

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

24-HOUR EMERGENCY PHONE NUMBER: 989-636-4400

Product: LUBRICANT SULLUBE

Product Code: 42836

Effective Date: 11/17/98 Date Printed: 03/03/03 MSD: 005126

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

Proprietary blend containing a polyoxyalkylene glycol, a pentaerythritol ester, and other components.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

* Green viscous liquid. Low odor. No significant immediate hazards *

* for emergency response are known. *

* *

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

EYE: Essentially nonirritating to eyes.

SKIN: Short single exposure may cause slight skin irritation.

Prolonged or repeated exposure may cause slight skin irritation.

Material may be handled at elevated temperatures; contact with heated material may cause thermal burns. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

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: At room temperature, vapors are minimal due to physical properties; a single exposure is not likely to be hazardous. If material is heated or mist is produced, concentrations may be attained that are sufficient to cause irritation and other effects.

SUBCHRONIC: For the major component, in animals, effects have been reported on the following organs: kidney and liver.

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4. FIRST AID

EYE: Flush eyes with plenty of water.

SKIN: Wash off in flowing water or shower.

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 physician.

NOTE TO PHYSICIAN: If burn is present, treat as any thermal

burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: 410F, 210C; 520F, 271C

METHOD USED: PMCC, COC

AUTOIGNITION TEMPERATURE: Not determined.

FLAMMABILITY LIMITS

LFL: Not determined

UFL: Not determined

HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds.

OTHER FLAMMABILITY INFORMATION: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

EXTINGUISHING MEDIA: Water fog or fine spray. Carbon dioxide, dry chemical, foam. Alcohol resistant foams (ATC type) preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively.

Do not use direct water stream. May spread fire.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. Burning liquids may be moved by flushing with water to protect personnel and minimize pro-
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5. FIRE FIGHTING MEASURES (CONTINUED)

perty damage. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

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

PROTECT PEOPLE: Isolate area. May be a slipping hazard.

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

CLEANUP: Contain spill if possible.

7. HANDLING AND STORAGE

HANDLING: Product on surfaces can cause slippery conditions.

STORAGE: Keep containers tightly closed when not in use. Store in stainless steel, polypropylene, polyethylene lined containers, Teflon, glass-lined container, aluminum, Plasite 3066 lined containers, Plasite 3070 lined containers, or 316 stainless steel.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Use safety glasses.

SKIN PROTECTION: Use gloves impervious to this material. Use gloves with insulation for thermal protection, when needed.

RESPIRATORY PROTECTION: For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

EXPOSURE GUIDELINES: None established.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Green viscous liquid.

ODOR: Low odor.

VAPOR PRESSURE: <0.01 mmHg @ 20C

VAPOR DENSITY: Not determined.

BOILING POINT: Not applicable.

SOLUBILITY IN WATER/MISCIBILITY: <1 gm/100 gm

SPECIFIC GRAVITY OR DENSITY: 0.9827 @ 25/25C

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under recommended storage conditions.

See storage section.

CONDITIONS TO AVOID: Product can oxidize at elevated temperatures.

Product can decompose at elevated temperatures.

INCOMPATIBILITY WITH OTHER MATERIALS: Avoid contact with oxidizing materials. Avoid unintended contact with isocyanates.

The reaction of polyols and isocyanates generates heat. Avoid contact with strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS: Hazardous decomposition products depend upon temperature, air supply, and the presence of other materials. Hazardous decomposition products may include and are not limited to: aldehydes, ketones, organic acids and polymer fragments.

HAZARDOUS POLYMERIZATION: Will not occur by itself.

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)

ACUTE

SKIN: The LD50 for skin absorption in rabbits is greater than 2000 mg/kg. Did not cause allergic skin reaction when tested in guinea pigs.

INGESTION: The oral LD50 for male rats is greater than 5000 mg/kg.

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

ENVIRONMENTAL FATE:

MOVEMENT & PARTITIONING: No relevant information.

DEGRADATION & TRANSFORMATION: Material is ultimately biodegradable. Reaches more than 70% mineralization in OECD test(s) for inherent biodegradability. Biodegradation reached in Modified Zahn-Wellens/EMPA Test (OECD Test No. 302B) after 28 days: 86%.

ECOTOXICOLOGY: Material is moderately toxic to aquatic organisms on an acute basis (LC50 between 1 and 10 mg/L in most sensitive species). Acute LC50 for fathead minnow (*Pimephales promelas*) is 51 ppm. Acute LC50 for water flea *Daphnia pulex* is 2.8 ppm.

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 characterizations and compliance with applicable laws 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 & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device.

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

DEPARTMENT OF TRANSPORTATION (D.O.T.):

This product is not regulated by D.O.T. when shipped domestically by (Continued on Page 6)

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14. TRANSPORT INFORMATION (CONTINUED)

land.

CANADIAN TDG INFORMATION:

For TDG regulatory information, if required, consult transportation regulations, product shipping papers, or your Dow representative.

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: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Not to have met any hazard category

TOXIC SUBSTANCES CONTROL ACT (TSCA):

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

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REGULATORY INFORMATION:(CONTINUED)

STATE RIGHT-TO-KNOW: This product is not known to contain any substances subject to the disclosure requirements of New Jersey

Pennsylvania

OSHA HAZARD COMMUNICATION STANDARD:

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CANADIAN REGULATIONS

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WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is: This product is not a "Controlled Product" under WHMIS.

16. OTHER INFORMATION

REVISION INDICATOR: Revised Section 13, Disposal.

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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.