

Prod.Name: MOBILFLUID LT
Manufacturer: EXXONMOBIL OIL CORP.
HMCS ID: 344024
SUC: 04 - Metal Working Fluids and Lubricants

MATERIAL SAFETY DATA SHEET

Revision: 09.Jun.2006
Effective: 20.Aug.2001
Print Date: 03.Dec.2009
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1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT INFORMATION

Product Name: MOBILFLUID LT
Recommended Use:
 GEAR OIL.

External Keys:

88861950 Distributable Material (Part #)
 Transfer Case Primary Tradename - Distributable Material
 Fluid
 PMRV0836 PMRV

MANUFACTURER INFORMATION

Manufacturer: EXXONMOBIL OIL CORP.

Address:

P.O. BOX 1031SEE MC82 USA NEW JERSEY 08540 PRINCETON CONTACT
 ALL US MSDS USE THIS
 P.O. BOX 1031SEE MC82, USA NEW JERSEY 08540 PRINCETON MAILING
 ALL US MSDS USE THIS

Communication Lines:

Phone 609-737-4411 EMERGENCY
 Phone 800-662-4525 0-003 EMERGENCY
 Phone 800-662-4525 MSDS PRODUCT INFORMATION
 Phone 609-737-4411 EMERGENCY
 Phone 800-662-4525 0-003 EMERGENCY
 Phone 800-662-4525 MSDS PRODUCT INFORMATION

Comment:

As of 6/9/06, the MSDS dated 8/2/01 is the most recent per the manufacturer.

2 INGREDIENT INFORMATION

FORMULATION

Ingredients:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Prefix</u>	<u>Value</u>	<u>Unit</u>	<u>Exposure Limits</u>
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	Range	1-5	% Wt	No
MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (severe) LIGHT NAPHTHENIC	64742-53-6	Range	5-15	% Wt	Yes
CALCIUM SULFONATE	989904-85-4	Range	1-5	% Wt	No

Comment:

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

3 HAZARDS IDENTIFICATION

Hazards Overview:

EMERGENCY OVERVIEW: Dark Amber Liquid. DOT ERG No. : NA.

Specific Hazards (Routes Of Exposure):

<u>Exposure Routes</u>	<u>Exposure Duration</u>	<u>Observation</u>
Eye Contact	General	Excessive exposure may result in eye.
Skin Contact	General	Excessive exposure may result in skin.
Inhalation	General	Excessive exposure may result in respiratory irritation.

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3 HAZARDS IDENTIFICATION

Medical Conditions Aggravated By Exposure:

NOT YET DETERMINED.

Additional Health Hazard Data:

POTENTIAL HEALTH EFFECTS: Under normal conditions of intended use, this product does not pose a risk to health.

SENSITIZATION (SUMMARY): Not expected to be sensitizing based on tests of this product, components, or similar products.

4 FIRST AID MEASURES

First Aid By::

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.
Skin Contact	Wash contact areas with soap and water. Remove and clean oil soaked clothing daily and wash affected area. (See Section 16 - Injection Injury)
Eye Contact	FLUSH THOROUGHLY WITH WATER. IF IRRITATION OCCURS, CALL A PHYSICIAN.
Ingestion	Not expected to be a problem. Seek medical attention if discomfort occurs. Do not induce vomiting.

5 FIRE FIGHTING MEASURES

Product Flammability:

FLAMMABILITY (SOLIDS): Not established.

Flash Point:

> 199 C (ASTM D-93). (390F)

Explosive Limits:

Upper Explosive Limit (UEL)	=	7.0	% Vol	Flammable Limits (approx.% vol.in air)
Lower Explosive Limit (LEL)	=	0.9	% Vol	Flammable Limits (approx.% vol.in air)

Explosion Properties:

Not applicable.

Autoignition Temperature:

Not
Applicable

Extinguishing Media:

CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

Fire and Explosion Hazards:

NONE

Special Fire Fighting Procedures:

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.

SPECIAL PROTECTIVE EQUIPMENT: For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

Comment:

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

OXIDIZING PROPERTIES: Not applicable.

6 ACCIDENTAL RELEASE MEASURES

PRECAUTIONS IN CASE OF ACCIDENTAL RELEASE

Personal Precautions:

See Section 8

Environmental Precautions:

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6 ACCIDENTAL RELEASE MEASURES

PRECAUTIONS IN CASE OF ACCIDENTAL RELEASE

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.

SPILL OR LEAK PROCEDURES

Recovery:

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.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: 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.

7 HANDLING AND STORAGE

HANDLING

Safe Handling Procedures:

No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.

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 CAUSE 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.

STORAGE

Storage Conditions:

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.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:

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

EXPOSURE LIMITS

Limit Values:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Type</u>	<u>Value</u>	<u>Specification</u>	<u>Source</u>
MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (severe) LIGHT NAPHTHENIC	64742-53-6	TLV-TWA	5mg/m3	-	Threshold Limit Values (TLVs) - ACGIH
MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (severe) LIGHT NAPHTHENIC	64742-53-6	TLV-STEL	10mg/m3	-	Threshold Limit Values (TLVs) - ACGIH
MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (severe) LIGHT NAPHTHENIC	64742-53-6	PEL-TWA	5mg/m3	-	OSHA - Permissible Exposure Limits (PELs)

Comment:

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8 EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS

Comment:

OCCUPATIONAL 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)

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment (PPE):

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

Skin Protection Not normally required. When splashing or liquid contact can occur frequently, wear other protective clothing. Good personal hygiene practices should always be followed.

