

SAFETY DATA SHEET

1. Identification

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|---|---|--------------------------|--|
| Product identifier | Dynasolve CU-6 | | |
| Other means of identification | | | |
| Product code | J001 | | |
| Recommended use | Polyurethane remover | | |
| Recommended restrictions | None known. | | |
| Manufacturer/Importer/Supplier/Distributor information | | | |
| Company name | Dynaloy, a subsidiary of Eastman Chemical Company | | |
| Address | 6445 Olivia Lane Indianapolis, IN 46226 US US | | |
| Telephone | 317-788-5694 | | |
| E-mail | DynaloyInfo@eastman.com | | |
| Contact person | Dynaloy Info | | |
| Emergency phone number | Chemtrec | 1-800-424-9300 | |
| | International | +1 703-527-3887 ccn 7178 | |

2. Hazard(s) identification

| | | |
|-----------------------------|---|---|
| Physical hazards | Flammable liquids | Category 4 |
| Health hazards | Acute toxicity, oral | Category 4 |
| | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 1 |
| | Reproductive toxicity | Category 1B |
| | Specific target organ toxicity, single exposure | Category 3 respiratory tract irritation |
| | Specific target organ toxicity, single exposure | Category 3 narcotic effects |
| | Specific target organ toxicity, repeated exposure | Category 2 (Kidney) |
| OSHA defined hazards | Not classified. | |

Label elements



| | |
|--------------------------------|---|
| Signal word | Danger |
| Hazard statement | Combustible liquid. Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. May cause drowsiness or dizziness. May damage fertility or the unborn child. |
| Precautionary statement | |
| Prevention | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. |
| Response | If swallowed: Call a poison center/doctor if you feel unwell. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Rinse mouth. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish. |
| Storage | Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. |

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| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Hazard(s) not otherwise classified (HNOC) | None known. |

3. Composition/information on ingredients

Mixtures

| Chemical name | CAS number | % |
|--|------------|----------|
| 1-Methyl-2-pyrrolidinone | 872-50-4 | 40 - 60 |
| Butyrolactone | 96-48-0 | 10 - 30 |
| 2-Phenoxyethanol | 122-99-6 | 10 - 20 |
| Branched-nonylphenol ethoxylate | 68412-54-4 | 2.5 - 10 |
| Ethyl-3-ethoxy propionate | 763-69-9 | 2.5 - 10 |
| [2-(2-methoxymethylethoxy)methyl]ethoxy]propanol | 25498-49-1 | 2.5 - 10 |

4. First-aid measures

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|---|---|
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell. |
| Skin contact | Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. |
| Eye contact | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately. |
| Ingestion | Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell. |
| Most important symptoms/effects, acute and delayed | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Skin irritation. May cause redness and pain. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed. |
| General information | If exposed or concerned: get medical attention/advice. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. |

5. Fire-fighting measures

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| Suitable extinguishing media | Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2). |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting equipment/instructions | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | Combustible liquid. |

6. Accidental release measures

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|--|---|
| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
|--|---|

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

Environmental precautions

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from open flames, hot surfaces and sources of ignition. Do not get this material in contact with eyes. Avoid breathing mist or vapor. Avoid contact with skin and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides

| Components | Type | Value |
|--|------|------------------------|
| 1-Methyl-2-pyrrolidinone (CAS 872-50-4) | TWA | 40 mg/m3 10 ppm |

Biological limit values

ACGIH Biological Exposure Indices

| Components | Value | Determinant | Specimen | Sampling Time |
|--|----------|------------------------------------|----------|---------------|
| 1-Methyl-2-pyrrolidinone (CAS 872-50-4) | 100 mg/l | 5-Hydroxy-N-methyl-2-pyrrolidinone | Urine | * |

* - For sampling details, please see the source document.

Exposure guidelines

US WEEL Guides: Skin designation

1-Methyl-2-pyrrolidinone (CAS 872-50-4) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment. Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

| | |
|-----------------------|---------------------|
| Physical state | Liquid. |
| Form | Liquid. |
| Color | Colorless to straw. |

Odor Not available.

Odor threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range 410 °F (210 °C)

Flash point 192.2 °F (89.0 °C) Pensky-Martens Closed Cup

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapor pressure 0.45 hPa

Vapor density Not available.

Relative density 1.065

Solubility(ies)

Solubility (water) Miscible.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Bulk density 1.06

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials Alkaline metals. Peroxides.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information**Information on likely routes of exposure**

Inhalation May cause drowsiness and dizziness. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin contact Causes skin irritation.

Eye contact Causes serious eye damage.

