

ESSEX

Material Safety Data Sheet



1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

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24-Hour Emergency Phone Number: 989-636-4400

Product: URETHANE ADHESIVE CLEANER U421

Product Code: 34644

Effective Date: 05/24/02

Date Printed: 12/26/02

MSD: 006160

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

CLEANER - URETHANE

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component (s)	CAS#	Amount (wt % or ppm)
D-Limonene	005989-27-5	45-55
Oleic acid	000112-80-1	5-15
Polyether polyol	009016-45-9	10-20
Coconut diethanolamide	061791-31-9	20-30
Diethanolamine	000111-42-2	< 10
Pumice	001332-09-8	5-15
Ethoxylate alcohol	034398-01-1	10-20
Water	007732-18-5	45-55

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

* Yellow gel. Fruity odor. Combustible. Causes eye irritation. *

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

This section includes possible adverse effects which could occur if this material is not handled in the recommended manner.

EYE: May cause moderate irritation with corneal injury.

SKIN: Prolonged may cause slight skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Under certain conditions, d-limonene may oxidize, forming compounds which may cause allergic skin rashes in susceptible

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individuals with prolonged/repeated contact.

INGESTION: Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

INHALATION: A single brief (minutes) inhalation exposure is not likely to cause adverse effects. Prolonged excessive exposure may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: For the component d-limonene, kidney effects/tumors have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans. Contains a proprietary ingredient present at low levels which, in animals, has been shown to cause liver, kidney and blood effects.

CANCER INFORMATION: In studies on a proprietary ingredient, liver and kidney tumors were observed in mice but not in rats. A number of factors may have influenced the results and were considered in the interpretation of the data.

TERATOLOGY (BIRTH DEFECTS): Contains d-limonene which did not cause birth defects; other fetal effects occurred only at doses toxic to the mother. Contains a proprietary ingredient which did not cause birth defects or any other fetal effects in lab animals.

REPRODUCTIVE EFFECTS: Contains a proprietary ingredient which has been shown to interfere with reproduction in animal studies.

4. FIRST AID

EYE: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Avoid prolonged or repeated contact with skin. Wash thoroughly after handling.

INGESTION: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION: Remove to fresh air if effects occur. Consult a

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physician.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reaction of the patient.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: 130 F
METHOD USED: TAG CC

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam.

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should wear self-contained, positive pressure breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and may travel along the ground or by ventilation duct to ignition sources far from material handling point. Combustible.

6. ACCIDENTAL RELEASE MEASURES (See Section 15 for Regulatory Information)

PROTECT PEOPLE: Clear non-emergency personnel from area. Use appropriate safety equipment. Eliminate all sources of ignition in vicinity of spill to avoid fire or explosion. For additional information, refer to "Exposure Controls/Personal Protection", MSDS section 8.

PROTECT THE ENVIRONMENT: Contain material to prevent contamination of soil, surface water or ground water.

CLEAN-UP: Contain spill if possible. Absorb with material such as cat litter, sand or sawdust. Clean up using tools which will not produce sparks. See "Disposal Considerations", MSDS section 13 for information on disposal.

7. HANDLING AND STORAGE

HANDLING & STORAGE: Combustible. Keep from heat, sparks, and flame. Use appropriate grounding equipment while handling this material. Store indoors in tightly closed containers between 50-95 F.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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These precautions are suggested for conditions with high potential for exposure. If handling procedures are such that there is only a low potential for exposure, less protection may be needed. Emergency conditions may require additional precautions.

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

PERSONAL PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION: Use safety glasses.

SKIN PROTECTION: Use gloves impervious to this material when prolonged or frequently repeated contact could occur.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator.

EXPOSURE GUIDELINES: d-Limonene: AIHA WEEL is 30 ppm.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Yellow gel.

ODOR: Fruity odor.

VAPOR PRESSURE: N/A

VAPOR DENSITY: N/A

BOILING POINT: N/A

SOLUBILITY IN WATER/MISCIBILITY: Insoluble.

SPECIFIC GRAVITY OR DENSITY: 0.83 (+/- 0.03)

VOLATILE ORGANIC COMPOUNDS (VOC) CONTENT (LBS/GAL): 2.2
EPA Method 24 Procedure B

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

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INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide, smoke, fumes.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1)

SKIN: The LD50 for skin absorption in rabbits is > 5000 mg/kg.

INGESTION: The oral LD50 for rats is between 5000-8000 mg/kg.

MUTAGENICITY: In vitro mutagenicity studies were negative.

12. ECOLOGICAL INFORMATION (For detailed Ecological data, write or call the address or non-emergency number shown in Section 1)

For detailed ecological data, write or call the Dow Chemical Company.

13. DISPOSAL CONSIDERATIONS (See Section 15 for Regulatory Information)

DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.

All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterization and compliance with applicable law are the responsibility solely of the waste generator.

THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL.

THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

FOR UNUSED AND UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted incinerator or other thermal destruction device.

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As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics and that manage used drums. Telephone Dow's Customer Information Center at 800-258-2436 or 989-832-1556 for further details.

14. TRANSPORT INFORMATION

U.S. DOT CLASSIFICATION/DESCRIPTION: For DOT regulatory information, if required, consult transportation regulations or product shipping papers.

CANADIAN TDG INFORMATION: For TDG regulatory information, if required, consult transportation regulations or product shipping papers.

15. REGULATORY INFORMATION (Not meant to be all-inclusive--selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS

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SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
DIETHANOLAMINE	000111-42-2	<10 %

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the

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REGULATORY INFORMATION (CONTINUED)

Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

- An immediate health hazard
- A delayed health hazard
- A fire hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
DIETHANOLAMINE	000111-42-2	NJ2 NJ3 PA3 PA1
9-OCTADECENOIC ACID (Z)-	000112-80-1	PA1

NJ2=New Jersey Environmental Hazardous Substance (present at greater than or equal to 1.0%).
 NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%).
 PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).
 PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD:

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

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT

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REGULATORY INFORMATION (CONTINUED)

(CERCLA, or SUPERFUND):

This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases:

Category:

Chemical Name	CAS#	RQ	% in Product
Diethanolamine	000111-42-2	100 lbs	< 10

16. OTHER INFORMATION

Section(s) changed: 2, 3, 4, 9

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The Information Herein Is Given In Good Faith, But No Warranty,
Express Or Implied, Is Made. Consult The Dow Chemical Company
For Further Information.