SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**MSDS Name:** Mobil DTE 13M  
**Manufacturer Name:** ExxonMobil Oil Corporation  
**Health Phone:** 24 - Hour (call collect): 609-737-4411  
**Manufacturer MSDS Revision Date:** 25 APR 2003  
**Synonyms:** PET. HYDROCARBONS AND ADDITIVES

**Distributor Name:** ExxonMobil Oil Corporation  
**Distributor Address:**  
3225 GALLOWS RD.  
FAIRFAX, VA 22037

24 - Hour Transportation Emergency:  
CHEMTREC: 800-424-9300; 202-483-7616  
LUBES AND FUELS: 281-834-3296

Product and Technical Information:  
Lubricants and Specialties: 800-662-4525; 800-443-9966  
Fuels Products: 800-947-9147
GENERAL USE:
HYDRAULIC OIL

CHEMICAL NAME:
PET. HYDROCARBONS AND ADDITIVES

MATERIAL SAFETY DATA BULLETIN

NFPA
Health: 0
Flammability: 1
Reactivity: 0
Other:

PRODUCT CODES:
602698-00

SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>% Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROTREATED LIGHT NAPHTHENIC DISTILLATE (PETROLEUM)</td>
<td>64742-53-6</td>
<td>Approx.: 25-35%</td>
</tr>
</tbody>
</table>

OTHER INGREDIENTS

CHEMICAL NAMES AND SYNONYMS:
PET. HYDROCARBONS AND ADDITIVES

GLOBALLY REPORTABLE MSDS INGREDIENTS:
None.

See Section 8 for exposure limits (if applicable).

SECTION 3 : HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
Note: Pressurized mists may form a flammable mixture.

PHYSICAL STATE:
Liquid

COLOR: Amber

Under normal conditions of use, this product is not considered hazardous according to regulatory guidelines (See section 15).

DOT ERG No.: Not Applicable

HYDROTREATED LIGHT NAPHTHENIC DISTILLATE (PETROLEUM):
Potential Health Effects:
Under normal conditions of intended use, this product does not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation.

For further health effects/toxicological data, see Section 11.

SECTION 4 : FIRST AID MEASURES

Eye Contact:
Flush thoroughly with water. If irritation occurs, call a physician.

Skin Contact:
Wash contact areas with soap and water. Remove and clean oil soaked clothing daily and wash affected area.
INJECTION INJURY WARNING: If product is injected into or under the skin, into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

Inhalation:
Not expected to be a problem. However, if respiratory irritation, dizziness, nausea, or unconsciousness occurs due to excessive vapor or mist exposure, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or mouth-to-mouth resuscitation.

Ingestion:
Not expected to be a problem. Seek medical attention if discomfort occurs. Do not induce vomiting.

SECTION 5 : FIRE FIGHTING MEASURES

Fire:
FLAMMABILITY (solids): Not Established

AUTO FLAMMABILITY deg C (deg F): Not Applicable

Explosion:
EXPLOSIVE PROPERTIES: Not Applicable

Flash Point:
210 deg C (410 deg F)

Flash Point Method:
ASTM D-92

Upper Flammable or Explosive Limit:
Approx.% vol. in air: 7.0%

Lower Flammable or Explosive Limit:
Approx.% vol. in air: 0.9%

Extinguishing Media:
Carbon dioxide, foam, dry chemical and water fog.

Hazardous Combustion Byproducts:
Fumes, smoke, carbon monoxide, sulfur oxides, aldehydes and other
decomposition products, in the case of incomplete combustion.

**Fire Fighting Instructions:**
Water or foam may cause frothing. Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

**Protective Equipment:**
For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

**NFPA**
- Health: 0
- Flammability: 1
- Reactivity: 0
- Other:

**Unusual Fire Hazards:**
Note: Pressurized mists may form a flammable mixture.

### SECTION 6 : ACCIDENTAL RELEASE MEASURES

**Personal Precautions:**
See Section 8

**Environmental Precautions:**
Prevent material from entering sewers, water sources or low lying areas; advise the relevant authorities if it has, or if it contaminates soil/vegetation.

