

# Micromeritics Material Safety Data Sheet

Title : OIL, SYNTHETIC, 15W50 GRADE  
Date of Preparation : 04/17/03

MSDS No. : 004/16011/01MSDS  
Revision : A

## Section 1 - Chemical Product and Company Identification

**Product/Chemical Name:** Mobil 1 Formula 15W-50  
**Chemical Formula:** Not Applicable  
**CAS Number:** Not Applicable  
**Other Designations:** Syn. Hydrocarbons and Additives

**General Use:** Automotive Engine Oil

**Supplier:** Micromeritics Instrument Corp.  
1 Micromeritics Dr.  
Norcross, GA 30093-1877 USA

Contact: Human Resources  
Phone: (770) 662-3620  
Fax: (770) 662-3696

**Manufacturer:** Mobil Oil Corp., North America Marketing and Refining, 3225 Gallows Rd., Fairfax, VA, 22037,  
Phone (800)662-4525, 24-Hr. Emergency (609)737-4411, Chemtrec (800)424-9300.

## Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number		
Please call the Customer Response Center on (800) 662-4525 for formulation disclosure			
ZINC DITHIOPHOSPHATE [List Citations: 18, 20, 21, 22, 24, 25]	68649-42-3	1.08%	
BUTYL BENZYL PHTHALATE [List Citations: 22, 24]	85-68-7	>0.96%	
ZINC (Elemental Analysis) [List Citations: 22] [See Section 16]	7440-66-6	0.13%	

**INGREDIENTS CONSIDERED HAZARDOUS TO HEALTH:** This product is not formulated to contain ingredients which have exposure limits established by U.S. agencies. It is not hazardous to health as defined by the European Union Dangerous Substances/Preparations Directives. See Section 15 for a regulatory analysis of the ingredients.

See Section 15 for European Label Information.

See Section 8 for exposure limits (if applicable).

### Trace Impurities:

	OSHA PEL	ACGIH TLV	NIOSH REL	NIOS H
Ingredient	TWA	STEL	TWA	STEL
Not Applicable	none estab.	none estab.	none estab.	none estab.

## Section 3 - Hazards Identification

### ★☆☆☆☆ Emergency Overview ☆☆☆☆☆

HMIS
H 0
F 1
R 0
PPE <sup>†</sup>
<sup>†</sup> Sec. 8

### Potential Health Effects

**Primary Entry Routes:** Not Applicable

**Target Organs:** Not Applicable

#### Acute Effects

**Inhalation:** Not Applicable

**Eye:** Not Applicable

**Skin:** Not Applicable

**Ingestion:** Not Applicable

**Carcinogenicity:** Not Applicable

**Medical Conditions Aggravated by Long-Term Exposure:** No significant effects expected.

**Chronic Effects:** No significant effects expected.

## Section 4 - First Aid Measures

**Inhalation:** Not expected to be a problem.

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

**Skin Contact:** Wash contact areas with soap and water.

**Ingestion:** Not expected to be a problem. However, if greater than 1/2 liter (pint) ingested, seek medical attention. Not Applicable

**Note to Physicians:** Not Applicable

**Special Precautions/Procedures:** Not Applicable

## Section 5 - Fire-Fighting Measures

**Flash Point:** > 417 °F (214°C) (ASTM D-92).

NFPA

**Flash Point Method:** Not Applicable

**Burning Rate:** Not Applicable

**Autoignition Temperature:** NE

**LEL:** NA

**UEL:** NA

**Flammability Classification:** NE

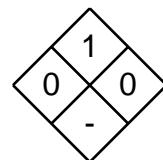
**Extinguishing Media:** Carbon dioxide, foam, dry chemical and water fog.

**Unusual Fire or Explosion Hazards:** OXIDIZING PROPERTIES: NA

**Hazardous Combustion Products:** None.

**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.

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



## Section 6 - Accidental Release Measures

**Spill /Leak Procedures:** Absorb on fire retardant treated sawdust, diatomaceous earth, etc. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal. Prevent spills from entering storm sewers or drains and contact with soil.

