



SPECIALIZED LUBRICANTS



1. Substance/Product Identification

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

Company/Address: Schaeffer Mfg

102 Barton Street

Saint Louis, Missouri 63104

USA

Synonyms:

Preparation/Revision Date: 04/01/2011

Product Use/Type: Fuel additive for diesel and biodiesel fuels

Emergency Phone Number: +1 314 865-4105 (24-hour response number)

+ 1 314 865-4100 (Business hours 8:30AM-5:00PM)

1-800-325-9962 (US & Canada)

Website: www.schaefferoil.com

MSDS Number: 137ND Version 1.0

2. Hazards Identification

Appearance: Tan to dark color

Odor: Aromatic solvent odor

Signal Word: Danger

Principal Hazards: Flammable. May be harmful by inhalation and enters airways. Causes skin and severe eye irritation. Contains components that are suspected of causing cancer. Toxic to aquatic life with long lasting effects

Hazardous Materials Information System

(U.S.A)

Health: 2

Fire: 2

Reactivity: 1

National Fire Protection Agency System

(U.S.A.)

Health: 2

Fire: 2

Reactivity: 1

See Section 11 for complete health hazard information

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

3. Composition and Information on Ingredients

Hazardous Ingredients

Ingredient Name	CAS No.	EU Number	Percentage (by wt.)
Heavy Aromatic (petroleum) solvent Naphtha	64742-94-5	265-198-5	4-9
Naphthalene	91-20-3	202-049-5	0.5 – 1
2-Ethylhexyl Nitrate	27247-96-7	248-363-6	10-45
2-Butoxyethanol	111-76-2	203-905-0	1 – 5
1,2,4-Trimethylbenzene	95-63-6	202-436-9	0.4 – 1.5
Light Aromatic (petroleum) solvent Naphtha	64742-96-6	265-199-0	1 -4
Xylene	1330-20-7	215-535-7	0.05 – 0.2
Petroleum Distillate	64742-47-8	265-149-8	25 – 45
Ethylbenzene	100-41-4	202-849-4	1 -4



Symbols:

4. First Aid Measures

Ingestion: If swallowed do not induce vomiting. Allow victim to rinse mouth and then drink 2 to 4 glasses of water. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Eyes: Flush eyes with eyelids open with clear, clean water for 15 minutes. Seek medical attention immediately

Inhalation: Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult administer oxygen.

Skin: Immediately wash with soap and water. Rinse thoroughly. If irritation develops or persists seek medical attention immediately.

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

4. First Aid Measures continued

Additional Information: Note to Physician: Activated charcoal mixture may be administered. To prepare activated charcoal mixture, suspend 50 grams activated charcoal in 400 ml water and mix thoroughly. Administer 5ml/kg or 350 ml for an average adult.

Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic additives. Activated charcoal may induce vomiting, but may be given after emesis or lavage to absorb toxic additives. Steroid therapy in mild to moderate cases does not improve outcome. Bacterial pneumonia often occurs after exposure, but prophylactic antibiotics are not indicated and should be reserved for documented bacterial pneumonia.

5. Fire Fighting Measures:

Flash Point: 133°F (56°C) PMCC ASTM D-93

Extinguishing Media: Carbon dioxide foam, dry chemical foam, sand, earth, water-fog

Firefighting Procedures: Evacuate personnel to a safe area. Wear self-contained breathing apparatus. Cool tank/containers with water spray. Fight fire from maximum distance, use extreme caution as heat may decompose material and rupture containers.

Unusual Fire & Explosion: Vapors may be heavier than air and travel along the ground to a distant ignition source and flash back. Containers may rupture upon heating. The 2-Ethylhexyl Nitrate contained in this product may undergo a self-accelerating exothermic reaction if the product is heated above 212°F (100°C).

Hazards: Hazardous gases or vapors produced in fire are carbon monoxide and oxides of nitrogen. There is a risk of explosion if heated under confinement.

6. Accidental Release Measures

Spill Procedures and Clean up methods: Eliminate all sources of ignition. Absorb spills with absorbent clay or other absorbent material. Ventilate confined spaces. Dike spill to keep out of sewers, waterways and watercourses. Collect used absorbent material and discard as dictated by National, International, Federal, State, Provincial and local laws and regulations. Spills are very slippery and should be cleaned up promptly. Unless released material is cleaned up immediately for reprocessing, recycling, or reuse, a release of 100 lbs (45.36 kgs) (approximately 36 gallons or 136 liters of product) may trigger the reporting requirements under the United States EPA's CERCLA Section 103.