Ingestion Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Headache. May cause drowsiness and dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity Harmful if swallowed. Narcotic effects. May cause respiratory irritation.

| Components | Species | Test Results |
|---|--|---------------------|
| [2-(2-methoxymethylethoxy)methylethoxy]propanol (CAS 25498-49-1) | | |
| Acute | | |
| <i>Oral</i> | | |
| LD50 | Rat | 3200 mg/kg |
| 1-Methyl-2-pyrrolidinone (CAS 872-50-4) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | 8000 mg/kg |
| <i>Inhalation</i> | | |
| LC50 | Rat | > 5.1 mg/l |
| <i>Oral</i> | | |
| LD50 | Rat | 3914 mg/kg |
| 2-Phenoxyethanol (CAS 122-99-6) | | |
| Acute | | |
| <i>Oral</i> | | |
| LD50 | Rat | 1260 mg/kg |
| Branched-nonylphenol ethoxylate (CAS 68412-54-4) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | | 2830 mg/kg |
| <i>Oral</i> | | |
| LD50 | Rat | > 2000 mg/kg |
| Butyrolactone (CAS 96-48-0) | | |
| Acute | | |
| <i>Inhalation</i> | | |
| LC50 | Rat | > 5.1 mg/l, 4 Hours |
| <i>Oral</i> | | |
| LD50 | Rat | 1582 mg/kg |
| Skin corrosion/irritation | Causes skin irritation. | |
| Serious eye damage/eye irritation | Causes serious eye damage. | |
| Respiratory or skin sensitization | | |
| Respiratory sensitization | Not a respiratory sensitizer. | |
| Skin sensitization | This product is not expected to cause skin sensitization. | |
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. | |
| Carcinogenicity | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. | |
| IARC Monographs. Overall Evaluation of Carcinogenicity | | |
| Butyrolactone (CAS 96-48-0) | 3 Not classifiable as to carcinogenicity to humans. | |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) | | |
| Not listed. | | |
| Reproductive toxicity | May damage fertility or the unborn child. | |
| Specific target organ toxicity - single exposure | May cause respiratory irritation. May cause drowsiness and dizziness. | |
| Specific target organ toxicity - repeated exposure | Not classified. | |

| | |
|--------------------------|--------------------------------------|
| Aspiration hazard | Not an aspiration hazard. |
| Chronic effects | Prolonged inhalation may be harmful. |

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

| Components | Species | Test Results |
|---|---------|---|
| 1-Methyl-2-pyrrolidinone (CAS 872-50-4) | | |
| Aquatic | | |
| Algae | EC50 | Scenedesmus subspicatus > 500 mg/l, 72 hours |
| Crustacea | EC50 | Daphnia magna > 1000 mg/l, 24 hours |
| Fish | LC50 | Oncorhynchus mykiss > 500 mg/l, 96 hours |
| 2-Phenoxyethanol (CAS 122-99-6) | | |
| Aquatic | | |
| Fish | LC50 | Fathead minnow (Pimephales promelas) 337 - 352 mg/l, 96 hours |

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

| | |
|---|-------|
| 1-Methyl-2-pyrrolidinone (CAS 872-50-4) | -0.54 |
| 2-Phenoxyethanol (CAS 122-99-6) | 1.16 |
| Butyrolactone (CAS 96-48-0) | -0.64 |

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

| | |
|-------------------------------------|---|
| UN number | NA1993 |
| UN proper shipping name | Combustible liquid n.o.s. (Ethyl-3-ethoxy propionate) |
| Transport hazard class(es) | |
| Class | Combustible Liquid |
| Subsidiary risk | - |
| Label(s) | None |
| Packing group | III |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions | IB3,T1,T4,TP1 |
| Packaging exceptions | 150 |
| Packaging non bulk | 203 |
| Packaging bulk | 241 |

This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

2-Phenoxyethanol (CAS 122-99-6) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

| Chemical name | CAS number | % by wt. |
|--------------------------|------------|----------|
| 1-Methyl-2-pyrrolidinone | 872-50-4 | 40 - 60 |
| 2-Phenoxyethanol | 122-99-6 | 10 - 20 |

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

2-Phenoxyethanol (CAS 122-99-6)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Butyrolactone (CAS 96-48-0) 70 %WV

DEA Exempt Chemical Mixtures Code Number

Butyrolactone (CAS 96-48-0) 2011

US state regulations

US. Massachusetts RTK - Substance List

1-Methyl-2-pyrrolidinone (CAS 872-50-4)

US. New Jersey Worker and Community Right-to-Know Act

1-Methyl-2-pyrrolidinone (CAS 872-50-4)

2-Phenoxyethanol (CAS 122-99-6)

US. Pennsylvania Worker and Community Right-to-Know Law

1-Methyl-2-pyrrolidinone (CAS 872-50-4)

2-Phenoxyethanol (CAS 122-99-6)

US. Rhode Island RTK

1-Methyl-2-pyrrolidinone (CAS 872-50-4)

2-Phenoxyethanol (CAS 122-99-6)

US. California Proposition 65

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

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

1-Methyl-2-pyrrolidinone (CAS 872-50-4)

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | No |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

| | |
|---------------|---|
| Issue date | 05-May-2015 |
| Revision date | - |
| Version # | 01 |
| HMIS® ratings | Health: 3* Flammability: 2 Physical hazard: 0 |

NFPA ratings



Disclaimer

Dynaloy, a subsidiary of Eastman Chemical Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.