Lion Oil Company

Product: Off Road Diesel Fuel **Revision No. 6**

MSDS No. LO0308 **Date of Preparation: 05-06-11**

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Off Road Diesel Fuel
CAS Number: 68476-34-6
Synonyms: Red Dyed Ultra Low Sulfur Diesel, #2 Diesel, Diesel Fuel, #2 Fuel Oil, High Sulfur Diesel, Red Dyed Diesel, Red Dyed Low Sulfur Diesel
Description: Red color with distinct hydrocarbon odor
Manufacturer or Distributor: Lion Oil Co., 1000 McHenry St., El Dorado, AR 71730; (870) 862-8111
24-hr Emergency Phone Number: "FOR CHEMICAL EMERGENCY" Spill, Leak, Fire, Exposure or Accident
CALL CHEMTREC – Day or Night 800-424-9300
MSDS CONTACT: Beverly McFarland – 870-864-1306

Section 2 - Hazards Identification

☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆ **Emergency Overview** ☆☆☆☆☆☆☆☆☆

HMIS	
H	1*
F	2
PH	0
PPE†	
†Sec. 8	

Health
Fammability
Physical Haz.

Warning !
Combustible liquid moderate fire hazard.
May cause moderate eye and skin irritation.
Long term, prolonged or repeated skin contact may increase the risk of skin cancer.
Harmful or fatal if swallowed – can enter lungs and cause damage.
May be harmful if absorbed through skin.

☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆ **Potential Health Effects**☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆

Primary Entry Routes: Skin and/or Eye contact, Ingestion, Inhalation,
Target Organs: Skin, Eyes, Central Nervous System
Carcinogenicity: IARC has classified diesel fuel as a group 2B carcinogen, sufficient evidence in animals, possibly carcinogenic to humans. Prolonged or repeated contact with this material can cause cancer. Contains Polynuclear aromatics, which has been designated as a carcinogen by IARC (group 1). Risk of cancer depends on duration and level of exposure. IARC has classified diesel engine exhaust as a group 2A carcinogen, sufficient evidence in animals, probably carcinogenic to humans.

Acute Effects

Eye: May cause irritation of the eye.
Skin: Excessive skin contact may cause irritation and dermatitis.
Inhalation: Irritation, dizziness, headaches, and nausea. Excessive breathing may cause central nervous system effects.
Ingestion: Do Not Induce Vomiting. Causes nausea, vomiting, and cramping; depression of central nervous system ranging from mild headache to anesthesia, coma, and death; pulmonary irritation secondary to exhalation of solvent; signs of kidney and liver damage may be delayed. Aspiration into lungs, causes severe lung irritation with coughing, gagging, dyspnea, substernal distress, and rapidly developing pulmonary edema; later, signs of bronchopneumonia and pneumonitis; acute onset of central nervous system excitement followed by depression.

Chronic Effects

Prolonged or repeated contact with this material can cause cancer. IARC has classified diesel fuel as a group 2B carcinogen, sufficient evidence in animals, possibly carcinogenic to humans. Contains Polynuclear aromatics, which has been designated as a carcinogen by IARC (group 1). Risk of cancer depends on duration and level of exposure.

Section Ref. (3, 10)

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS Number	%wt.
Diesel Fuel, A distillate oil having a minimum viscosity of 32.6 SUS at 37.7.degree.C (100.degree.F) to a maximum of 40.1 SUS at 37.7.degree.C (100.degree.F)	68476-34-6	100
Naphthalene	91-20-3	0-1.0
Xylenes	1330-20-7	<0.2

Section 4 - First Aid Measures

Eye Contact: Flush with water for at least 20 minutes. Seek medical attention.
Skin Contact: Remove any contaminated clothing and wash with soap and water at least 20 minutes. Launder or dry-clean clothing before reuse.
Inhalation: Move to fresh air. If breathing is irregular or has stopped, start resuscitation, and then administer oxygen if available. Seek medical attention.
Ingestion: Do not induce vomiting. Vomiting may cause aspiration into lungs. If spontaneous vomiting is about to occur, place victim's head below knees. Seek medical attention.

After first aid, get appropriate in-plant, paramedic, or community medical support. **Section Ref. (4)**

Section 5 - Fire-Fighting Measures

NFPA rating ®	
H	1
F	2
R	0

Flash Point: >140°F
Flash Point Method: PM
Autoignition Temperature: 500 F
LEL: 0.9
UEL: 7.0
Emergency Response Guide: Guide No. 128
Flammability Classification: Combustible liquid
Extinguishing Media: Extinguish with dry chemical, CO2, foam and water fog. Solid streams of water may be ineffective. Cool affected containers and vessels with flooding quantities of water. Apply water from as great a distance as possible. Keep run off water out of sewers and water sources. Minimize breathing of gases, vapor, fumes, or decomposition products. Use self-contained breathing apparatus for enclosed or confined spaces or as otherwise needed.
Unusual Fire or Explosion Hazards: Do not store near strong oxidants or open flame.
Hazardous Combustion Products: Under fire conditions – May form toxic materials; carbon dioxide and monoxide, oxides of sulfur and H2S, and other decomposition products, in the case of incomplete combustion.
Fire-Fighting Instructions: Extinguish with dry chemical, CO2, foam and water fog. Solid streams of water may be ineffective. Cool affected containers and vessels with flooding quantities of water. Apply water from as great a distance as possible. Keep run off water out of sewers and water sources. Minimize breathing of gases, vapor, fumes, or decomposition products.
Special Fire-Fighting Procedures: Use self-contained breathing apparatus for enclosed or confined spaces or as otherwise needed. Cool exposed containers and vessels with water.