Personal Precautions: Wear appropriate personal protective equipment when cleaning up a spill

Environmental Precautions: U.S.A. regulations may require reporting spills of this material that could reach any surface waters. Report spills to all applicable National, International, Federal, State, Provincial and local authorities and/or the United States National Response Center at (800) 424-8802 as appropriate or required

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

7. Handling & Storage

Handling: Avoid breathing vapors or mists. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling and before eating, smoking or using toilet facilities. Do not swallow product. Do not eat, drink or smoke in work areas.

Storage: Do not store near heat, spark, flame or strong oxidizers. Keep containers closed when not in use. Store in a well ventilated area. Properly bond and ground containers and transferring equipment when transferring this product to different containers. Store as a combustible liquid, Store in accordance with National Fire Protection Association recommendations or applicable National, Provincial and local laws and regulations.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid and/or vapor) and can be dangerous. Do not cut, weld, braze, solder, drill, grind or expose containers to heat, flame, sparks, static electricity or other sources of ignition. There may explode and cause injury or death. Empty containers should be completely drained, properly closed and promptly returned to a drum reconditioner or disposed of properly

8. Exposure Controls and Personal Protection

Occupational Exposure Limits

Ingredient	OSHA TWA	OSHA STEL	ACGIH TWA	ACGIH STEL
Heavy Aromatic (petroleum) solvent Naphtha	300 mg/m ³ 50 ppm		N/E	
Naphthalene	100 ppm 435 mg/m ³		10 ppm	15 ppm
2-Ethylhexyl Nitrate	5 ppm, 8 & 12 hour TWA (supplier recommendation)	N/E	N/E	N/E
2-Butoxyethanol	50 ppm		25 ppm	75 ppm
1,2,4-Trimethylbenzene	125 mg/m ³ 25 ppm		125 mg/m ³ 25 ppm	
Light Aromatic (petroleum) solvent Naphtha	5 ppm, 12 hour TWA (supplier recommendation)			

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

8. Exposure Controls and Personal Protection continued

Occupational Exposure Limits

Ingredient	OSHA TWA	OSHA STEL	ACGIH TWA	ACGIH STEL
Xylene	435 mg/m ³ 100 ppm		435 mg/m ³ 100 ppm	
Petroleum Distillate			200 mg/m ³	
Ethylbenzene	435 mg/m ³ 100 ppm		100 ppm	125 ppm

(s)-Skin exposure

(p) proposed limit

(c) – Ceiling limit

(l) Recommended exposure limit

(u) supplier limit

(N/E) – not established

Other Exposure Limits

Engineering Controls: Good general ventilation should be used. If applicable use process enclosures, local exhaust ventilation and other engineering controls to maintain airborne levels below recommended exposure limits.

Personal Protective Equipment

Gloves: Impervious oil resistant gloves such as Neoprene, Nitrile rubber

Protective Clothing: Apron and long sleeves recommended

Eye Protection: Chemical goggles or safety goggles

Respiratory Protection: None required under conditions of normal use. Use approved full face respirator with an organic cartridge if the recommended exposure limit is exceeded or when working with this material in a confined space. Use self-contained breathing apparatus for entry into confined spaces, for poorly ventilated areas and for cleaning up large spill cleanup sites.

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

9. Physical and Chemical Properties

Flash Point: 133°F (56°C) PMCC ASTM D-93

Specific Gravity: 0.9422

Upper Flammable Limit (UEL): Not determined

Lower Flammable Limit (LEL): Not determined

Vapor Pressure: <0.1 mm Hg @ 20°C (68°F)

Vapor Density (air = 1) : >1

Percent Volatile: >80%

Evaporation Rate: <1 (Butyl Acetate = 1)

pH: Not applicable

Boiling Point: Decomposes above 100°C (212°F)

Melting Point: Not applicable

Appearance: Tan to dark color

Odor: Aromatic solvent odor

Solubility in Water: Negligible

The above data are typical values and do not constitute a specification. Vapor pressure data are calculated unless otherwise specified

10. Stability and Reactivity

Stability: Stable at normal temperatures and storage conditions

Materials to Avoid: Strong Oxidizers

Polymerization: Not expected to occur under conditions of normal use

Thermal Decomposition: 2-Ethylhexyl Nitrate in this product decomposes above 100°C (212°F). Oxides of carbon and nitrogen and by-products of incomplete combustion may form.

