MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT
Product Name: MOBIL DELVAC SYNTHETIC TRANSMISSION FLUID 50
Product Description: Synthetic Base Stocks and Additives
Product Code: 20152010E010, 511600-00, 97AC48
Intended Use: Manual transmission fluid

COMPANY IDENTIFICATION
Supplier: EXXON MOBIL CORPORATION
3225 GALLOWS RD.
FAIRFAX, VA.  22037     USA
24 Hour Health Emergency 609-737-4411
Transportation Emergency Phone 800-424-9300
ExxonMobil Transportation No. 281-834-3296
Product Technical Information 800-662-4525, 800-947-9147

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

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

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS#</th>
<th>Concentration*</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMINES, C11-14 BRANCHED ALKYL MONOHEXYL AND DIHEXYL PHOSPHATES</td>
<td>80939-62-4</td>
<td>1 - 5%</td>
</tr>
<tr>
<td>DIISODECYL ADIPATE</td>
<td>27178-16-1</td>
<td>20 - 30%</td>
</tr>
</tbody>
</table>

* 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
Low order of toxicity. Excessive exposure may result in eye, skin, or respiratory irritation. High-pressure injection under skin may cause serious damage.

ENVIRONMENTAL HAZARDS
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

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  
Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. 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.

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 (CO2) 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, Aldehydes, Sulfur Oxides, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES  
Flash Point [Method]: >190°C (374°F) [ASTM D-92]  
Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0  
Autoignition Temperature: N/D

SECTION 6  ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES
In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable 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. Recover by pumping or with suitable absorbent.

**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.

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**SECTION 7**

**HANDLING AND STORAGE**

**HANDLING**

Avoid all personal contact. Prevent small spills and leakage to avoid slip hazard.

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

**STORAGE**

Do not store in open or unlabelled containers.

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**SECTION 8**

**EXPOSURE CONTROLS / PERSONAL PROTECTION**

**EXPOSURE LIMIT VALUES**

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

<table>
<thead>
<tr>
<th>Source</th>
<th>Form</th>
<th>Limit / Standard</th>
<th>NOTE</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIISODECYL ADIPATE</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>N/A</td>
<td>ExxonMobil</td>
</tr>
</tbody>
</table>

Exposure limits/standards for materials that can be formed when handling this product: When mists / aerosols can occur, the following are recommended: 5 mg/m³ - ACGIH TLV, 10 mg/m³ - ACGIH STEL, 5 mg/m³ - 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. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Chemical resistant gloves are recommended.

**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/oil resistant clothing is recommended.

**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.

SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

**GENERAL INFORMATION**

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Amber</td>
</tr>
<tr>
<td>Odor:</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Odor Threshold:</td>
<td>N/D</td>
</tr>
</tbody>
</table>
IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 C): 0.86
Flash Point [Method]: >190C (374F) [ ASTM D-92]
Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0
Autoignition Temperature: N/D
Boiling Point / Range: > 316C (600F)
Vapor Density (Air = 1): > 2 at 101 kPa
Vapor Pressure: < 0.013 kPa (0.1 mm Hg) at 20 C
Evaporation Rate (N-Butyl Acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): > 3.5
Solubility in Water: Negligible
Viscosity: 132 cSt (132 mm²/sec) at 40 C | 17.8 cSt (17.8 mm²/sec) at 100C

OTHER INFORMATION
Freezing Point: N/D
Melting Point: N/A
Pour Point: -40°C (-40°F)
DMSO Extract (mineral oil only), IP-346: < 3 %wt

SECTION 10 STABILITY AND REACTIVITY

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.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>Conclusion / Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inhalation</strong></td>
<td></td>
</tr>
<tr>
<td>Toxicity (Rat): LC50 &gt; 5000 mg/m³</td>
<td>Minimally Toxic. Based on assessment of the components.</td>
</tr>
<tr>
<td>Irritation: No end point data.</td>
<td>Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.</td>
</tr>
</tbody>
</table>

| **Ingestion** |                      |
| Toxicity (Rat): LD50 > 2000 mg/kg | Minimally Toxic. Based on test data for structurally similar materials. |

| **Skin** |                      |
| Toxicity (Rabbit): LD50 > 2000 mg/kg | Minimally Toxic. Based on test data for structurally similar materials. |
| Irritation (Rabbit): Data available. | Mildly irritating to skin with prolonged exposure. Based on test data for structurally similar materials. |

| **Eye** |                      |
CHRONIC/OTHER EFFECTS

Contains:
Synthetic base oils: Not expected to cause significant health effects under conditions of normal use, based on laboratory studies with the same or similar materials. Not mutagenic or genotoxic. Not sensitizing in test animals and humans.
Phenyl-alpha-naphthylamine (PAN): Undiluted PAN is a skin sensitizer. Human testing with lubricants containing 1.0% PAN caused no reactions indicative of sensitization.

Additional information is available by request.

The following ingredients are cited on the lists below:  None.

---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 -- Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

MOBILITY
Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

SECTION 13  DISPOSAL CONSIDERATIONS

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

**Empty Container Warning** Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, 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.

### SECTION 14 TRANSPORT INFORMATION

**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

### SECTION 15 REGULATORY INFORMATION

**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, IECSC, DSL, EINECS, ENCS, KECl, PICCS, TSCA

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

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

**SARA (313) TOXIC RELEASE INVENTORY:** This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

The following ingredients are cited on the lists below: None.

---REGULATORY LISTS SEARCHED---

1 = ACGIH ALL

2 = ACGIH A1

3 = ACGIH A2

4 = OSHA Z

5 = TSCA 4

6 = TSCA 5a2

7 = TSCA 5e

8 = TSCA 6

9 = TSCA 12b

10 = CA P65 CARC

11 = CA P65 REPRO

12 = CA RTK

13 = IL RTK

14 = LA RTK

15 = MI 293

16 = MN RTK

17 = NJ RTK

18 = PA RTK

19 = RI RTK

20 = WA RTK

21 = WIS RTK

22 = WV RTK

23 = WRTK

24 = WRTK
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