

# Safety Data Sheet

Version 1.1

Revision Date 03/22/2022

SDS Number 300000078612

Print Date 09/14/2022

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Dynasolve<sup>®</sup> 180

Product Use Description : Polymer Remover

Manufacturer/Importer/Distributor : Versum Materials US, LLC  
8555 South River Parkway  
Tempe, AZ 85284-2601  
Exporter EIN No. 47-5632014  
www.emdgroup.com/electronics

Telephone : 800 837 2724

Emergency telephone number (24h) : 1-800-424-9300  
(+1) 703-741-5970 (CHEMTREC)

## 2. HAZARDS IDENTIFICATION

### GHS classification

Flammable liquids - Category 4  
Skin irritation - Category 2  
Eye irritation - Category 2A  
Reproductive toxicity - Category 1B

### GHS label elements

#### Hazard pictograms/symbols



Signal Word: Danger

#### Hazard Statements:

H227: Combustible liquid  
H315: Causes skin irritation.  
H319: Causes serious eye irritation.  
H360: May damage fertility or the unborn child.

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## Precautionary Statements:

- Prevention : P201:Obtain special instructions before use.  
P202:Do not handle until all safety precautions have been read and understood.  
P210:Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.  
P264:Wash hands thoroughly after handling.  
P280a:Wear protective gloves and eye/face protection.
- Response : P308+P313 :IF exposed or concerned: Get medical advice/attention.  
P302+P352 :IF ON SKIN: Wash with plenty of soap and water.  
P332+P313 :If skin irritation occurs: 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.  
P362 :Take off contaminated clothing and wash before re use.  
P370+P378 :In case of fire, use recommended extinguishing media for extinction.
- Storage : P403+P235:Store in a well-ventilated place. Keep cool.  
P405:Store locked up.
- Disposal : P501:Disposal of contents/container to be specified in accordance with regulations.

## Hazards not otherwise classified

None known.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Concentration (Weight)
Methyl-2-pyrrolidinone, 1-	872-50-4	90% - 100 %

## 4. FIRST AID MEASURES

- General advice : Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.
- Eye contact : Rinse immediately with plenty of water also under the eyelids for at least 20 minutes. Remove contact lenses.
- Skin contact : Wash off immediately with plenty of water for at least 20 minutes. Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay.

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- Ingestion : Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.
- Inhalation : Treat symptomatically. Move to fresh air.
- Most important symptoms/effects - acute and delayed : Eye disease. Skin disorders and Allergies.

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## 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam.  
Carbon dioxide (CO<sub>2</sub>).  
Dry chemical.  
Dry sand.  
Limestone powder.
- Specific hazards : Ammonia gas may be liberated at high temperatures. In case of incomplete combustion an increased formation of oxides of nitrogen (NO<sub>x</sub>) is to be expected. Incomplete combustion may form carbon monoxide. Burning produces noxious and toxic fumes. In the event of fire, cool tanks with water spray. Fire or intense heat may cause violent rupture of packages. Flash back possible over considerable distance. May form explosive mixtures in air.
- Special protective equipment for fire-fighters : Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

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## 6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions, Protective Equipment, and Emergency Procedures : Use self-contained breathing apparatus and chemically protective clothing. Remove all sources of ignition. Evacuate personnel to safe areas.
- Environmental precautions : Shut off or remove all ignition sources. Construct a dike to prevent spreading.
- Methods for cleaning up : Call Emergency Response number for advice. Approach suspected leak areas with caution. Absorb with inert absorbent materials such as: Dry sand. Vermiculite. Activated charcoal. Place in appropriate chemical waste container.
- Additional advice : If possible, stop flow of product.

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## 7. HANDLING AND STORAGE

### Handling

Avoid contact with eyes. See "Flammable and Combustible Liquid Code" NFPA No. 30, National Fire Protection Association, Boston, MA. Use personal protective equipment. When using, do not eat, drink or smoke.

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## Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep in a dry, cool place. Keep away from oxidizers.

## Technical measures/Precautions

Keep away from open flames, hot surfaces and sources of ignition.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Engineering measures

Apply process controls to ensure safe operating conditions. Assess potential flammability hazards based on flash point and potential ignition sources.

Ensure adequate ventilation.

Provide readily accessible eye wash stations and safety showers.

Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

### Personal protective equipment

Respiratory protection : Wear appropriate respirator when ventilation is inadequate.

Hand protection : Nitrile rubber.  
Impervious gloves.  
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Chemical resistant goggles must be worn.

Skin and body protection : Long sleeve shirts and trousers without cuffs.

Environmental exposure controls : Shut off or remove all ignition sources.

Special instructions for protection and hygiene : Provide readily accessible eye wash stations and safety showers.

### Exposure limit(s)

Methyl-2-pyrrolidinone, 1-	Time Weighted Average (TWA): WEEL	10 ppm	40 mg/m3
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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid. Colorless - Light yellow.