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

Hand Protection Not normally required. When splashing or liquid contact can occur frequently, wear oil resistant gloves. Good personal hygiene practices should always be followed.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Physical State: Liquid.

Color: DARK AMBER

Odor: MILD. ODOR THRESHOLD: NE.

PHYSICAL PROPERTIES

pH Value:

Not
Applicable

Changes of State:

Boiling Point	>	316		(600 F)
Melting/Freezing Point	Not Applicable			Melting Point.
Pourpoint	=	-43	C	(-45 F)
Melting/Freezing Point	Not Established			Freeze Point

Vapor Pressure:

< 0.1 mmhg 20 C.

Vapor Density:

> 2.0

Evaporation Rate:

Not
Established

Density:

Density = 0.882 15/4 C. RELATIVE DENSITY.

Specific Gravity:

= 0.882

Solubility:

Water Negligible

Viscosity:

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9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Viscosity:

Viscosity = 34.0 At 40 C, CST

Viscosity = 7.0 100 C, cSt.

VOC:

Theoretical VOC (by. < 3.00 %Wt
wt.)

Theoretical VOC (by. = 0.215 lb/gal
wt.)

Additional Chemical and Physical Data:

PARTITION COEFFICIENT: > 3.5

Comment:

Typical physical properties are given below. Consult Product Data Sheet For specific details.

DMSO EXTRACT, IP-346 (WT.%): <3, for mineral oil only

FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE.

10 STABILITY AND REACTIVITY

STABILITY INFORMATION

Stability Under Normal Conditions: Stable

Conditions to Avoid:

Extreme heat and high energy sources of ignition.

Incompatible Materials:

STRONG OXIDIZERS.

Hazardous Polymerization:

Will not occur.

HAZARDOUS DECOMPOSITION

Reactions:

Type of Reaction

Reaction Products

Decomposition

Product does not decompose at ambient temperatures.

11 TOXICOLOGICAL INFORMATION

CLASSIFICATION OF INGREDIENTS

Carcinogenicity:

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. 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. These base oils are not expected to be carcinogenic with chronic dermal exposures.

Comment:

Additional toxicological data for individual ingredients is available from the MSDS Processing Center.

12 ECOLOGICAL INFORMATION

ENVIRONMENTAL IMPACT

Comment:

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

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12 ECOLOGICAL INFORMATION

ENVIRONMENTAL IMPACT

Comment:

bioavailability to aquatic organisms is minimal.

ECOTOXICITY

Comment:

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

13 DISPOSAL CONSIDERATIONS

Waste Disposal Information:

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 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.

14 TRANSPORT INFORMATION

DOT Information:

USA DOT: Not regulated by USA DOT.

Comment:

RID/ADR: NOT REGULATED BY RID/ADR.

IMO: NOT REGULATED BY IMO.

IATA: NOT REGULATED BY IATA.

STATIC ACCUMULATOR (50 picosiemens or less): YES

15 REGULATORY INFORMATION

LABELLING

Hazard Codes:

NFPA Flammability	1
NFPA Health	0
NFPA Reactivity	0

NATIONAL REGULATIONS

SARA 311/312: No

SARA 313: Yes

Immediate Health: No

Delayed Health: No

Fire: No

Sudden Pressure Release: No

Reactive: No

RCRA:

Hazardous Waste

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.

Other Regulation:

US OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this product

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15 REGULATORY INFORMATION

NATIONAL REGULATIONS

Other Regulation:

Governmental Inventory Status:

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:

SARA (311/312) REPORTABLE HAZARD CATEGORIES:

This product contains the following SARA (313) Toxic Release Chemicals:

THIS PRODUCT HAS BEEN AUTHORIZED BY USDA FOR USE UNDER THE FOLLOWING CATEGORY:

is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

All components comply with TSCA.

This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

None.

ZINC DITHIOPHOSPHATE (68649-42-3): <1.8%

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).

STATE/LOCAL REGULATIONS

Comment:

The following product ingredients are cited on these lists:

Toluene (0.17%) (108-88-3): 22= MI 293. 24= NJ RTK.

Zinc (Elemental Analysis (0.17%) (7440-66-6): 22= MI 293.

Zinc Dithiophosphate (<1.79%) (68649-42-3):

18= CA RTK

20=IL RTK

21=LA RTK

22= MI 293

24= NJ RTK

25=PA RTK

16 OTHER INFORMATION

Comments:

* EPA recently added new chemical substances to its TSCA Section 4 test rules. Please contact the supplier to confirm whether the ingredients in this product currently appear on a TSCA 4 or TSCA 12b list. Code key:CARC=Carcinogen; SUS=Suspected Carcinogen; REPRO=Reproductive

Additional Comments:

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:

INJECTION INJURY WARNING: If product is injected into or under the skin, or 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.

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. 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.