

**MATERIAL SAFETY DATA SHEET**

**eni MTL Synthetic CD-50 Transmission Lubricant**

**SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION:**

**LABEL IDENTITY(S):** eni MTL Synthetic CD-50 Transmission Lubricant  
**DESCRIPTION:** A synthetic non-EP monograde heavy duty manual transmission lubricant.  
**PRODUCT CAS NO.:** Not applicable to Mixtures, **see Composition Section 2 below.**  
**GENERIC/CHEMICAL NAME:** Petroleum hydrocarbon Mixture containing polyalphaolefins, polymer(s), polybutene, mineral oil, esters, and other proprietary additives.

**MANUFACTURER/  
SUPPLIER:** eni USA R&M Co. Inc.  
 539 Marwood Road  
 Cabot, PA 16023  
 Ph: (724) 352-4451  
 Fax: (724) 352-9543

**EMERGENCY TELEPHONE #:**  
**Manufacturer:** 8am - 5pm EST (M-F)  
 1-800-922-9243  
**Chemtrec:** 24hrs EVERYDAY  
 1-800-424-9300

**SECTION 2. COMPOSITION / INFORMATION OF INGREDIENTS:**

CHEMICAL INGREDIENT (see Section 1 for Grades)	COMPOSITION %(w/w)	CAS No.
<u>A.</u> Synthetic Base Oil	50 - 60	N/D-1 (8020-83-5)
<u>B.</u> Mineral Oil (Petroleum)	80 - 87	N/D-2 (8002-05-9)
<u>C.</u> Polybutene (Isobutylene/Butene Co-Polymer)	0 - 10	9003-29-6
<u>D.</u> DiIsoDecyl Adipate	5 - 10	27178-16-1
<u>E.</u> Alkyl Phenol	0.1 - 0.3	N/D-3 (74499-35-7)
<u>F.</u> Alkoxylated Long-Chain Alkyl Amine	0.1 - 0.3	N/D-4
<u>G.</u> Phosphorous Acid Salt	0.1 - 0.3	N/D-5
<u>H.</u> Alkyl Alkoxy Amine	0 - 0.1	N/D-6
<u>I.</u> Long Chain Alkyl DiThio Thiazole	0 - 0.1	N/D-7
<u>J.</u> Poly Long Chain Alkyl Methacrylate	1 - 5	N/D-8
<u>K.</u> Alkyl Methacrylate	0 - 0.4	N/D-9
<u>L.</u> <b>Other Misc. Additives Components:</b> includes Mineral Oil, and Other Undisclosed Mixtures - No Known Hazards.	13.5 - 43.7	N/D-10

cont. CAS No.	OSHA		ACGIH - TLV		OTHER / COMMENT
	PEL-TWA #	CEILING	TWA #	STEL	
<u>A.</u> N/D-1 (as Oil Mist)	5mg/m <sup>3</sup>	N/A	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	IDLH= 2500 mg/M <sup>3</sup>
<u>B.</u> N/D-2 (as Oil Mist)	5mg/m <sup>3</sup>	N/A	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	IDLH= 2500 mg/M <sup>3</sup>
<u>C.</u> 9003-29-6	N/A	N/A	N/A	N/A	N/A
<u>D.</u> 27178-16-1 (as Oil Mist)	5mg/m <sup>3</sup>	N/A	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	IDLH= 2500 mg/M <sup>3</sup>
<u>E.</u> N/D-3 (74499-35-7)	N/A	N/A	N/A	N/A	N/A
<u>F.</u> N/D-4	N/A	N/A	N/A	N/A	N/A
<u>G.</u> N/D-5	N/A	N/A	N/A	N/A	N/A
<u>H.</u> N/D-6	N/A	N/A	N/A	N/A	N/A
<u>I.</u> N/D-7	N/A	N/A	N/A	N/A	N/A
<u>J.</u> N/D-8	N/A	N/A	N/A	N/A	N/A
<u>K.</u> N/D-9	N/A	N/A	N/A	N/A	N/A
<u>L.</u> N/D-10	5mg/m <sup>3</sup>	N/A	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	IDLH= 2500 mg/M <sup>3</sup>

# = 8 hr. day & 40 hr. week TWA.

- NOTES:** *PEL = Permissible Exposure Limit (OSHA).*  
*TLV = Threshold Limit Value (ACGIH).*  
*TWA = Time-Weighted Average over a work day (usually 8-12 hr. day)*  
**Ceiling** = maximum allowable human exposure limit for an airborne substance; never to be exceeded even momentarily, (even if the 8-hr. TWA is not exceeded).  
**STEL** = Short-Term Exposure Limit = 15 minute Time-Weighted Average maximum allowable human exposure limit for an airborne substance; never to be exceeded even momentarily during a workday (even if the 8-hr. TWA is not exceeded).  
**IDLH** = Immediately Dangerous to Life and Health (NIOSH) = Airborne Concentration which may cause irreversible health effects or death.  
**N/D** = Information Not Disclosed by eni USA R&M's supplier and was withheld as a Trade Secret.

**SECTION 3. HAZARD IDENTIFICATION:**

**EMERGENCY OVERVIEW**

**APPEARANCE / STATE:** Amber to Dark Amber Color; Viscous liquid.

**CAUTION !!** **SLIPPING HAZARD IF SPILLED!**

**CAN BURN IF HEATED ABOVE ITS FLASH POINT.**

**HEALTH HAZARDS:**

- May be harmful if swallowed.
- May irritate eyes, skin, digestive/intestinal system.
- Vapor/Mist(s) can irritate eyes, lungs/respiratory system.

