

Product Name: MARINE USED LUBRICATING OIL FOR ANALYSIS

Revision Date: 18Nov2005

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# MATERIAL SAFETY DATA SHEET

## SECTION 1

### PRODUCT AND COMPANY IDENTIFICATION

#### PRODUCT

**Product Name:** MARINE USED LUBRICATING OIL FOR ANALYSIS

**Product Description:** Hydrocarbons and Additives

**Product Code:** 361014-03

**Intended Use:** Recovery/by-product

#### COMPANY IDENTIFICATION

**Supplier:** EXXON MOBIL CORPORATION

3225 GALLOWS ROAD  
FAIRFAX, VA. 22037 USA

**24 Hour Health Emergency** 609-737-4411

**Transportation Emergency Phone** 800-424-9300

**ExxonMobil Transportation No.** 281-834-3296

**MSDS Requests** 713-613-3661

**Product Technical Information** 800-662-4525 / 800-947-9147

**MSDS Internet Address** <http://www.exxon.com>, <http://www.mobil.com>

## SECTION 2

### COMPOSITION / INFORMATION ON INGREDIENTS

#### Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*
CARBON BLACK	1333-86-4	0.1 - 1%
LUBRICATING OILS, USED	92045-40-4	90 - 100%
PHOSPHORODITHOIC ACID, O,O-DI C1-14-ALKYL ESTERS, ZINC SALTS (2:1) (ZDDP)	68649-42-3	1 - 5%

\* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

## SECTION 3

### HAZARDS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

#### POTENTIAL HEALTH EFFECTS

Under conditions of poor personal hygiene and prolonged repeated contact, some polycyclic aromatic compounds (PACs) have been suspected as a cause of skin cancer in humans. Excessive exposure may result in eye, skin, or respiratory irritation.

#### ENVIRONMENTAL HAZARDS

May cause long-term adverse effects in the aquatic environment.

**NFPA Hazard ID:** Health: 1 Flammability: 1 Reactivity: 0

**HMIS Hazard ID:** Health: 1\* Flammability: 1 Reactivity: 0

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**NOTE:** This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

#### SECTION 4 FIRST AID MEASURES

##### INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

##### SKIN CONTACT

Remove contaminated clothing. Dry wipe exposed skin and cleanse with waterless hand cleaner and follow by washing thoroughly with soap and water. For those providing assistance, avoid further skin contact to yourself or others. Wear impervious gloves. Launder contaminated clothing separately before reuse. Discard contaminated articles that cannot be laundered.

##### EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

##### INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

#### SECTION 5 FIRE FIGHTING MEASURES

##### EXTINGUISHING MEDIA

**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**Inappropriate Extinguishing Media:** Straight Streams of Water

##### FIRE FIGHTING

**Fire Fighting Instructions:** Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**Hazardous Combustion Products:** Smoke, Fume, Sulfur oxides, Aldehydes, Incomplete combustion products, Metal Oxides, Oxides of carbon

##### FLAMMABILITY PROPERTIES

**Flash Point [Method]:** >93°C (200°F) [ASTM D-93]

**Flammable Limits (Approximate volume % in air):** LEL: 0.6 UEL: 7.0

**Autoignition Temperature:** N/D

#### SECTION 6 ACCIDENTAL RELEASE MEASURES

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## NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. U.S. regulations require reporting releases of this material to the environment which exceed the reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

## SPILL MANAGEMENT

**Land Spill:** Stop leak if you can do it without risk. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. If liquid is too viscous for pumping, scrape it up with shovels into a suitable container for recycle or disposal.

**Water Spill:** Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

## ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

<b>SECTION 7</b>	<b>HANDLING AND STORAGE</b>
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### HANDLING

Avoid contact with used product. Prevent small spills and leakage to avoid slip hazard. The composition of used motor oil is variable, depending on the source of the used oil and segregation practices. Procedures should be established to minimize contamination by ensuring segregation of used oil from other materials, such as ethylene glycol and halogenated solvents, used in the same work area. Properly segregated used motor oil can be expected to contain low levels of lead from leaded gasoline and aromatic hydrocarbons from oil oxidation and fuel combustion by-products.

**Static Accumulator:** This material is a static accumulator.

### STORAGE

Do not store in open or unlabelled containers.

