# Safety Data Sheet

Version 1.2
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## 1. PRODUCT AND COMPANY IDENTIFICATION

| | | |
|---|---|---|
| Product name | : | Dynasolve CU-6 |
| Product Use Description | : | Polyurethane remover |
| Manufacturer/Importer/Distributor | : | Versum Materials US, LLC<br>8555 South River Parkway<br>Tempe, AZ 85284-2601<br>Exporter EIN No. 47-5632014<br>www.versummaterials.com |
| Telephone | : | 800 837 2724 |
| Emergency telephone number (24h) | : | 1-800-424-9300<br>(+1) 703-741-5970 (CHEMTREC) |

## 2. HAZARDS IDENTIFICATION

### GHS classification

Flammable liquids - Category 4
Acute toxicity - Oral Category 4
Skin Corrosion/Irritation - Category 2
Serious Eye Damage/Eye Irritation - Category 1
Toxic to reproduction - Category 1B
Specific Target Organ Toxicity - Single Exposure - Category 3

### GHS label elements

Hazard pictograms/symbols

Signal Word: Danger

Hazard Statements:

H227:Combustible liquid.

H302:Harmful if swallowed.
H315:Causes skin irritation.
H318:Causes serious eye damage.
H360:May damage fertility or the unborn child.
H336:May cause drowsiness or dizziness.

Precautionary Statements:

| | | |
|---|---|---|
| Prevention | : | P210:Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>P280:Wear protective gloves/protective clothing/eye protection/face protection.<br>P264:Wash thoroughly after handling.<br>P270:Do not eat, drink or smoke when using this product.<br>P201:Obtain special instructions before use.<br>P202:Do not handle until all safety precautions have been read and understood.<br>P281:Use personal protective equipment as required.<br>P261:Avoid breathing dust/fume/gas/mist/vapors/spray.<br>P271:Use only outdoors or in a well-ventilated area. |
| Response | : | P301+P312 :IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.<br>P330 :Rinse mouth.<br>P302+P352 :IF ON SKIN: Wash with plenty of water/…<br>P332+P313 :If skin irritation occurs: Get medical advice/attention.<br>P305+P351+P338 :IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P310 :Immediately call a POISON CENTER/doctor.<br>P304+P340 :IF INHALED: Remove person to fresh air and keep comfortable for breathing.<br>P321 :Specific treatment (see on this label).<br>P362 :Take off contaminated clothing.<br>P370+P378 :In case of fire, use recommended extinguishing media for extinction. |
| Storage | : | P403+P235:Store in a well-ventilated place. Keep cool.<br>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) |
|---|---|---|
| Methyl-2-pyrrolidinone, 1- | 872-50-4 | 40% - 60 % |
| Cyclic ester | Not Available | 10% - 30 % |
| Cyclic glycol ether | Not Available | 10% - 20 % |
| Nonylphenol, branched, ethoxylated | 68412-54-4 | 2.5% - 10 % |
| Ether-ester solvent | Not Available | 2.5% - 10 % |
| Glycol Ether | Not Available | 2.5% - 10 % |

The composition is trade secret.

## 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 : 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 exposures may result in : Blood chemistry changes (such as methemoglobinemi a leading to cyanosis or loss of consciousness). Kidney disorders.

## 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.

| | | |
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| 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. 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.<br>Impervious gloves.<br>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 | : | 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 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 |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | Liquid. Colorless - Light yellow |
| Odor | : | No data available. |
| Odor threshold | : | No data available. |
| pH | : | No data available. |
| Melting point/range | : | No data available. |
| Boiling point/range | : | 410 °F (210 °C) |
| Flash point | : | 192 °F (89 °C) |
| 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 | : | 0.34 mmHg |
| Water solubility | : | Completely soluble. |
| Relative vapor density | : | No data available. |

| | | |
|---|---|---|
| Relative density | : | 1.065 (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. |
| | : | No data available. |
| Density | : | 66.486 lb/ft3 (1.065 g/cm3) |

## 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Chemical Stability | : | Stable under normal conditions. |
| Conditions to avoid | : | Heat, flames and sparks. |
| Materials to avoid | : | Oxidizing agents. |
| Hazardous decomposition products | : | Carbon monoxide.<br>Carbon dioxide (CO2).<br>Nitrogen oxides (NOx). |
| Possibility of hazardous Reactions/Reactivity | : | No data available. |