**ROUTES OF ENTRY:** Skin contact, eye contact, inhalation, and ingestion.

**TARGET ORGAN EFFECTS:** (refer to Sec. 11 Toxicological Information).

**Oil (as Mist):** Hazardous effects: Accumulation in Lungs (Pneumonitis). NFPA=0-1-0.  
(see Potential Health Effects-Inhalation, below for more detail).

**WARNING: AVOID SKIN CONTACT WITH USED HEAT-DEGRADED OILS, SUCH AS ENGINE OIL, METAL-WORKING OIL, ETC.!!**

(refer to Sec. 11 Toxicological Information - Other Considerations, for more detail)

(refer also to Sec. 16 for HMIS & NFPA Ratings).

**POTENTIAL HEALTH EFFECTS:**

(Signs & Symptoms of Exposure)

**INHALATION (Breathing):** This product as a low vapor pressure and is not expected to present an inhalation exposure at ambient conditions. However, upon heating to high temperatures, or mechanical actions which may produce aerosols, vapors, mists, or fumes, inhalation of product may cause irritation of the respiratory tract (lungs, breathing passages, nose, and throat), nausea, headache, and dizziness. Prolonged or repeated inhalation of Oil Mist may cause oil / chemical pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Exposure to fire can generate highly toxic fumes.

(refer also to Sec. 8 & 11 for more information).

- EYE CONTACT:** Liquid / Vapors may cause mild irritation. Prolonged or repeated eye contact with the liquid or its vapors may cause reddening and irritation. Inflammation of the membrane linings of the eyelids and covering of the eyeball (conjunctivitis) can also result.
- SKIN CONTACT:** Product may be irritating, and cause skin sensitization. Not likely to be absorbed through the skin in harmful amounts. Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis) due to skin defatting. It is possible that this material can become injected under the skin by a pressurized system. This can occur without visible external damage. In such an accident occurs, seek medical treatment.
- INGESTION (Swallowing):** May cause irritation of the GI tract. May cause generalized depression, headache, drowsiness, throat irritation, nausea, vomiting, and diarrhea. Breathing product into the lungs during ingestion or vomiting may cause lung injury, chemical pneumonia, and possible death.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

Eye Conditions/Diseases  
Skin Conditions/Diseases  
Respiratory System Conditions/Diseases, if mist/vapor(s) are generated.  
Lung (Asthma-like) Conditions/Diseases, if mist/vapor(s) are generated.

(refer also to Sec. 11 for Toxicological Information).

**SECTION 4. FIRST AID MEASURES:**

- INHALATION (Breathing):** Evacuate the victim to a safe area with fresh air as soon as possible. If the victim is not breathing, perform artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with the victim. Allow the victim to rest in a well ventilated area. Seek medical attention.
- EYE CONTACT:** Upon contact, remove contact lenses, if worn. Immediately flush eyes with low pressure water and continue washing for at least fifteen minutes, keeping eyelids open. If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Obtain medical attention.
- SKIN CONTACT:** Remove contaminated clothing and shoes - launder before reuse. Wash gently and thoroughly the contaminated skin with non-abrasive soap and running water. If irritation persists or if contact has been prolonged, obtain medical attention. If product is injected under pressure into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, a physician should immediately evaluate the individual as a medical/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 the injury.
- INGESTION (Swallowing):** **DO NOT** induce vomiting because of danger of aspirating liquid into lungs which can result in chemical pneumonia, other lung damage, mild to severe pulmonary injury, and possibly death. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. **ONLY** if the person is conscious, rise the mouth with water but without swallowing. **NEVER** give anything by mouth to an unconscious person. Keep airway clear. Seek medical attention, especially if aspiration into the lungs (such as spontaneous vomiting) has occurred.  
(refer to Sec. 3 for other Hazards).

**PHYSICIAN NOTE:** Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of the incident. Do not induce vomiting, use gastric lavage only. Aspiration of petroleum distillates associated with vomiting may cause pulmonary irritation and pneumonitis. If aspiration is suspected, respiratory effects should be evaluated. Suspicious skin lesions should be exercised and examined histologically. Subcutaneous or intramuscular injection requires prompt surgical debridement.

**Call the Poison Control Center, if Necessary.**

**SECTION 5. FIRE FIGHTING MEASURES:****NAERG '08, GUIDE:** 171 - Substances (low to moderate hazard).**FLAMMABILITY:** Low fire hazard - liquid can burn if heated to temperatures above the flashpoint.**FLAMMABLE LIMITS:** Not Available.**LEL:** Not Available.**UEL:** Not Available.**FLASHPOINT (method):**  $\geq 225$  °C / 437 °F (Cleveland Open Cup).**AUTOIGNITION TEMPERATURE:** N/A**FIRE HAZARDS:** Low fire hazard. Must be heated before ignition will occur. Mists and sprays may burn at temperatures below the flash point. Avoid contact with strong oxidizing agents, including peroxides, chlorine, and strong acids. Exposure to fire can generate highly toxic fumes.**(refer also to Sec. 16 for NFPA & HMIS Ratings)****EXPLOSION HAZARDS:** "Empty" containers retain product residue (liquid/vapors) and can be dangerous. **DO NOT** cut, weld, braze, solder, grind, drill, pressurize, or heat such containers to heat, flame, sparks, static electricity, or other sources of ignition. Heated vapor in enclosed spaces can ignite and **MAY EXPLODE AND CAUSE INJURY OR DEATH**. Empty drum should be completely drained, properly bunged, and promptly returned to a drum reconditioner or properly disposed of. Products are not sensitive to mechanical impact.**FIRE FIGHTING MEDIA & INSTRUCTIONS:** NAERG '08, GUIDE: 171 - Substances (low to moderate hazard).