**Land Spill:**
Shut off source taking normal safety precautions. Take measures to minimize the effects on ground water. Recover by pumping or contain spilled material with sand or other suitable absorbent and remove mechanically into containers. If necessary dispose of adsorbed residues as directed in Section 13.

**Water Spill:**
Confine the spill immediately with booms. Warn other ships in the vicinity. Notify port and other relevant authorities. Remove from the surface by skimming or with suitable absorbents. If permitted by regulatory authorities the use of suitable dispersants should be considered where recommended in local oil spill procedures.

**Spill/Release Reporting:**
NOTIFICATION PROCEDURES: Report spills/releases as required to appropriate authorities. U.S. Coast Guard and EPA regulations require immediate reporting of spills/releases that could reach any waterway including intermittent dry creeks. Report spill/release to Coast Guard National Response Center toll free number (800) 424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.

### SECTION 7 : HANDLING and STORAGE

**Handling:**
High pressure injection under the skin may occur due to the rupture of pressurized lines. Always seek medical attention. No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.
Storage:
Keep containers closed when not in use. Do not store in open or unlabelled containers. Store away from strong oxidizing agents and combustible materials. Do not store near heat, sparks, flame or strong oxidants.

SPECIAL PRECAUTIONS:
Prevent small spills and leakages to avoid slip hazard.

EMPTY CONTAINER WARNING: Empty containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUS INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION

Ventilation System:
If mists are generated, use adequate ventilation, local exhaust or enclosures to control below exposure limits.

Skin Protection Description:
Not normally required. When splashing or liquid contact can occur frequently, wear oil resistant gloves and/or other protective clothing. Good personal hygiene practices should always be followed.

Eye/Face Protection:
If eye contact is likely, safety glasses with side shields or chemical type goggles should be worn.

Respiratory Protection:
If mists are generated, and/or when ventilation is not adequate, wear approved respirator.

Exposure Limits:
When mists/aerosols can occur, the following are recommended:
5 mg/m3 (as oil mist) - ACGIH Threshold Limit Value (TLV)
10 mg/m3 (as oil mist) - ACGIH Short Term Exposure Limit (STEL)
5 mg/m3 (as oil mist) - OSHA Permissible Exposure Limit (PEL)

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance:
Liquid
Color:
Amber
Odor:
Mild
pH:
Vapor Pressure: 
mmHg 20 deg C: < 0.1

Vapor Density: 
> 2.0

Boiling Point: 
> 316 deg C (600 deg F)

Freezing Point: 
Deg C (Deg F): Not Established

Melting Point: 
Deg C (Deg F): Not Applicable

Solubility: 
IN WATER: Negligible

Density: 
RELATIVE DENSITY, 15/4 deg C: 0.874

Evaporation Point: 
Not Established

Volatile Organic Compound Content: 
Not Established

Viscosity: 
AT 40 deg C, cSt: 32.0
AT 100 deg C, cSt: 6.1

Pour Point: 
-45 deg C (-49 deg F)

Odor Threshold: 
ppm: Not Established

Coefficient of Water/Oil Distribution: 
PARTITION COEFFICIENT: > 3.5

Flashpoint: 
210 deg C (410 deg F)

Upper Flammable Explosive Limit: 
Approx.% vol. in air: 7.0%

Lower Flammable Explosive Limit: 
Approx.% vol. in air: 0.9%

FLASH POINT METHOD:
ASTM D-92

FLAMMABILITY (solids): Not Established

AUTO FLAMMABILITY Deg C (Deg F): Not Applicable

EXPLOSIVE PROPERTIES: Not Applicable

OXIDIZING PROPERTIES: Not Applicable

DMSO EXTRACT, IP-346 (WT.%): < 3, for mineral oil only
FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE

Typical physical properties are given above. Consult Product Data Sheet for specific details.

SECTION 10 : STABILITY AND REACTIVITY

Chemical Stability:
(THERMAL, LIGHT, ETC.): Stable.

Conditions to Avoid:
Extreme heat and high energy sources of ignition.

Incompatibilities with Other Materials:
(MATERIALS TO AVOID): Strong oxidizers.