Conditions to Avoid: Products containing 2-Ethylhexyl Nitrate or solvents should not be exposed to steam, sparks, flames or hot surfaces. Rapid gas evolution during decomposition may lead to bursting of containers and may be explosive if heated under confinement.

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

11. Toxicological Information:

Routes of Exposure: Skin, eyes, ingestion and inhalation

Target Organs: Skin, eyes, upper respiratory tract, liver, spleen, kidneys

Acute Exposure

Ingestion: Harmful if swallowed. Nausea, abdominal discomfort, diarrhea

Eye Contact: Liquid contact produces severe irritation to the eyes

Skin Contact: Prolonged and repeated skin contact may cause redness, severe irritation and defatting of skin. Product may be absorbed through skin.

Inhalation: Inhalation of vapors can cause headache, dizziness, nausea, or decreased blood pressure.

Dermal Sensitization: This product is not expected to be a dermal sensitizer

Inhalation Sensitization: Product is not considered to be an inhalation sensitizer

Carcinogenicity:

This product contains 0.5 – 1% of Naphthalene CAS #91-20-3, and 1-4 % Ethylbenzene CAS #100-41-4 which are chemicals found on the National Toxicology Programs Annual Reports, International Agency for Cancer Research's Monographs or OSHA's Subpart Z list as suspected human cancer causing agents.

This product contains 0.5 to 1% of Naphthalene CAS #91-20-3, and 1 -4% Ethylbenzene CAS #100-41-4 which are chemicals known to the State of California to cause cancer and/or birth defects.

2-Butoxyethanol has been found to show teratogenic effects in laboratory animals

Acute toxicity

2-Ethylhexyl Nitrate

Acute Inhalation Toxicity: LC50 1 hour >639 ppm (rats)

Acute Oral Toxicity LD50: >9,640 mg/kg (rats)

Acute Dermal Toxicity: LD50: >4,820 mg/kg (rabbits)

Heavy Aromatic Naphtha:

Acute Inhalation Toxicity: LC50 6 hour >11.7 mg/l (rats)

Acute Oral Toxicity LD50: >5,000 mg/kg (rats)

Acute Dermal Toxicity: LD50: >3,160 mg/kg (rabbits)

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

11. Toxicological Information continued:

Acute Toxicity

Light Aromatic Naphtha

Acute Inhalation Toxicity: LC50 6 hour >14.4 mg/l (rats)

Acute Oral Toxicity LD50: >5,000 mg/kg (rats)

Naphthalene:

Acute Inhalation Toxicity: LC50 15 minutes >0.34 mg/l (rats)

Acute Oral Toxicity LD50: 1,780 mg/kg (rats)

Acute Dermal Toxicity: LD50: 10,000 mg/kg (rabbits)

2-Butoxyethanol

Acute Inhalation Toxicity: LC50 4 hours > 450 ppm (rats)

Acute Oral Toxicity LD50: 470 mg/kg (rats)

Acute Dermal Toxicity: LD50: 220 mg/kg (rabbits)

Naphthalene

Acute Inhalation Toxicity: LC50 8 hours > 100 ppm (rats)

Acute Oral Toxicity LD50: 2,000 mg/kg (rats)

Acute Dermal Toxicity: LD50: 2,500 mg/kg (rats)

1,2,4 -Trimethylbenzene

Acute Oral Toxicity LD50: 5 g/kg (rats)

Xylene

Acute Inhalation Toxicity: LC50 1hour > 340 mg/m³ (rats)

Acute Oral Toxicity LD50: 490 mg/kg (rats)

Acute Dermal Toxicity: LD50: >2,000 mg/kg (rats)

Petroleum Distillates:

Acute Inhalation Toxicity: LC50 4hour > 1400 ppm (rats)

Acute Oral Toxicity LD50: 6 g/kg (rats)

Acute Dermal Toxicity: LD50: >2,000 mg/kg (rats)

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

12. Environmental and Ecological Information

Ecotoxicity

2-Ethylhexyl Nitrate

24 hour LC50: 145 mg/l Trout

48 hour LC50: 116 mg/l Trout

24 hour LC50: 6.5 mg/l Bluegill

48 hour LC50: 6.0 mg/l Bluegill

Heavy Aromatic Naphtha

96 hour LC50: 4.2-20.8 mg/l Fathead minnows

96 hour LC50: >50 mg/l Pimephales promelas

48 hour EC50: 0.95 mg/l Daphnia Magna

2-Butoxyethanol

24 hour LC50: 1700 mg/l Carassius auratus

48 hour LC50: 1880 mg/l Leuciscus idus

96 hour LC50: 2950 mg/l Lepomis macrochirus

24 hour EC50: 1720 – 1850 Daphnia Magna

Light Aromatic Naphtha:

48 hour LC50: 4.2 mg/l white crappie

1,2,4-Trimethylbenzene:

96 hour LC50: 7.72 mg/l Pimephales promelas

Naphthalene:

24 hour LC50: 7.76 mg/l Pimephales promelas

48 hour LC50: 6.35 mg/l Pimephales promelas

96 hour LC50: 6.08 mg/l Pimephales promelas

96 hour LC50: 0.5 mg/l Micropeterus salmodies

96 hour LC50: 18 mg/l Oncorhynchus mykiss

24 hour EC50: 10.64 mg/l Artemia salina

24 hour EC50: 17 mg/l Daphnia Magna

48 hour EC50: 2.16 mg/l Daphnia Magna

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

12. Environmental and Ecological Information

Ecotoxicity

Xylene:

96 hour LC50: 3.3 mg/l Oncorhynchus mykiss

96 hour LC50: 14,400 mg/l Bluegill Machrochrus

Petroleum Distillate:

24 hour LC50: 5.5 ml/l Dendronereides heteropoda

48 hour LC50: 5.9 ml/l Dendronereides heteropoda

96 hour LC50: 1.5 ml/l Dendronereides heteropoda

Biodegradation: This product is not readily biodegradable

Bioaccumulation: Product has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

Water Class Hazard (Germany): WK-3 according to appendix 4 VwVwS dated 27.7.2005

Do not allow product to reach ground water, water course or sewage system

13. Disposal Considerations

Waste Handling and Disposal: This product in its neat state when discarded or disposed of is a hazardous waste according to Federal Regulations 40CFR 261.4 (b)(4) due to its reactivity. Unless released material is cleaned up immediately for reprocessing, recycling, or reuse, a release of 100 lbs (45.36 kgs) (approximately 36 gallons or 136 liters of product) may trigger the reporting requirements under the United States EPA's CERCLA Section 103. Dispose of product in accordance with all applicable National, Federal, State, Provincial and local laws and regulations. Do not re-use empty containers

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

14. Transport Information

US DOT Classification Non-Bulk: 4 X1 gallons per case: ORM-D Consumer Commodity

5, 30 and 55 gallon drums: Flammable Liquids, N.O.S. (Petroleum Distillates, Heavy Aromatic Naphtha, 2-Ethylhexyl Nitrate, 2-Butoxyethanol), 3, PGIII

US DOT Classification Bulk: 275 gallon totes: Flammable Liquids, N.O.S. (Petroleum Distillates, Heavy Aromatic Naphtha, 2-Ethylhexyl Nitrate, 2-Butoxyethanol), 3, PGIII, Marine Pollutant, (2-Ethylhexyl Nitrate, Naphthalene, Petroleum Naphtha, 1,2,4-Trimethylbenzene)

Bulk cargo tank >1,000 gallons: Flammable Liquids, N.O.S. (Petroleum Distillates, Heavy Aromatic Naphtha, 2-Ethylhexyl Nitrate, 2-Butoxyethanol), 3, PGIII, RQ, (Naphthalene) Marine Pollutant, (2-Ethylhexyl Nitrate, Naphthalene, Petroleum Naphtha, 1,2,4-Trimethylbenzene)

IMDG Classification: Flammable Liquids, N.O.S. (Petroleum Distillates, Heavy Aromatic Naphtha, 2-Ethylhexyl Nitrate, 2-Butoxyethanol), 3, PGIII, Marine Pollutant, (2-Ethylhexyl Nitrate, Naphthalene, Petroleum Naphtha, 1,2,4-Trimethylbenzene)

IATA/ICAO Classification: US: 4 X1 gallons per case: ORM-D Consumer Commodity
International: 4 X1 gallons per case: Flammable Liquids, N.O.S. (Petroleum Distillates, Heavy Aromatic Naphtha, 2-Ethylhexyl Nitrate, 2-Butoxyethanol), 3, PGIII, Limited Quantity