**Small Spills:** Not Applicable

**Large Spills**

**Containment:** Not Applicable

**Cleanup:** Not Applicable

**Regulatory Requirements:** Not Applicable

**Notification Procedures:** Report spills as required to appropriate authorities. U.S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard toll free number (800) 424-8802. In case of accident or road spill notify Chemtrec (800) 424-9300.

## Section 7 - Handling and Storage

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

**Storage Requirements:** Do not store in open or unlabelled containers. Store away from strong oxidizing agents or combustible material.

**Regulatory Requirements:** Not Applicable

## Section 8 - Exposure Controls / Personal Protection

**Engineering Controls:** Not Applicable

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

**Administrative Controls:** Not Applicable

**Respiratory Protection:** No special requirements under ordinary conditions of use and with adequate ventilation.

**Protective Clothing/Equipment:** EYE PROTECTION: Normal industrial eye protection practices should be employed. SKIN PROTECTION: No special equipment required. However, good personal hygiene practices should always be followed.

**Safety Stations:** Not Applicable

**Contaminated Equipment:** Not Applicable

**Comments:** EXPOSURE LIMITS: This product does not contain any components which have recognized exposure limits. However, an exposure limit of 5.00 mg/m<sup>3</sup> is suggested for oil mist.

## Section 9 - Physical and Chemical Properties

**Physical State:** Not Applicable

**Appearance and Odor:** Amber Liquid. Mild odor

**Odor Threshold:** NE

**Vapor Pressure:** <0.1 mm Hg at 20 °C

**Vapor Density (Air=1):** >2.0

**Formula Weight:** Not Applicable

**Density:** 15/4 C: 0.86-0.88

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):**

**pH:** NA

**PARTITION COEFFICIENT:** > 3.5

**VOLATILE ORGANIC COMPOUND:** NE

**Water Solubility:** Negligible

**Other Solubilities:** Not Applicable

**Boiling Point:** > 600°F (316°C)

**Freezing/Melting Point:** NA

**Viscosity:** 120.0 cSt at 40 C, 17.3 cSt at 100 C

**Refractive Index:** Not Applicable

**Surface Tension:** Not Applicable

**% Volatile:** Not Applicable

**Evaporation Rate:** NE

**POUR POINT:** -65F°(-54C°)

## Section 10 - Stability and Reactivity

**Stability:** Stable.

**Polymerization:** Will not occur.

**Chemical Incompatibilities:** Strong oxidizers.

**Conditions to Avoid:** Extreme heat.

**Hazardous Decomposition Products:** Metal Oxides. Carbon monoxide. Elemental oxides.

## Section 11- Toxicological Information

### Toxicity Data:\*

**Eye Effects:** (Rabbits): Practically non-irritating. (Draize score: > 6, < 16). Based on testing of similar products and/or the components.

**Skin Effects:** (Rabbits): Practically non-irritating. (Primary Irritation Index: > 0.5, < 3). Based on testing of similar products and/or the components.

**DERMAL TOXICITY (Rabbits):** Practically non-toxic (LD<sub>50</sub>: > 2000 mg/kg) Based on testing of similar products and/or the components.

### Acute Inhalation Toxicity:

(Rats): Not Applicable Harmful concentrations of mists and/or vapors are unlikely to be encountered through any customary or reasonably foreseeable handling, use, or misuse of this product.

### Acute Oral Effects:

(Rats): Practically non-toxic (LD<sub>50</sub>: > 2000 mg/kg) Based on testing of similar products and/or the components.

### Chronic Effects:

Not Applicable

### Carcinogenicity:

Not Applicable

### Mutagenicity:

Not Applicable

### Teratogenicity:

Not Applicable

**OTHER ACUTE TOXICITY DATA:** The acute toxicological results summarized above are based on testing of representative Mobil Products. Representative Mobil formulations have shown no acute effects, administered via the inhalation route, when tested at maximum attainable oil mist or vapor concentrations.

**SUBCHRONIC TOXICOLOGY (SUMMARY)** Representative Mobil formulations have been tested at the Mobil Environmental and Health Sciences Laboratory by dermal applications to rats 5 days/week for 90 days at doses significantly higher than those expected during normal industrial exposure. Extensive evaluations, including microscopic examination of internal organs and clinical chemistry of body fluids, showed no adverse effects.

