

# Safety Data Sheet

Version 1.1

Revision Date 03/24/2022

SDS Number 300000078616

Print Date 05/10/2022

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Dynasolve® 100

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  
Acute toxicity - Dermal Category 4  
Acute toxicity - Inhalation Category 4  
Serious Eye Damage/Eye Irritation - Category 2A  
Toxic to reproduction - Category 1B

### GHS label elements

#### Hazard pictograms/symbols



Signal Word: Danger

#### Hazard Statements:

H227:Combustible liquid.  
H312+H332:Harmful in contact with skin or if inhaled.  
H319:Causes serious eye irritation.  
H360:May damage fertility or the unborn child.

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## Precautionary Statements:

- Prevention**
- : P210:Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P280:Wear protective gloves/protective clothing/eye protection/face protection.
  - P261:Avoid breathing dust/fume/gas/mist/vapors/spray.
  - P271:Use only outdoors or in a well-ventilated area.
  - P264:Wash thoroughly after handling.
  - P201:Obtain special instructions before use.
  - P202:Do not handle until all safety precautions have been read and understood.
  - P281:Use personal protective equipment as required.
- Response**
- : 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.
  - P302+P352 :IF ON SKIN: Wash with plenty of soap and water.
  - P304+P340 :IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  - P312 :Call a POISON CENTER/doctor if you feel unwell.
  - P322 :Specific measures (see this label).
  - P363 :Wash contaminated clothing before reuse.
  - 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:Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## Hazards not otherwise classified

None known.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Concentration (Weight)
DIMETHYLFORMAMIDE	68-12-2	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.

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Eye contact	: Hold eyelids apart, initiate and maintain gentle and continuous irrigation care is not promptly available, continue to irrigate for one hour.
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.
Ingestion	: Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.
Inhalation	: 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. Move to fresh air.
Most important symptoms/effects - acute and delayed	: Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Local irritation.

## 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Alcohol-resistant foam. Carbon dioxide (CO2). 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 (NOx) 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.

## 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	: Use appropriate containment to avoid environmental contamination. Do not allow spill to enter into sewers or waterways. 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.

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Vermiculite. Activated charcoal. Place in appropriate chemical waste container.

Additional advice : If possible, stop flow of product.

## 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.

### Storage

Keep away from direct sunlight. 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.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Engineering measures

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.  
Neoprene gloves are acceptable for short duration tasks such as turning process valves and product transfer operations where more abrasion-resistant gloves are needed.  
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 : Impervious Clothing (rubber apron) should be worn when there is a potential for significant skin exposure such as a spill or splash.  
Long sleeve shirts and trousers without cuffs.

Environmental exposure controls : Use appropriate containment to avoid environmental contamination. Do not allow spill to enter into sewers or waterways. Shut off or remove all ignition sources.

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

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protection and hygiene

## Exposure limit(s)

DIMETHYLFORMAMIDE	Recommended exposure limit (REL): NIOSH	10 ppm	30 mg/m3
DIMETHYLFORMAMIDE	Permissible exposure limit: OSHA Z1	10 ppm	30 mg/m3
DIMETHYLFORMAMIDE	Time Weighted Average (TWA) Permissible Exposure Limit (PEL): US CA OEL	10 ppm	30 mg/m3
DIMETHYLFORMAMIDE	Time Weighted Average (TWA): ACGIH	5 ppm	-

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid. pink
Odor	: No data available.
Odor threshold	: No data available.
pH	: 8
Melting point/range	: No data available.
Boiling point/range	: 307 °F (153 °C)
Flash point	: 145 °F (63 °C) Pensky-Martens Closed Cup
Evaporation rate	: No data available.
Flammability (solid, gas)	: Refer to product classification in Section 2
Upper/lower explosion/flammability limit	: No data available.
Vapor pressure	: 3.88 mmHg
Water solubility	: Completely soluble.
Relative vapor density	: No data available.
Relative density	: 0.945 (water = 1)
Partition coefficient: n-octanol/water [log Kow]	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.

