis:	BOD of the ThOD
Degree of elimination:	73 % (28 d)
Evaluation:	Readily biodegradable (according to OECD criteria).

## **13. DISPOSAL CONSIDERATIONS**

### **Waste disposal of substance:**

Dispose of in accordance with national, state and local regulations. Do not discharge substance/product into waterways or sewer systems.

### **Container disposal:**

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

## **14. TRANSPORTATION INFORMATION**

### **Land Transport:**

USDOT Classified as combustible liquid in containers greater than 119 gallons.

### **Sea Transport:**

IMDG Not classified as a dangerous good under transport regulations

### **Air Transport:**

IATA/ICAO Not classified as a dangerous good under transport regulations

## **15. REGULATORY INFORMATION**

### **Federal Regulations**

#### **Registration status:**

Chemical TSCA, US released / listed

#### **OSHA hazard category:**

Skin and/or eye irritant; Combustible liquid: Chronic target organ effects reported

**EPCRA 311/312 (Hazard categories):** Fire; Chronic; Acute

**EPCRA 313:**

<u>CAS Number</u> 872-50-4	<u>Chemical name</u> N-Methylpyrrolidone
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<u>CERCLA RQ</u> 100 LBS	<u>CAS Number</u> 74-89-5	<u>Chemical name</u> Methylamine
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**State regulations**

<u>State RTK</u> MA, PA	<u>CAS Number</u> 872-50-4	<u>Chemical name</u> N-Methylpyrrolidone
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**CA Prop. 65:**

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

**16. OTHER INFORMATION**

**NFPA Hazard codes:**

Health : 2      Fire: 2      Reactivity: 0      Special:

**HMIS III rating**

Health: 2      Flammability: 2      Physical hazard: 0

**SDS Prepared by:**

Technical Services

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