Shut-off source of product if possible. If tank, rail car, or tank truck; stay away from the ends of tanks, ISOLATE for 800 meters (0.5 mile) in all directions; also, consider initial evacuation for 800 meters (0.5 mile) in all directions. Shut off fuel to fire (remove containers) if it is possible to do so without hazard. If this is not possible, withdraw from area and let fire burn out under controlled conditions. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire. Cool containing vessels with water spray in order to prevent pressure build-up, autoignition, or explosion. Use water spray to disperse the vapors and to provide protection for persons attempting to stop the leak. Water spray may be used to flush spills away from exposures. Spilled product which is not burning should be covered with earth/sand or foam.

Minimize breathing of gases, vapors, fumes, or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed. Avoid accidental water sprays on hot surfaces or electrical contacts. In case of losses from pressurized systems, the water sprays may form mists - in which case the lower explosive limit for mists is approximately 45 g/M<sup>3</sup> air.

**SMALL FIRE:** use DRY chemicals, sand/earth, foam, water spray only, or CO<sub>2</sub>.**LARGE FIRE:** use water spray only, fog, or foam. For small outdoor fires, portable fire extinguishers may be used. A positive-pressure, self contained breathing apparatus (SCBA - MSHA/NIOSH approved or equivalent) and full-body protective equipment is required for fire emergencies (all indoor fires and any significant outdoor fires).

Respiratory and eye protection are required for fire-fighting personnel.

Water or foam may cause frothing. **DO NOT** scatter spilled material with high pressure water streams. Dike fire-control water for later disposal. Prevent runoff to drinking water supply, streams, and sewers. Continue cooling containers & other surfaces with flooding quantities of water until well after the fire is out.

**HAZARDOUS COMBUSTION PRODUCTS:**

Decomposition and combustion materials may be toxic. During fire or when heated to decomposition, the following materials may be produced: Smoke, irritating vapors, unidentified organic compounds, oxygenated organic compounds (alcohols, aldehydes, etc.), alkyl mercaptans, and oxides of Carbon, Nitrogen, and Phosphorus.

**The information chart below is not for determining the hazardousness of this product, as manufactured; it is provided here as reference information should the product be incinerated:**

POSSIBLE COMBUSTION PRODUCTS		EXPOSURE LIMITS				OTHER / COMMENTS
		OSHA		ACGIH - TLV		
Chemical	[CAS No.]	PEL-TWA #	CEILING	TWA #	STEL	
Carbon Monoxide [630-08-0]		55mg/m <sup>3</sup>	N/A	55 mg/m <sup>3</sup>	440 mg/m <sup>3</sup>	IDLH= 1200 ppm
		50 ppm	N/A	25 ppm	N/A	
<b>HAZARDOUS EFFECTS:</b> Chemical Anoxia & Asphyxiation. (NFPA=2-4-0).						
Carbon Dioxide [124-38-9]		9000 mg/m <sup>3</sup>	N/A	9000 mg/m <sup>3</sup>	54000 mg/m <sup>3</sup>	IDLH= 40000 ppm
		5000 ppm	N/A	5000 ppm	30000 ppm	
<b>HAZARDOUS EFFECTS:</b> Asphyxiation. (NFPA= N/A)						

# = 8 hr. day & 40 hr. week TWA.

**SECTION 6. ACCIDENTAL RELEASE MEASURES:**

**MATERIAL RELEASE OR SPILL:**

**NAERG '08, GUIDE:** 171 - Substance (low to moderate hazard).

**LAND:** **ELIMINATE ALL IGNITION SOURCES.** Avoid contact - Do not touch or walk through the spilled product. **STOP LEAK SOURCE** if without risk. **CONTAIN SPILL.** Isolate hazard area - keep unnecessary and unprotected personnel from entering: 30 to 80 feet (10-25 meters) in all directions. Prevent contact with Soil. Stay upwind. Ventilate area, especially confined areas, and avoid breathing vapor or mist. Wear protective equipment and provide engineering controls as specified in **Section 8: Exposure Control/Personal Protection.**

Contain spill away from surface waters, intermittent dry creeks, sewers, and other underground areas. Contain spill as a liquid for possible recovery or absorb with inert absorbents, sand, dry clay, or diatomaceous earth. **DO NOT** use combustible materials such as sawdust. Avoid inhaling dust of diatomaceous earth for it may contain silica in very fine particle size, making this a potential respiratory hazard. Recover any free liquids and waste materials in suitable waterproof and oil resistant containers. Place used absorbent in sealable metal containers for later disposal or burn absorbent in a suitable combustion chamber. Clean contaminated area. Runoff from fire control may cause pollution.

**LARGE SPILLS:** Dike far ahead of liquid spill for collection and later disposal. **DO NOT FLUSH TO SEWERS, STREAMS, OR OTHER BODIES OF WATER.**

Check with applicable local, state, and federal jurisdiction(s) for specific disposal requirements of spilled material and empty containers. Keep public away and notify the appropriate authorities immediately, if required. If this product is subject to CERCLA reporting (**see section 15**), notify the National Response Center.

**WATER:** Product floats on water. Confine spillage if possible. Remove from surface by skimming or with suitable absorbents. If permitted by local authorities, and regulatory & environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters. Do not use solvents. Collect recovered product and other waste materials in suitable waterproof, oil resistant container. Check with applicable jurisdiction(s) for specific disposal requirements of recovered material and empty containers.

U.S. Coast Guard regulations require immediate reporting of spills that could reach any waterway, including intermittent dry creeks. Report spill(s) to the U.S. Coast Guard at 1-800-424-8802.