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

Likely routes of exposure

| | | |
|---|---|---|
| Effects on Eye | : | Causes eye burns. Risk of serious damage to eyes. |
| Effects on Skin | : | Causes skin irritation. |
| Inhalation Effects | : | Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system. May cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Severe cases of overexposure can result in respiratory failure. |
| Ingestion Effects | : | Harmful if swallowed. |
| Symptoms | : | No data available. |

Acute toxicity

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

Acute Oral Toxicity - Components

| | | |
|---|---|---|
| Methyl-2-pyrrolidinone, 1- | LD50 : 3,914 mg/kg | Species : Rat |
| Cyclic ester | LD50 : 1,540 mg/kg | Species : Rat |
| Cyclic glycol ether | LD50 : 1,840 mg/kg | Species : Rat |
| Nonylphenol, branched, ethoxylated | LD50 : > 2,000 mg/kg | Species : Rat |
| Ether-ester solvent | LD50 : > 4,000 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 |
| Cyclic ester | LC50 (4 h) : > 5.1 mg/l | Species : Rat |

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

Acute Dermal Toxicity - Components

| | | |
|---|---|---|
| Methyl-2-pyrrolidinone, 1- | LD50 : 8,000 mg/kg | Species : Rabbit |
| Cyclic glycol ether | LD50 : 14,391 mg/kg | Species : Rat |
| Nonylphenol, branched, ethoxylated | LD50 : > 2,000 mg/kg | Species : Rabbit |
| Ether-ester solvent | LD50 : 10,000 mg/kg | Species : Rabbit |

Skin corrosion/irritation : Irritating to skin.

Serious eye damage/eye irritation : Risk of serious damage 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 laboratory animals.

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

Specific target organ systemic toxicity (single exposure) : May cause drowsiness or dizziness.

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.Repeated and/or prolonged exposures may result in :, Blood chemistry changes (such as

methemoglobinemi a leading to cyanosis or loss of consciousness)., Kidney disorders.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity effects

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

Toxicity to fish - Components

| | | |
|---|---|---|
| Methyl-2-pyrrolidinone, 1- | LC50 (96 h) : 832 mg/l | Species : Bluegill (Lepomis macrochirus) |
| Methyl-2-pyrrolidinone, 1- | LC50 (96 h) : 4,000 mg/l | Species : Golden Orfe (Leuciscus Iodus L, Golden variety) |
| Cyclic ester | LC50 (96 h) : 220 - 460 mg/l | Species : Fish |
| Ether-ester solvent | LC50 (96 h) : 45 - 62 mg/l | Species : Fish |

Toxicity to daphnia - Components

| | | |
|---|---|---|
| Methyl-2-pyrrolidinone, 1- | EC 50 (48 h) : > 4,000 mg/l | Species : Daphnia |
| Cyclic ester | EC 50 (48 h) : > 500 mg/l | Species : Daphnia |
| Ether-ester solvent | EC 50 (48 h) : 470 - 800 mg/l | Species : Daphnia |

Toxicity to algae - Components

| | | |
|---|---|---|
| Cyclic ester | EC 50 (72 h) : 360 mg/l | Species : Algae |
| Ether-ester solvent | IC 50 (72 h) : > 1,000 mg/l | Species : Algae |

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

| | |
|---|---|
| Methyl-2-pyrrolidinone, 1- | Negligible bioaccumulation potential. |
| Cyclic ester | Negligible bioaccumulation potential. |
| Ether-ester solvent | Low bioaccumulation potential. |

## 13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products : The product should not be allowed to enter drains, water courses or the soil; dispose of this material and its container in a safe way. Waste from residues /

unused products: do not discharge effluent containing this product into waterways or sewer systems without proper authorization. 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

UN/ID No. : NA1993
Proper shipping name : Combustible liquid, n.o.s., (Ether-ester solvent)
Packing group : III
Marine Pollutant : No
*** NOTE: When packaged in a bulk quantity (>450 liters), this substance is classified as NA1993 Combustible Liquid for surface transportation within the United States. In smaller containers, the product is not regulated for transportation.

### 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.

## 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 | Not on Inventory. |
| 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
Methyl-2-pyrrolidinone, 1-
Ethylene glycol phenyl ether

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-

## 16. OTHER INFORMATION

### HMIS Rating

Health : 3*
Flammability : 2
Physical hazard : 0

Prepared by : Versum Materials, Product Regulatory Department

Telephone : 800 837 2724

Preparation Date : 06/25/2019

For additional information, please visit Versum Materials' Product Stewardship web site.
http://www.versummaterials.com/productstewardship/