**REPRODUCTIVE TOXICOLOGY (SUMMARY)** Dermal exposure of pregnant rats to representative formulations did not cause adverse effects in either the mothers or their offspring.

**SENSITIZATION (SUMMARY)** Representative Mobil formulations have not caused skin sensitization in guinea pigs.

**OTHER TOXICITY DATA** This product is formulated with a synthetic hydrocarbon as the base stock. The Mobil Environmental and Health Sciences Laboratory has tested representative synthetic base stocks to assess their potential adverse effects on human health. Assessment of human health effects was based on acute oral, dermal, and inhalation toxicity; eye and skin irritation; subchronic dermal toxicity and reproductive studies; guinea pig sensitization; and mutagenicity and chromosomal damage assays. None of these base stocks appear to pose a health hazard to humans under conditions of expected use.

Used gasoline engine oils have shown evidence of skin carcinogenic activity in laboratory tests when no effort was made to wash the oil off between applications. Used oil from diesel engines did not produce this effect.

\* See NIOSH, RTECS (????0000), for additional toxicity data.

## Section 12 - Ecological Information

**Ecotoxicity:** Not Applicable

**Environmental Fate:** This product is expected to be inherently biodegradable. There is no evidence to suggest bioaccumulation will occur. Acute LC/EC50: Juvenile Rainbow Trout: Practically non-toxic. Based on testing of similar products.

**Environmental Degradation:** Not Applicable

**Soil Absorption/Mobility:** Not Applicable

**Environmental Precautions:** Accidental spillage may lead to penetration in the soil and groundwater. However, there is no evidence that this would cause adverse ecological effects.

## Section 13 - Disposal Considerations

**Disposal:** WASTE DISPOSAL: Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. 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 exposed 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.

**Disposal Regulatory Requirements:** 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 and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

**Container Cleaning and Disposal:** Not Applicable

## Section 14 - Transport Information

### DOT Transportation Data (49 CFR 172.101):

DOT ERG No.: NA

NOT REGULATED BY USA DOT

NOT REGULATED BY RID/ADR

NOT REGULATED BY IMO

NOT REGULATED BY IATA

**Shipping Name:** Not Applicable

**Shipping Symbols:** Not Applicable

**Hazard Class:** Not Applicable

**ID No.:** Not Applicable

**Packing Group:** Not Applicable

**Label:** Not Applicable

**Special Provisions (172.102):** Not Applicable

#### Packaging Authorizations

**a) Exceptions:** Not Applicable

**b) Non-bulk Packaging:** Not Applicable

**c) Bulk Packaging:** Not Applicable

#### Quantity Limitations

**a) Passenger, Aircraft, or Railcar:** Not Applicable

**b) Cargo Aircraft Only:** Not Applicable

#### Vessel Stowage Requirements

**a) Vessel Stowage:** Not Applicable

**b) Other:** Not Applicable

## Section 15 - Regulatory Information

**EPA Regulations:** Not Applicable

**OSHA Regulations:** Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined not to be hazardous.

**State Regulations:** Not Applicable

Governmental Inventory Status: All components comply with TSCA, EINECS/ELINCS, and MITI. EU labeling not required.

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

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

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

See Section 2

Regulatory Lists Searched:

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

Code Key: CARC=Carcinogen; SUS=Suspected Carcinogen; REPRO=Reproductive

## Section 16 - Other Information

**Prepared By:** M. Day

**Revision Notes:** Not Applicable

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES.

**Additional Hazard Rating Systems:** N/A

**Disclaimer:** Legally required information is given in accordance with applicable 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 any license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users. Use or retransmission of the information contained herein in any other format than the format as presented is strictly prohibited. Mobil neither represents nor warrants that the format, content or product formulas contained in this document comply with the laws of any other country except the United States of America.

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NOTE: Mobil products are not formulated to contain PCBs.

Please call the Customer Response Center on (800) 662-4525 for formulation disclosure