(refer also to Sec. 13 & 15 for Regulatory information)

## SECTION 7. HANDLING AND STORAGE:

### STORAGE TEMPERATURE:

Ambient to 55°C / 131°F max.

### STORAGE PRESSURE:

Atmospheric

### LOADING/UNLOADING

TEMPERATURE: Not Available.

### LOADING/UNLOADING

PRESSURE: Not Available.

### HANDLING:

Keep away from sources of ignition (such as flames, hot surfaces, or sparks). Use explosion-proof equipment. When transferring large volumes of product; metal containers, including trucks and tank cars, should be grounded and bonded. This product has a low vapor pressure and is not expected to present an inhalation hazard under normal ambient conditions. However, when aerosolizing, misting, or heating these products, do not breathe vapor or mist. Do Not Smoke. Store and use in cool well ventilated areas. Avoid contact with eyes, skin, clothing, and shoes.

**DO NOT** reuse empty containers without cleaning or reconditioning. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. "Empty" drum liners also retain residue (solid, liquid, vapor). Do not reuse liners for any purpose. Liners should be emptied of contents to the maximum extent possible, then segregated from liners containing other products. Dispose of empty liners in an environmentally safe manner and in accordance with governmental regulations.

Practice good personal hygiene. Wash hands after handling and before eating. Launder work clothes frequently. Discard saturated leather goods.

Avoid water contamination and extreme temperature to minimize product degradation.

**WARNING:** Exposure to fire can generate highly toxic fumes.

### STORAGE:

NFPA class IIIB storage. Flash point is greater than 200°F. Store in tightly closed sealable containers in a cool, dry, isolated, well-ventilated area, and away from strong oxidizing agents. **DO NOT** pressurize, cut, weld, braze. Solder, drill, or grind containers. Keep containers away from extreme heat, flame, sparks, static electricity, or other sources of ignition; as empty product containers may retain product residues and can be dangerous. **DO NOT** Store in unlabeled containers. Outside or detached storage is preferable. **DO NOT** store at temperatures above 131°F or in direct sunlight for extended periods of time.

### OTHER PRECAUTIONS:

For work on tanks refer to OSHA regulations, ANSI Z49.1, and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

(refer also to Sec. 13 & 15 for Regulatory Information)

**SECTION 8. EXPOSURE CONTROL / PERSONAL PROTECTION:**

**EXPOSURE LIMITS:** Oil Mist, if generated: PEL (OSHA) 5mg/m<sup>3</sup> - 8hr. TWA  
TLV (ACGIH) 5 mg/m<sup>3</sup> - 8hr. TWA  
STEL (ACGIH) 10 mg/m<sup>3</sup>  
TLV (NIOSH) 5 mg/m<sup>3</sup> - 8hr. TWA  
STEL (NIOSH) 10 mg/m<sup>3</sup>

(refer also to Sec. 2 & 5 for Other Exposure Limits)

**ENGINEERING CONTROLS:**

**VENTILATION:** For normal application, special ventilation is not necessary. If user's operations generate vapors or mists, use ventilation to keep exposure to airborne contaminants below the exposure limit. Make-up air should always be supplied to balance air removed by exhaust ventilation. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below the applicable exposure limits.

Total enclosure and process engineering controls maybe required where the used product is reprocessed because of the possible formation of components which may be more toxic than the product.

Keep containers closed when not in use. Do not store near heat, sparks, flame, or strong oxidants.

**OTHER:** Ensure that eyewash station and safety shower are close to work station.  
Avoid excessive or improper use. Avoid the creation of mists or vapors.

**PERSONAL PROTECTION:** The selection of personal protective equipment varies, depending upon conditions of use. A hazard assessment of the user's work area for personal protective equipment requirements should be conducted by a qualified professional pursuant to OSHA regulations.

**EYES: DO NOT** wear contact lenses. AVOID contact with eyes. Eye protection (ie. Safety glasses, safety goggles, and/or face shield) should be determined based on conditions of use. If product is used in an appropriate application where splashing may occur, the use of chemically-resistant safety goggles and/or a face shield should be considered. Wear goggles and face shield if material is heated above 125°F (51°C). Have suitable eyewash water available.

**SKIN:** Avoid prolonged or repeated contact with skin. Wear appropriate clothing to prevent skin contact, such as apron, coveralls, long-sleeve shirts, etc. As a minimum, long sleeves and trousers should be worn. Wear appropriate chemically protective gloves: Nitrile or PolyVinyl Alcohol. Gloves made of PolyVinyl Chloride can be used for limited periods. Gloves of neoprene, or natural rubber (latex) are **NOT** adequately resistant. When handling hot product, ensure gloves, boots, and clothing are heat resistant and insulated. Wear appropriate footwear to prevent product from coming in contact with feet and skin. Use heat-protective gloves when handling product at elevated temperatures. Do not clean hands with oil-soaked rags or keep dirty rags in clothing. (see Work Hygienic Practices below).

**WARNING: AVOID SKIN CONTACT WITH USED HEAT-DEGRADED OILS,  
SUCH AS ENGINE OIL, METAL-WORKING OIL, ETC.!!**

**RESPIRATORY:** **DO NOT** breathe vapors, mists, or fumes. Respiratory protection is not usually needed unless product is heated or misted. Concentration in air determines the level of respiratory protection needed. Where concentrations in air may exceed the occupational exposure limits given above and in Sections 2 & 5 (and those applicable to your area) and where engineering, work practices, or other means of exposure reduction are not adequate; NIOSH approved respirators may be necessary to prevent overexposure by inhalation.

Use only NIOSH-certified, air purifying respirators with combination P- or R- vapor cartridges when concentration of vapor series particulate filters and organic or mist exceeds applicable exposure limits. **DO NOT** use N-Rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4. Protection by air purifying respirators is limited.