Hazardous Polymerization:
Will not occur.

Hazardous Decomposition Products:
Product does not decompose at ambient temperatures.

SECTION 11 : TOXICOLOGICAL INFORMATION

HYDROTREATED LIGHT NAPHTHENIC DISTILLATE (PETROLEUM):

Acute Health Effects:
OTHER ACUTE TOXICITY DATA: Although an acute inhalation study was not performed with this product, a variety of mineral and synthetic oils, such as those in this product, have been tested. These samples had virtually no effect other than a nonspecific inflammatory response in the lung to the aerosolized mineral oil. The presence of additives in other tested formulations (in approximately the same amounts as in the present formulation) did not alter the observed effects.

Skin Effects:
DERMAL TOXICITY (RABBITS): Practically non-toxic (LD50: greater than 2000 mg/kg). Based on testing of similar products and/or the components.

Ingestion Effects:
ORAL TOXICITY (RATS): Practically non-toxic (LD50: greater than 2000 mg/kg). Based on testing of similar products and/or the components.

Inhalation Effects:
INHALATION TOXICITY (RATS): Practically non-toxic (LC50: greater than 5 mg/l). Based on testing of similar products and/or the components.

Subchronic Effects:
No significant adverse effects were found in studies using repeated dermal applications of similar formulations to the skin of laboratory animals for 13 weeks at doses significantly higher than those expected during normal industrial exposure. The animals were evaluated extensively for effects of exposure (hematology, serum chemistry, urinalysis, organ weights, microscopic examination of tissues etc.).

Chronic Effects:
Repeated and/or prolonged exposure may cause irritation to the skin, eyes or respiratory tract. Overexposure to oil mist may result in oil droplet deposition...
and/or granuloma formation. For mineral base oils: Base oils in this product are severely solvent refined and/or severely hydrotreated. Chronic mouse skin painting studies of severely treated oils showed no evidence of carcinogenic effects. These results are confirmed on a continuing basis using various screening methods such as Modified Ames Test, IP-346, and/or other analytical methods.

Carcinogenicity:
For synthetic base oils: These base oils are not expected to be carcinogenic with chronic dermal exposures.

Mutagenicity:
For synthetic base oils: The base oils in this product have been tested in the Ames assay and other tests of mutagenicity with negative results.

Sensitization:
Not expected to be sensitizing based on tests of this product, components, or similar products.

Reproductive Toxicity:
No teratogenic effects would be expected from dermal exposure, based on laboratory developmental toxicity studies of major components in this formulation and/or materials of similar composition.

Irritation:
EYE IRRITATION (RABBITS): Practically non-irritating. (Draize score: greater than 6 but 15 or less). Based on testing of similar products and/or the components.

SKIN IRRITATION (RABBITS): Practically non-irritating. (Primary Irritation Index: greater than 0.5 but less than 3). Based on testing of similar products and/or the components.

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:
Available ectoxicity data (LL50 > 1000 mg/L) indicates that adverse effects to aquatic organisms are not expected from this product.

Environmental Fate:
ENVIRONMENTAL FATE AND EFFECTS:
In the absence of specific environmental data for this product, this assessment is based on information for representative products.

MOBILITY:
When released into the environment, adsorption to sediment and soil will be the predominant behavior.

PERSISTENCE AND DEGRADABILITY: This product is expected to be inherently biodegradable.

BIOACCUMULATIVE POTENTIAL: Bioaccumulation is unlikely due to the very low water solubility of this product, therefore bioavailability to aquatic organisms is minimal.

SECTION 13 : DISPOSAL CONSIDERATIONS
Waste Disposal:
Product is suitable for burning in an enclosed, controlled burner for fuel value. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at an appropriate government waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

RCRA Hazard Class:
RCRA INFORMATION: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity. The unused product is not formulated with substances covered by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Information:
NOT REGULATED BY USA DOT.

IMO:
NOT REGULATED BY IMO.

IATA:
NOT REGULATED BY IATA.

RID/ADR: NOT REGULATED BY RID/ADR.