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Viscosity : No data available.

Density : No data available.  
: 58.994 lb/ft<sup>3</sup> (0.945 g/cm<sup>3</sup>)

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## 10. STABILITY AND REACTIVITY

Chemical Stability : Stable under normal conditions.

Conditions to avoid : Heat, flames and sparks.

Materials to avoid : Aluminum triethyl (an explosive mixture is formed when heated with this product).  
Carbon tetrachloride.  
Diisocyanatomethane.

Hazardous decomposition products : Nitric acid.  
Ammonia.  
Nitrogen oxides (NO<sub>x</sub>).  
Nitrogen oxide can react with water vapors to form corrosive nitric acid.  
Carbon monoxide.  
Carbon dioxide (CO<sub>2</sub>).  
Magnesium nitrate and product undergo spontaneous decomposition.

Possibility of hazardous Reactions/Reactivity : No data available.

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## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Likely routes of exposure

Effects on Eye : Irritating to eyes.

Effects on Skin : Mild skin irritation.

Inhalation Effects : Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.

Ingestion Effects : Harmful if swallowed.

Symptoms : Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Local irritation.

#### Acute toxicity

Acute Oral Toxicity : No data is available on the product itself.

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## Acute Oral Toxicity - Components DIMETHYLFORMAMIDE

LD50 : 2,800 mg/kg

Species : Rat

Inhalation : No data is available on the product itself.

## Inhalation - Components DIMETHYLFORMAMIDE

LC50 (4 h) : > 5.85 mg/l

Species : Rat

Acute Dermal Toxicity : No data is available on the product itself.

## Acute Dermal Toxicity - Components DIMETHYLFORMAMIDE

LD50 : 4,720 mg/kg

Species : Rabbit

Skin corrosion/irritation : Mild skin irritation.

Serious eye damage/eye irritation : Irritating to eyes.

Sensitization. : No data available.

## Chronic toxicity or effects from long term exposures

Carcinogenicity : This product contains listed carcinogen(s) according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater.

Reproductive toxicity : May damage fertility or the unborn child.

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  
DIMETHYLFORMAMIDE IARC : 2A - Probably carcinogenic to humans.

This product contains listed carcinogen(s) according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Intolerance for alcohol has been reported to occur for up to 36 hours after exposure to DMF; characteristics include flushing of the skin, rapid heartbeat, and tightness of chest, sometimes accompanied by nausea and dyspnea., Reproductive toxin.

## 12. ECOLOGICAL INFORMATION

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## Ecotoxicity effects

Aquatic toxicity : No data is available on the product itself.

Toxicity to fish - Components

DIMETHYLFORMAMIDE

EC 50 (48 h) : 7,500 mg/l

Species : Bluegill  
(Lepomis macrochirus)

Toxicity to daphnia - Components

DIMETHYLFORMAMIDE

EC 50 (48 h) : 14,500 mg/l

Species : Daphnia

Toxicity to other organisms : No data available.

## Persistence and degradability

Biodegradability : No data is available on the product itself.

Mobility : No data available.

Bioaccumulation : No data is available on the product itself.

Bioaccumulation - Components

DIMETHYLFORMAMIDE

Negligible bioaccumulation potential.

## 13. DISPOSAL CONSIDERATIONS

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.

## 14. TRANSPORT INFORMATION

DOT

Not dangerous goods

IATA

Not dangerous goods

IMDG

Not dangerous goods



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## 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.

## 15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA) 12(b) Component(s):

None.

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.
Philippines	PICCS	Included on Inventory.

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification

Fire Hazard. Acute Health Hazard Chronic Health Hazard

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

DIMETHYLFORMAMIDE

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

WARNING! This product contains a chemical known in the State of California to cause cancer.

DIMETHYLFORMAMIDE

## 16. OTHER INFORMATION

### HMIS Rating

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

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Prepared by : Product Compliance Department

Telephone : 800 837 2724

Preparation Date : 05/10/2022

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