**AIR SAMPLING / TEST METHOD:** The applicable method measures oil mist. NIOSH Analytical Method No. 283 or S272. Air sampling for PNA's may be accomplished by NIOSH Methods 5506 & 5515 using glass fiber filter and XAD-2 tube for collection followed by analysis using gravimetric measurements and high pressure liquid chromatography (HPLC) with UV detection (5506) or gas chromatography with flame ionization detection.

**OTHER PROTECTIVE CLOTHING / EQUIPMENT:** Where spills and splashed are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area. Chemically resistant protective clothing and boot materials may include: PolyVinyl Chloride (PVC), Neoprene, Nitrile, Viton, Polyurethane. Contaminated clothing should be stored in well ventilated areas and precautions taken for possible spontaneous combustion. Affix warning labels, as needed, on containers in accordance with 29 CFR 1910.1200 (OSHA Hazard Communication Standard).

**WORK HYGIENIC PRACTICES:** Use good personal hygiene. Wash hands thoroughly with soap and water after handling product and before eating, drinking, using tobacco products, or using toilet facilities. Clean affected clothing, shoes, and protective equipment before reuse. Discard leather articles, such as shoes, saturated with this product. Do Not wear rings, watches, or similar apparel that could entrap the material and cause a skin reaction. **DO NOT** use gasoline, kerosene, solvents, harsh abrasives, or other cleaning materials that may defat or otherwise damage the skin.

(refer also to Sec. 2 & 5 for Other Exposure Limits)

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES:**

**APPEARANCE/STATE:** Viscous liquid.  
**COLOR:** Amber to Dark Amber.  
**ODOR:** Sulfurous Hydrocarbon; Petroleum.  
**ODOR THRESHOLD:** Not Available.  
**BOILING POINT:** Not Available.  
**DENSITY:** 0.84 - 0.91 - kg/l @ 15 °C (59 °F).  
**OCTANOL / H<sub>2</sub>O DIST. COEFF.:** Not Available.  
**VAPOR DENSITY:** Not Available.  
**VAPOR PRESSURE:** Not Available.  
**VOLATILITY:** Not Available.  
**pH:** Not Applicable.  
**PARTITION COEFF. (P o/w):** Not Available.  
**FLASH POINT:** Not Available.

**VISCOSITY:** 139 cSt @ 40°C (104 °F).  
**VISCOSITY:** 18 cSt @ 100°C (212 °F).  
**MELT/POUR POINT:** -40 °C (-40°F).  
**SOFTENING POINT:** Not Available.  
**DROPPING POINT:** Not Available.  
**PENETRATION:** Not Available.  
**OIL / H<sub>2</sub>O DIST. COEFF.:** Not Available.  
**MOLECULAR WT.:** Not Available.  
**IONICITY (in H<sub>2</sub>O):** Not Available.  
**DISPERSION PROPERTIES:** Not Available.  
**SOLUBILITY (in H<sub>2</sub>O):** Insoluble.  
**EVAPORATION RATE:** Not Available.  
**AUTO-IGNITION TEMP:** Not Available.



**SECTION 10. STABILITY AND REACTIVITY:**

**STABILITY:** Stable under normal handling and storage conditions. Not Reactive with water.

**CONDITIONS TO AVOID:** Excessive Heat (> 140°F), Sparks, and Flames.

**CORROSIVITY:** Copper corrosion, 3h, 100 °C (ASTM D 130): N/A (typical).

**MATERIALS TO AVOID:** Reactive with strong oxidizing agents, reducing agents, and/or acids.

**HAZARDOUS POLYMERIZATION:** Will not occur under normal working conditions.

**CONDITIONS TO AVOID:** None.

**HAZARDOUS DECOMPOSITION:**

Decomposition and combustion materials may be toxic. During fire or when heated to decomposition, the following materials may be produced: Smoke, irritating vapors, unidentified organic compounds, oxygenated organic compounds (alcohols, aldehydes, etc.), alkyl mercaptans, and oxides of Carbon, Nitrogen, and Phosphorus.

**SECTION 11. TOXICOLOGICAL INFORMATION:**

**NOTE:** *The information related in Section 11. Toxicological Information, for this product is not based upon actual tests of this product, but is based upon information and studies for similar products / product types. The information cited with an ( \* ) is from tests conducted for this product.*

**ROUTES OF ENTRY:** Skin contact, eye contact, inhalation, and ingestion.

**ACUTE EFFECTS:** Based on toxicity of similar product(s)/component(s):

**Acute Oral Toxicity (LD<sub>50</sub>):** Not Available.

**Acute Dermal Toxicity (LD<sub>50</sub>):** Not Available.

**Inhalation Toxicity (LC<sub>50</sub>):** Not Available.

**Acute Eye Irritation:** Not Available.

**Acute Skin Irritation:** Not Available.

**CHRONIC EFFECTS:**

**Dermal Route:** Prolonged or repeated contact tends to remove skin oils which may cause skin irritation; characterized by dermatitis (drying & cracking) or oil acne. While this may result in skin irritation and dermatitis, the product is not believed to be either a "corrosive" nor an "irritant" by OSHA criteria.