NAERG Number: DOT ERG No.: Not Applicable

STATIC ACCUMULATOR (50 picosiemens or less): YES

SECTION 15 : REGULATORY INFORMATION

HYDROTREATED LIGHT NAPHTHENIC DISTILLATE (PETROLEUM):

TSCA 8(b): Inventory Status
All components comply with TSCA.

Section 302:
U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:
This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

Section 312 Hazard Category:
SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

Section 313 Toxic Release Form:
This product contains no chemicals subject to the supplier notification requirement of SARA (313) toxic release program.

OSHA 29 CFR 1200:
When used for its intended purposes, this product is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

Regulatory Paragraph:
THIS PRODUCT HAS BEEN AUTHORIZED BY USDA FOR USE UNDER THE
FOLLOWING CATEGORY: This product is acceptable as a lubricant where there is no possibility of food contact (complies with earlier USDA guidelines for H-2 lubricant use).

The following product ingredients are cited on the lists below:

**CHEMICAL NAME: ZINC (ELEMENTAL ANALYSIS)**
CAS NUMBER: 7440-66-6  
Percentage: 0.08%  
LIST CITATIONS: 22

**CHEMICAL NAME: ZINC ALKYL DITHIOPHOSPHATE**
CAS NUMBER: 68649-42-3  
Percentage: 0.67%  
LIST CITATIONS: 22

--- REGULATORY LISTS SEARCHED ---
1 = ACGIH ALL
2 = ACGIH A1
3 = ACGIH A2
4 = NTP CARC
5 = NTP SUS
6 = IARC 1
7 = IARC 2A
8 = IARC 2B
9 = OSHA CARC
10 = OSHA Z
11 = TSCA 4
12 = TSCA 5a2
13 = TSCA 5e
14 = TSCA 6
15 = TSCA 12b
16 = CA P65 CARC
17 = CA P65 REPRO
18 = CA RTK
19 = FL RTK
20 = IL RTK
21 = LA RTK
22 = MI 293
23 = MN RTK
24 = NJ RTK
25 = PA RTK
26 = RI RTK

Code key:  
CARC = Carcinogen  
SUS = Suspected Carcinogen  
REPRO = Reproductive

**Canada DSL:** All components comply with DSL.

**European Community Chemical Inventory Status:**
All components comply with EINECS/ELINCS.

EU Labeling: Product is not dangerous as defined by the European Union Dangerous Substances/Preparations Directives. EU labeling not required.
Australia Chemical Inventory Status:
All components comply with AICS.

International Chemical Inventory Lists:
Governmental Inventory Status: All components comply with KECl.

SECTION 16 : ADDITIONAL INFORMATION

NFPA:
Fire Hazard: 1
Health: 0
Reactivity: 0

Label Text:
USE: HYDRAULIC OIL

NOTE: PRODUCTS OF EXXON MOBIL CORPORATION AND ITS AFFILIATED COMPANIES ARE NOT FORMULATED TO CONTAIN PCBS.

Health studies have shown that many hydrocarbons pose potential human health risks which may vary from person to person. Information provided on this MSDS reflects intended use. This product should not be used for other applications. In any case, the following advice should be considered:

INDUSTRIAL LABEL:
Under normal conditions of intended use, this product does not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures.

Label First Aid:
Wash skin with soap and water. Flush eyes with water. If overcome by fumes or vapor, remove to fresh air. If ingested do not induce vomiting. If symptoms persist seek medical assistance. Read and understand the MSDS before using this product

MSDS Revision Date:
25 APR 2003

MSDS Author:
ExxonMobil Oil Corporation
Environmental Health and Safety Department, Clinton, USA

Disclaimer:
Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, republication or retransmission of this document, in whole or in part, is not permitted. Exxon Mobil Corporation and its affiliated companies assume no responsibility for accuracy of information unless the document is the most current available from an official ExxonMobil distribution system. Exxon Mobil Corporation and its affiliated
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Abbreviations:
NA = NOT APPLICABLE
NE = NOT ESTABLISHED
D = DECOMPOSES

For Internal Use Only:
MHC: 1* 1* 1* 1* 1*
MPPEC: A
TRN: 602698-00
CMCS97: 970705
REQ: US - MARKETING
SAFE USE: L