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Odor	: Slight. Amine-like.
Odor threshold	: No data available.
pH	: No data available.
Melting point/range	: -11 °F (-23.94 °C)
Boiling point/range	: 396 °F (202.05 °C)
Flash point	: 196 °F (91 °C) Pensky-Martens Closed Cup
Evaporation rate	: No data available.
Flammability (solid, gas)	: Not applicable.
Upper/lower explosion/flammability limit	: 9.5 %(V) / 1.3 %(V)
Vapor pressure	: 0.35 mmHg
Water solubility	: Completely soluble.
Relative vapor density	: 3.4 (air = 1)
Relative density	: 1.027 (water = 1)
Partition coefficient: n-octanol/water [log Kow]	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.
Viscosity	: No data available.
Molecular Weight	: 99.15 g/mol
Density	: 64.114 lb/ft <sup>3</sup> (1.027 g/cm <sup>3</sup> )

## 10. STABILITY AND REACTIVITY

Chemical Stability	: Stable under normal conditions.
Conditions to avoid	: Heat, flames and sparks.
Materials to avoid	: Oxidizing agents.
Hazardous decomposition	: Nitric acid.

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products Ammonia.  
Nitrogen oxides (NOx).  
Nitrogen oxide can react with water vapors to form corrosive nitric acid.  
Carbon monoxide.  
Carbon dioxide (CO2).

Possibility of hazardous Reactions/Reactivity : No data available.

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Likely routes of exposure

Effects on Eye : Contact with eyes may cause irritation.  
Effects on Skin : Causes skin irritation.  
Inhalation Effects : Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.  
Ingestion Effects : No data available.  
Symptoms : No data available.

#### Acute toxicity

Acute Oral Toxicity : LD50 : 3,914 mg/kg Species : Rat.  
Inhalation : No data is available on the product itself.  
Inhalation - Components  
Methyl-2-pyrrolidinone, 1- LC50 (4 h) : > 5.1 mg/l Species : Rat male  
Acute Dermal Toxicity : LD50 : 8,000 mg/kg Species : Rabbit.  
Skin corrosion/irritation : Irritating to skin.  
Serious eye damage/eye irritation : Irritating to eyes.  
Sensitization. : No data available.

#### Chronic toxicity or effects from long term exposures

Carcinogenicity : No data available.  
Reproductive toxicity : 1-Methyl-2-Pyrrolidone has caused embryotoxic and teratogenic effects in

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laboratory animals.

Germ cell mutagenicity : No data is available on the product itself.

Specific target organ systemic toxicity (single exposure) : No data available.

Specific target organ systemic toxicity (repeated exposure) : No data available.

Aspiration hazard : No data available.

## Delayed and Immediate Effects and Chronic Effects from Short and Long Term Exposure

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Reproductive toxin. Eye disease., Skin disorders and Allergies.

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## 12. ECOLOGICAL INFORMATION

### Ecotoxicity effects

Aquatic toxicity : LC50 (96 h) : 4,000 mg/l Species : Fish.  
LC50 (96 h) : 832 mg/l Species : Bluegill sunfish (*Lepomis macrochirus*).  
EC50 (48 h) : > 4,000 mg/l Species : Daphnia.

Toxicity to algae - Components			
Methyl-2-pyrrolidinone, 1-	EC 50 (72 h) : 600.5 mg/l	Species : Algae	( <i>Pseudokirchneriella subcapitata</i> )
Methyl-2-pyrrolidinone, 1-	NOEC (72 h) : 92.6 mg/l	Species : Algae	( <i>Pseudokirchneriella subcapitata</i> )

Toxicity to other organisms : No data available.

### Persistence and degradability

Biodegradability : No data is available on the product itself.

Mobility : No data available.

Bioaccumulation : Negligible bioaccumulation potential.

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## 13. DISPOSAL CONSIDERATIONS

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Waste from residues / unused products : Contact supplier if guidance is required.

Contaminated packaging : Dispose of container and unused contents in accordance with federal, state, and local requirements.

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## 14. TRANSPORT INFORMATION

### DOT

Not dangerous goods

### IATA

Not dangerous goods

### IMDG

Not dangerous goods

### TDG

Not dangerous goods

### Further Information

The transportation information is not intended to convey all specific regulatory data relating to this material. For complete transportation information, contact customer service.

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## 15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA) 12(b) Component(s):  
Methyl-2-pyrrolidinone, 1-

Country	Regulatory list	Notification
USA	TSCA	Included on Inventory.
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.
Canada	DSL	Included on Inventory.
Australia	AICS	Included on Inventory.
Japan	ENCS	Included on Inventory.
South Korea	ECL	Included on Inventory.
China	SEPA	Included on Inventory.



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Philippines	PICCS	Included on Inventory.
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EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification

Acute Health Hazard Chronic Health Hazard Fire Hazard.

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level

Methyl-2-pyrrolidinone, 1-

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Methyl-2-pyrrolidinone, 1-

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## 16. OTHER INFORMATION

### HMIS Rating

Health : 2\*  
Flammability : 2  
Physical hazard : 0

Prepared by : Product Compliance Department

Telephone : 800 837 2724

Preparation Date : 09/14/2022