**Inhalation Route:** Due to low volatility, inhalation is not likely. Mists from highly-refined mineral oils are reported to have low acute and sub-acute toxicities in animals. Exposures to lower concentrations at or below current workplace exposure levels produced no significant toxicological effects. However, prolonged or repeated inhalation of excessive amount of mists or fumes may cause irritation of the respiratory tract. Oil mists can cause oil droplet deposition in the lung which may result in oil/lipoid granuloma formation, fibrosis, inflammation, reduced pulmonary function, lipid pneumonia, and increased incidence of infection. High vapor/aerosol concentrations may cause CNS effects such as Dizziness, Headaches, or Drowsiness. Minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

**Oral Route:** May cause irritation of GI Tract, vomiting, and diarrhea. Minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

**Ocular (Eye) Route:** May be irritating to eyes, no permanent damage.

**OTHER TOXICITY STUDIES:**

**SENSITIZATION:**

-(Skin): This product contains a component which may cause skin sensitization.

-(Respiratory Tract): Minimally Toxic. Mildly Irritating.

**CARCINOGENICITY:** (reportable quantities: >= 1.0%Wt. (0.1%Wt. for carcinogens):

AGENCY	CARCINOGENIC MATERIAL CONTENT STATUS
OSHA	None @ Reportable Quantity
IARC	None @ Reportable Quantities as listed as Group 1, 2A, or 2B carcinogens. ## None [CAS No. N/A].
NTP	None @ Reportable Quantity. ## None [CAS No. N/A].
ACGIH	None @ Reportable Quantities as listed as 1A or A2 carcinogens.
IRIS	Not Available

## However, it does contain the listed carcinogenic material at the stated concentration below the Reportable Quantity (0.1%wt).

**IMMUNOTOXICITY:** None.

**TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** None.

**MUTAGENICITY:** None.

**REPRODUCTIVE TOXICITY:** None.

**TERATOGENICITY /**

**EMBRYOTOXICITY:** None.

**OTHER CONSIDERATIONS:**

Minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death. In accordance with the current OSHA Hazard Communication Standard criteria, this product does not require a cancer hazard warning. This is because the product is formulated from base stocks which are severely hydrotreated, severely solvent extracted, and or processed by mild hydrotreatment and extraction. Alternatively, it may consist of components not otherwise affected by IARC criteria, such as atmospheric distillates or synthetically derived materials, and as such is not characterized by current IARC classification criteria.

**(refer also to Sec. 2 & 5 for Exposure Limits)**

**SECTION 12. ECOLOGICAL INFORMATION:**

**ENVIRONMENTAL FATE:** An environmental fate analysis has not been conducted on this material, but by comparisons to similar products it is expected to have a toxicity for aquatic organisms > 100 mg/L. This material is Harmful/Toxic to Aquatic organisms and may cause long-term adverse effects in the aquatic environment. Harmful to Plants and animals may experience harmful or fatal effects when coated with oil-based products. Oil-based lube oils are insoluble will normally float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway might be enough to cause a fish kill or create an anaerobic condition.

**PERSISTENCE/BIOACCUMULATION POTENTIAL:** Not Available.

**OCTANOL / WATER PART. COEFF.:** Not Available.

**VOLATILE ORGANIC COMPOUNDS (VOC):** Not Available.

**BOD<sub>5</sub> and COD:** Not Available.

**PRODUCTS OF BIODEGRADATION:** Not Available.

**ECOTOXICITY:** (see Additional Remarks below)

**Freshwater Fish:** Not Available.

**Freshwater Invertebrates:** Not Available.

**Algae:** Not Available.

**Saltwater Fish:** Not Available.

**Saltwater Invertebrates:** Not Available.

**Bacteria:** Not Available.

**Miscellaneous:** Not Available.

**ADDITIONAL REMARKS:** Analysis for ecological effects has not been conducted on this product. Handle according to general safe handling practices to avoid pollution and release into the environment. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also the coating action associated with petroleum products can be physically harmful or fatal to aquatic life and waterfowl. This product has no specific properties for inhibition of bacterial activity. None the less, wastewater containing this product should be treated in facilities that are suited for the specific purpose.

(refer also to Sec. 6, 13, & 15)

### **SECTION 13. DISPOSAL CONSIDERATIONS:**

Do Not Discharge this product, either new or used, into public waters or waterways unless authorized by a National Pollution Discharge Elimination System (NPDES) permit issued by the Environmental Protection Agency (EPA).

In Eni's opinion, Unused / Uncontaminated product is not specifically listed by the EPA as a CERCLA / RCRA regulated hazardous waste or material. Therefore, it may be disposed of as an industrial waste in a manner acceptable to good waste management practice and in compliance with applicable local, state, and federal regulations. DO NOT flush material into drains, tunnels, or storm sewers.

Options for disposal of this product may depend on the conditions under which it was used. Spent / Used / Waste oil may meet the requirements of a hazardous waste. RCRA criteria (ignitability, reactivity, corrosivity, and toxicity-TCLP) must be determined if the material has been used. Refer to 40 CFR 261 (RCRA); as well as federal EPA, state, and local regulations.

Consult your local or regional authorities. Preferred waste management priorities are:

1. Recycle or reprocess.
2. Approved incineration with energy recovery.
3. Disposal at licensed waste disposal facility.

If recycled in the USA, this product must be managed in accordance with 40 CFR Part 279. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product.

Waste product and contaminated material will be considered a hazardous waste if the flash point is less than 140°F requiring disposal at an approved hazardous waste facility.

Ensure that disposal or reprocessing is in compliance with government requirements and local disposal regulations. Consult your federal, local, state, & regional authorities. Transportation, treatment storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40CFR 260 through 40 CFR 271). Contact the RCRA/Superfund Hotline at 1-(800)-424-9346 or your regional US EPA office for guidance concerning case specific disposal issues.

Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Dispose of containers in a safe manner, in accordance with local regulations. **DO NOT** cut, weld, drill, burn, or incinerate empty containers or drums unless they have been properly cleaned and declared safe according to any applicable regulations.