<b>SECTION 8</b>	<b>EXPOSURE CONTROLS / PERSONAL PROTECTION</b>
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### EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Source	Form	Limit / Standard			Note	Source
CARBON BLACK		TWA	3.5 mg/m <sup>3</sup>		N/A	OSHA Z1
CARBON BLACK		TWA	3.5 mg/m <sup>3</sup>		N/A	ACGIH

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**Exposure limits/standards for materials that can be formed when handling this product:** When mists / aerosols can occur, the following are recommended: 5 mg/m<sup>3</sup> - ACGIH TLV, 10 mg/m<sup>3</sup> - ACGIH STEL, 5 mg/m<sup>3</sup> - OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

## ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

## PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

**Respiratory Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**Hand Protection:** Any specific glove information provided is based on published literature and glove manufacturer data. Work conditions can greatly effect glove durability; inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

**Eye Protection:** If contact is likely, safety glasses with side shields are recommended.

**Skin and Body Protection:** Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

Chemical resistant clothing, including apron and sleeves, when handling bulk quantities.

**Specific Hygiene Measures:** 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. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

## ENVIRONMENTAL CONTROLS

See Sections 6, 7, 12, 13.

<b>SECTION 9</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
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Typical physical and chemical properties are given below.

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#### GENERAL INFORMATION

**Physical State:** Liquid

**Color:** Dark Brown

**Odor:** Characteristic

**Odor Threshold:** N/D

#### IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

**Relative Density (at 15 °C):** 0.9

**Flash Point [Method]:** >93°C (200°F) [ASTM D-93]

**Flammable Limits (Approximate volume % in air):** LEL: 0.6 UEL: 7.0

**Autoignition Temperature:** N/D

**Boiling Point / Range:** N/D

**Vapor Density (Air = 1):** > 2 at 101 kPa

**Vapor Pressure:** < 0.133 kPa (1 mm Hg) at 20°C

**Evaporation Rate (n-butyl acetate = 1):** N/D

**pH:** N/A

**Log Pow (n-Octanol/Water Partition Coefficient):** N/D

**Solubility in Water:** Negligible

**Viscosity:** N/D

**Oxidizing Properties:** See Sections 3, 15, 16.

#### OTHER INFORMATION

**Freezing Point:** N/D

**Melting Point:** N/A

<b>SECTION 10</b>	<b>STABILITY AND REACTIVITY</b>
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**STABILITY:** Material is stable under normal conditions.

**CONDITIONS TO AVOID:** Excessive heat. High energy sources of ignition.

**MATERIALS TO AVOID:** Strong oxidizers

**HAZARDOUS DECOMPOSITION PRODUCTS:** Material does not decompose at ambient temperatures.

**HAZARDOUS POLYMERIZATION:** Will not occur.

<b>SECTION 11</b>	<b>TOXICOLOGICAL INFORMATION</b>
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#### ACUTE TOXICITY

Route of Exposure	Conclusion / Remarks
<b>Inhalation</b>	
Toxicity: No end point data.	Not determined.
Irritation: No end point data.	Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs. Based on assessment of the components.
<b>Ingestion</b>	
Toxicity (Rat): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
<b>Skin</b>	

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Toxicity (Rabbit): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): No end point data.	Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.
<b>Eye</b>	
Irritation (Rabbit): No end point data.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

### CHRONIC/OTHER EFFECTS

#### For the product itself:

The toxicological properties of this material have not been fully assessed. This material must be used by or under the supervision of a technically qualified person.

Diesel engine oils: Not carcinogenic in animals tests. Used and unused diesel engine oils did not produce any carcinogenic effects in chronic mouse skin painting studies.

#### Contains:

Carbon black: Certain carbon blacks have proved carcinogenic in animal studies. Inhalation animal studies of high concentrations resulted in chronic inflammation, lung fibrosis and lung tumors. Epidemiology studies of workers include findings of bronchitis, pneumonia, emphysema and excess cancer. Substances bound in a polymer or other matrix should present little or no hazard.

Additional information is available by request.

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
CARBON BLACK	1333-86-4	5

--REGULATORY LISTS SEARCHED--

1 = NTP CARC

3 = IARC 1

5 = IARC 2B

2 = NTP SUS

4 = IARC 2A

6 = OSHA CARC

## SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

### ECOTOXICITY

Material -- May cause long-term adverse effects in the aquatic environment.

### PERSISTENCE AND DEGRADABILITY

#### Biodegradation:

Base oil component -- Expected to be inherently biodegradable

## SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws

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and regulations, and material characteristics at time of disposal.

#### DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

#### REGULATORY DISPOSAL INFORMATION

RCRA Information: Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Potential RCRA characteristics: TCLP (LEAD, BENZENE, CHROMIUM)

**Empty Container Warning** PRECAUTIONARY LABEL TEXT: Empty containers may retain residue 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.

<b>SECTION 14</b>	<b>TRANSPORT INFORMATION</b>
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**LAND (DOT)** : Not Regulated for Land Transport

**LAND (TDG)** : Not Regulated for Land Transport

**SEA (IMDG)** : Not Regulated for Sea Transport according to IMDG-Code

**AIR (IATA)** : Not Regulated for Air Transport

<b>SECTION 15</b>	<b>REGULATORY INFORMATION</b>
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**OSHA HAZARD COMMUNICATION STANDARD:** When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

**NATIONAL CHEMICAL INVENTORY LISTING:** AICS, EINECS, ENCS, TSCA

**EPCRA:** This material contains no extremely hazardous substances.

**SARA (311/312) REPORTABLE HAZARD CATEGORIES:** None.

**SARA (313) TOXIC RELEASE INVENTORY:**

Chemical Name	CAS Number	Typical Value
PHOSPHORODITHOIC ACID, O,O-DI C1-14-ALKYL ESTERS, ZINC SALTS (2:1) (ZDDP)	68649-42-3	1 - 5%

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**The Following Ingredients are Cited on the Lists Below:**

Chemical Name	CAS Number	List Citations
CALCIUM	7440-70-2	17, 19
CARBON BLACK	1333-86-4	1, 4, 10, 13, 16, 17, 18, 19
PHOSPHORODITHOIC ACID, O,O-DI C1-14-ALKYL ESTERS, ZINC SALTS (2:1) (ZDDP)	68649-42-3	13, 15, 17
PHOSPHORUS	7723-14-0	1, 4
XYLENES	1330-20-7	5, 9, 15

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

<b>SECTION 16</b>	<b>OTHER INFORMATION</b>
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N/D = Not determined, N/A = Not applicable

**THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:**

Revision Changes:

- Section 04: First Aid Inhalation was modified.
- Section 01: Product Identification Product Name was modified.
- Section 06: Accidental Release - Spill Management - Water was modified.
- Section 02: Component table was modified.
- Section 15: List Citations Table was modified.
- Section 15: SARA (311/312) REPORTABLE HAZARD CATEGORIES was modified.
- Section 06: Accidental Release Measures - Environmental Precautions was modified.
- Section 15: OSHA Hazard Communication Standard was modified.
- Section 13: RCRA Information Header was modified.
- Section 08: Exposure Limits Table was modified.
- Section 11: Chronic Tox - Component was modified.
- Section 11: Chronic Tox - Product was modified.
- Section 08: Exposure Limit Values - Header was modified.
- Section 16: Global Disclaimer was added.
- Section 03: OSHA - Not Hazardous Statement was added.
- Section 03: OSHA - May be Hazardous Statement was added.
- Section 03: Health Hazards was deleted.
- Section 16: Precautionary Label Text - Header was deleted.
- Section 16: Signal Word was deleted.
- Section 16: Health Hazards was deleted.
- Section 16: Health Hazards - Header was deleted.
- Section 16: Precautions was deleted.
- Section 16: Precautions - Header was deleted.
- Section 16: First Aid - Header was deleted.
- Section 16: First Aid Eye - Header was deleted.



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Section 16: First Aid Eye was deleted.  
Section 16: First Aid Skin was deleted.  
Section 16: First Aid Skin - Header was deleted.  
Section 16: First Aid Inhalation - Header was deleted.  
Section 16: First Aid Inhalation was deleted.  
Section 16: Fire Fighting Media - Header was deleted.  
Section 16: Fire Fighting Media - Header was deleted.  
Section 16: Spill - Header was deleted.  
Section 16: Water Spill - Header was deleted.  
Section 16: Water Spill was deleted.  
Section 16: Land Spill was deleted.  
Section 16: Land Spill - Header was deleted.  
Section 16: Labeling Use was deleted.  
Section 16: Labeling Use - Header was deleted.  
Section 16: NA Contains was deleted.  
Section 16: NA Contains - Header was deleted.  
Section 16: Disclaimer was deleted.  
Section 03: OSHA - Hazards Statement was deleted.

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This warning is given to comply with California Health and Safety Code 25249.6 and does not constitute an admission or a waiver of rights. This product contains a chemical known to the State of California to cause cancer.

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