5, 30, 55 gallon drums: Flammable Liquids, N.O.S. (Petroleum Distillates, Heavy Aromatic Naphtha, 2-Ethylhexyl Nitrate, 2-Butoxyethanol), 3, PGIII

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

15. Regulatory Information

Hazard Symbols

EU



**Xi irritant
Xn Harmful**

Relevant R Phrases:

R10 Flammable

R20 Harmful by inhalation

R22 Harmful if swallowed

R36/37/38 Irritating to eyes, respiratory system and skin

R36/38 Irritating to eyes and skin

R36 Irritating to eyes

R38 Irritating to skin

R40 Limited evidence of a carcinogenic effect

R50/53 Very toxic to aquatic organisms may cause long term adverse effects in the aquatic environment

R51/53 Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in aquatic environment

R65 Harmful: may cause lung damage if swallowed

S2 Keep out of the reach of children

S23 Do not breathe gas/fumes/vapour/spray

S24 Avoid contact with skin

S25 Avoid contact with eyes

S26 in case of contact with eyes rinse immediately with plenty of water and seek medical advice

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

15. Regulatory Information continued

Relevant hazard phrases

H226 – Flammable liquid or vapor
H302 – Harmful if swallowed
H304- May be fatal if swallowed and enters airways
H312 – Harmful in contact with skin
H315 – Causes skin irritation
H319 – Causes serious eye irritation
H332 – Harmful if inhaled
H335 – May cause respiratory irritation
H351 – Suspected of causing cancer
H-400 – Very toxic to aquatic life
H-410 – Very toxic to aquatic life with long lasting effects
H411 – Toxic to aquatic life with long lasting effects

GHS



US Regulations

TSCA Inventory: All of the components in this material are on the US TSCA Inventory or are exempt.

State of California Proposition 65: This product contains 0.5-1% of Naphthalene CAS #91-20-3 and 1-4% Ethylbenzene CAS #100-41-4 which are chemicals known to the State of California to cause cancer and/or birth defects.

2-Butoxyethanol has been found to show teatogenic effects in laboratory animals

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

15. Regulatory Information continued

US EPA SARA Title III and CERCLA Listings and Reportable Quantities

US EPA Section 311/313 Classifications

Acute	Chronic	Fire	Pressure	Reactivity
X	X			X

US EPA Section 313 Chemicals

I. Section 302/304 Extremely Hazardous

Component	CAS#	%	RQ (lbs.)	RQ (gal*)
-----------	------	---	-----------	-----------

II. CERCLA Section 102(a) & 302.4 Hazardous Substance & Section 313 Toxic Chemical

Component	CAS#	%	RQ (lbs.)	RQ (gals.)
Naphthalene	91-20-3	0.5 – 1	100	1,780
Xylene	1330-20-7	0.05 – 0.2	100	6,439
Ethylbenzene	100-41-4	1 - 4	1000	3,220

Section 313 Chemicals

Component	CAS#	%
2-Butoxyethanol	111-76-2	1-5
Naphthalene	91-20-3	0.5 -1
Xylene	1330-20-7	0.05 – 0.2
Ethylbenzene	100-41-4	1 - 4

*Product RQ for Stationary Source to release Regulatory Requirement RQ as specified by CERCLA.

Product Name: 137ND Diesel Treat 2000™ Ultra Low Sulfur

15. Regulatory Information continued

US Tariff Heading Number: 3811.90.0000

Schedule B Number: 3811.90.0000

Other Regulations:

Canada: All of the ingredients of this product are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substance List

Canadian WHMIS Classifications and Symbols:

This product is a WHMIS controlled product. This product is a Class B Flammable and a class D2 material



EEC: All components are in compliance with the EC Seventh Amendment Directive 92/32/EEC

16. Other Information

For additional information call +1 314-865-4100 (outside the US and Canada) or 1-800-325-9962 inside the United States and Canada.

Although the information and recommendations set forth herein (hereafter referred to as information) are presented in good faith and believed to be accurate and factual as of the date hereof, Schaeffer Mfg. Company makes no representation as to the completeness or accuracy thereof. Information is supplied upon the condition that the person receiving the same will make their own determination as to its safety and suitability for their purposes prior to use. In no event will Schaeffer Mfg. Company be responsible for damages of any natures whatsoever resulting from the use or reliance upon information. **No representation or warranty, either expressed or implied, of merchantability or fitness for a particular purpose is made with respect to information of the product to which the information refers. Compliance with all applicable federal, state, and local regulations remains the responsibility of the user.**