(refer also to Sec. 5, 6, 12, & 15)

**SECTION 14. TRANSPORTATION INFORMATION:**

**DOT:**

NOT REGULATED.

**IMO:**

NOT REGULATED.

**OTHER:**

<b>IMDG CODE PROPER SHIPPING NAME:</b>	Not Evaluated.
<b>ICAO PROPER SHIPPING NAME:</b>	Not Evaluated.
<b>IATA PROPER SHIPPING NAME:</b>	Not Regulated.
<b>ADR/RID (Europe):</b> (Pictograms)	Not Regulated.

**PICTOGRAMS:**

Under TDG (Canada) & DOT (USA):



**TRANSPORTATION INCIDENT INFORMATION:**

For further information relative to spills resulting from transportation incidents, refer to latest Department of Transportation's North American Emergency Response Guidebook (NAERG) for Hazardous Materials Incidents.

<u>Relevant Listing(s):</u>	<u>Guide(s)</u>
Oil, n.o.s., Flash Point > 200°F.	171 - Substances (Low to Moderate Hazard)
Environmentally Hazardous Substances, Liquid, n.o.s.	171 - Substances (Low to Moderate Hazard)

**SECTION 15. REGULATORY INFORMATION:**

**N/E=None Established, N/A=Not Applicable, N/D=Not Determined.**

**TOXIC SUBSTANCES CONTROL ACT (TSCA):** This Product is in compliance with TSCA (USC, Title 15, Chp. 53-I, Sec. 2601-2629). This product, as manufactured by Eni, does not contain polychlorinated biphenyls (PCB's). All components of this product are listed on the U.S. TSCA inventory of the US EPA.

**CLEAN WATER ACT (CWA) / OIL POLLUTION ACT (OPA):** This product is classified as an OIL under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Act of 1990. Discharges or spills into or leading to surface waters which produce a visible sheen on either surface water, or in waterways / sewers / intermittent dry creeks which lead to surface water, must be reported to the U.S. Coast Guard National Response Center at 1-800-424-8802. For additional detail, refer to SARA III, Sec. 304.

Component (CAS#)	Listing
None	(refer to SARA III, Sec. 304.) N/A

**CLEAN AIR ACT (CAA):** The components of this product listed on the Regulated Chemicals for Accidental Release Prevention list in Section 112(r) of the Clean Air Act of 1990 (40 CFR 68) are as follows:

Component (CAS#)	TQ (lbs)
None	For additional detail, refer to SARA III, Sec. 304. N/A

**COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA):**  
(40 CFR Part 302, Table 302.4)

This product (as manufactured), if accidentally spilled, is not subject to special reporting under the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act. However, it is recommended that you consult local and state authorities to determine if there may be other reporting requirements. For specific details, refer below to SARA Title III, Sec. 304.

**RESOURCE CONSERVATION and RECOVERY ACT (RCRA) Hazardous Waste:** (40 CFR 261.33)

CAS NO.	COMPONENT	RCRA Hazardous Waste Code
(8002-05-9)	(Hydrocarbon / Petroleum / Oil)	(Not Listed)
(8020-83-5)	(Petroleum Distillates, Petroleum, Hydrocarbon Oils)	(Not Listed)
N/D-2	Mineral Oil (Petroleum)	Not Listed
N/A	Mineral Oil Mist	Not Listed
N/D-1 (8002-05-9)	Synthetic Base Oil	Not Listed
9003-29-7	Polybutene	Not Listed
27178-16-1	DilsoDecyl Adipate	Not Listed
N/D-3 (74499-35-7)	Alkyl Phenol	Not Listed
N/D-4	Alkoxylated Long-Chain Alkyl Amine	Not Listed
N/D-5	Phosphorous Acid Salt	Not Listed
N/D-6	Alkyl Alkoxy Amine	Not Listed
N/D-7	Long Chain Alkyl DiThio Thiadiazole	Not Listed
N/D-8	Poly Long Chain Alkyl Methacrylate	Not Listed
N/D-9	Alkyl Methacrylate	Not Listed

**SUPERFUND AMENDMENTS REAUTHORIZATION ACT OF 1986 (SARA TITLE III):**

SARA requires disclosure of hazardous substances present at concentrations  $\geq 1.0\%Wt.$  ( $\geq 0.1\%Wt.$  For Carcinogens).

**Sec. 302 Extremely Hazardous Substances (EHS):** (40 CFR Part 355, Appendix A, B)

Component (CAS#)	%Wt. max.	TPQ (lbs.)	Status as an EHS:
ALL COMPONENTS LISTED IN SECTION 2.	100.0%	N/E	NONE LISTED.

**Sec. 304 CERCLA Hazardous Substances:** (40 CFR Part 355, Appendix A, B)

Component (CAS#)	%Wt. max.	EHS RQ	CERCLA RQ	Status as a CHS:
ALL COMPONENTS LISTED IN SECTION 2.	100.0%	N/E	N/E	NONE LISTED.

\*\* \_\_\_\_\_ lbs. Statutory RQ under CWA, Sec. 311(b)(4); \_\_\_\_\_ lbs. Final RQ. (Category B).

\*\*\* \_\_\_\_\_ Compound class - although no RQ is assigned to this generic/broad class, the class is a CERCLA Hazardous Substance. However, since an RQ has not been assigned, reporting is not required under CERCLA.

**Sec. 311 / 312 EPA Hazardous Chemical Reporting:** (40 CFR Part 370)

**EPA HAZARD REPORTING CATEGORIES:**

<u>Health:</u>		<u>Physical:</u>	
Immediate (Acute)	YES	Fire	NO
Delayed (Chronic)	YES	Sudden Release of Pressure	NO
		Reactive	NO
		Nuisance Mist / Dust Only	NO

**Sec. 313 Toxic Chemical Release Reporting:** (40 CFR Part 372)

<u>Component (CAS#)</u>	<u>%Wt. max.</u>	<u>Status as Toxic:</u>
ALL COMPONENTS LISTED IN SECTION 2.	100.0%	NONE LISTED.

**CA PROPOSITION 65:**

The following component(s) of this material is/are known to the state of California to cause cancer<sup>1</sup> and/or birth defects or other reproductive harm<sup>2</sup> (based upon maximum impurity levels of components):  
THE FOLLOWING IMPURITIES MAY BE PRESENT IN DETECTIBLE AMOUNTS:

<sup>1, 2</sup> NONE

**Note:** An evaluation of all components of this product for California Proposition 65 is not routinely performed.

**PA WORKER AND COMMUNITY RIGHT-TO-KNOW ACT (PA Act 159-1984):**

The following component(s) of this material is/are listed as Hazardous Substance(s) under the Act on the PA Hazardous Substance List:

<u>CAS NO.</u>	<u>RELEVANT COMPONENT / LISTING</u>	<u>PA HAZARD Note</u>
(8002-05-9; 8020-83-5) (see Oil CAS#s below):	Severely Hydrotreated Paraffinic Hydrocarbons (Oil); Solvent Refined Paraffinic Hydrocarbons (Oil); Solvent Dewaxed Residual Oils (Petroleum Distillates; Petroleum; Hydrocarbon Oils)	Listed *
(8002-05-9)	(Petroleum)	Listed *
(8020-83-5)	(Hydrocarbon Oils)	SHS **
(N/A)	(Petroleum Distillates)	Listed *
N/D-2(8002-05-9)	Mineral Oil (Petroleum)	* Listed (as above)
N/A	Mineral Oil Mist	* Listed (as above)
N/D-1 (8020-83-5)	Synthetic Base Oil	SHS **
9003-29-7	Polybutene (Butenes)	(Listed)
27178-16-1	DilsoDecyl Adipate	Not Listed
N/D-3 (74499-35-7)	Alkyl Phenol	Not Listed
N/D-4	Alkoxylated Long-Chain Alkyl Amine	Not Listed
N/D-5	Phosphorous Acid Salt	Not Listed
N/D-6	Alkyl Alkoxy Amine	Not Listed
N/D-7	Long Chain Alkyl DiThio Thiadiazole	Not Listed
N/D-8	Poly Long Chain Alkyl Methacrylate	Listed
N/D-9	Alkyl Methacrylate	Listed

Listed=PA Hazardous Substance, EH=PA Environmental Hazard, SHS=PA Special Hazardous Substance.

**C EPA /** We believe that this product's components are acceptable for use in Canada under the provisions of **WHMIS:** Workplace Hazardous Material Information System (WHMIS) - Controlled Products Regulations (CPR).  
**(Canada)** All components of this formulation are believed to be listed on the Domestic Substances List (DSL).

This product is believed to be classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS is believed to contain all the information required by the CPR.

**Note:** An evaluation of all components of this product for Canadian regulations is not routinely performed, and may be incomplete or incorrect. It is the responsibility of the receiver/end-user to verify it's compliance with any Hazard Communication or other regulations within their own geographic/regulatory jurisdiction.

**US EPA:** For US Environmental Protection Agency regulations, refer to the regulations above that reference 40CFR (such as TSCA, CWA/OPA, CAA, RCRA, CERCLA, SARA etc.)

**DSD/DPD (EEC):** This product has not been evaluated for the Dangerous Substances or Dangerous Preparations Directives (Europe).

**SECTION 16. OTHER INFORMATION:**

**HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS):**

Health	Flammability	Reactivity	Personal	BASIS
1	1	0	B	Recommended by eni USA R&M

**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 704) - HAZARD IDENTIFICATION:**

Health	Flammability	Reactivity	Specific	BASIS
1	1	0		Recommended by eni USA R&M

**KEYS:** 4=Severe; 3=Serious; 2=Moderate; 1=Slight; 0=Minimal

The Environmental Information included under Section 15, as well as the Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) ratings in Section 16, have been included by Eni in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria of the developers of these ratings systems, together with Eni's interpretation of the available data.

The health and safety information presented herein must be used in conjunction with the pertinent standards for training, work practices, and facilities design established by OSHA, NIOSH, NFPA, API, NEC NSC, UNDERWRITERS, BUREAU OF MINES, and similar organizations.

The information and recommendations contained herein are offered for the user's consideration and examination; and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use.

Avoid excessive or improper use. Do not use the product for any purpose that has not been advised by the manufacturer because the user could be exposed to unforeseeable dangers.

All information disclosed herein relates only to the specific product and may not be valid if the product is used in combination with any other material or in any process.

**DISCLAIMER:**

Although the information and recommendations set forth herein ("Information") are presented in good faith and believed to be correct as of the date hereof, eni USA R&M Co. Inc., makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its safety and suitability for their purposes prior to use. NO REPRESENTATIONS OF WARRANTIES, EITHER EXPRESSED OR IMPLIED, OR MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

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**MSDS REVISION:** 4/1/2013 NEW **SUPERSEDES:** 1/27/2012  
**FORMERLY:**

**DATA DATE:** 1/27/2012 **SUPERSEDES:** 1/25/2012

**MSDS Prepared by:** W.G. Wagner

**NON-EMERGENCY INFORMATION:**

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**THIS MATERIAL SAFETY DATA SHEET CONTAINS THE INFORMATION REQUIRED TO COMPLY WITH THE FEDERAL OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 (g) (2).**