Section Ref. (4, 9, 10)

Section 6 - Accidental Release Measures

"FOR CHEMICAL EMERGENCY" Spill, Leak, Fire, Exposure or Accident
CALL CHEMTREC – Day or Night 800-424-9300

Spill /Leak Procedures: Shut off sources of ignition. Shut off leak, if possible without risk. Take up with sand or other non-combustible, absorbent material.
Small Spills: Take up with an absorbent material and place in containers, seal tightly for proper disposal.

Large Spills: Isolate the hazard area and restrict entry to unnecessary personnel. Shut off source of leak only if it can be done so safely or dike and contain the spill. Keep run off out of sewers and water sources. Wear appropriate respirator and protective clothing. If possible remove product with vacuum trucks. Soak up residue with sand or other suitable material, place in containers for proper disposal. Local, state and federal disposal regulations must be followed.

Regulatory Requirements: Report any spills that could reach any surface waters to the U.S. Coast Guard National Response Center (800) 424-8802.

Section Ref. (4)

Section 7 - Handling and Storage

Handling Precautions: Do not handle or store near heat, sparks, or flame.

Storage Requirements: Do not store near strong oxidants or open flames. Avoid water contamination.

Section 8 - Exposure Controls / Personal Protection

Ingredient	OSHA PEL TWA	OSHA PEL STEL	ACGIH TLV TWA	ACGIH TLV STEL	NIOSH REL TWA	NIOSH REL STEL	NIOSH IDLH
Diesel Fuel			100 mg/m^3				
Polynuclear aromatics	0.2 g/m^3		0.2 mg/m^3		0.1 mg/m^3		
Naphthalene	10 ppm		10 ppm	15 ppm	10 ppm	15 ppm	250 ppm
Xylenes	100 ppm		100 ppm	150 ppm	100 ppm	150 ppm	900 ppm

Engineering Controls

Ventilation: General mechanical with local exhaust; sufficient to maintain exposure levels below recommended TLV.

Protective Clothing/Equipment

Gloves: Use chemical resistant gloves resistant to distillate to avoid prolonged or repeated skin contact.

Goggles: Chemical-type goggles or face shield.

Respiratory: Self-contained, positive-pressure breathing apparatus when used in confined or enclosed space or when exposure limits are exceeded. Organic vapor respirators can be used with good ventilation when organic vapors are less than 1000 ppm or ten (10) times permissible exposure limit, which ever is less.

Section Ref. (3)

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance and Odor: Yellow-Green color with distinct hydrocarbon odor

Odor Threshold: No Data

Vapor Pressure: 0.19 psi @ 100°F

Vapor Density (Air=1): 4+

Formula Weight: No Data

Density: No Data

Specific Gravity (H_2O=1, at 4 °C): 0.83 –0.86

pH: No Data

Water Solubility: Negligible

Other Solubilities: No Data

Boiling Point: 320°F - 680°F

Viscosity: 2.6 cst @ 40°C

Refractive Index: No Data

Surface Tension: No Data

% Volatile: <2

Evaporation Rate: 0.02 (Butyl Acetate = 1)

Section 10 - Stability and Reactivity

Stability: Material is stable.

Polymerization: Will not occur.

Chemical Incompatibilities: Do not store near strong oxidants.

Conditions to Avoid: Do not store near open flames.

Hazardous Decomposition Products: Under fire conditions – May form toxic materials; carbon dioxide and monoxide, oxides of sulfur and nitrogen, H2S, and other decomposition products, in the case of incomplete combustion.

Section Ref. (10)

Section 11- Toxicological Information

Toxicity by ingestion: Grade 1; LD50 = 5–15 g/kg
Skin-Rabbit, adult 500 mg Moderate irritation effects
National Technical Information Service. (Springfield, VA 22161) (Formerly U.S. Clearinghouse for Scientific and Technical Information)NTIS** AD-A172-198
Oral-Rat LD50: 9 g/kg
"Toxicology of Petroleum Hydrocarbons, Proceedings of the Symposium, 1st, 1982" MacFarland, H.N., et al., eds., Washington, DC, American Petroleum Institute, 198352MLA2 1,1,83
Skin-Mouse TDLo: 243 g/kg/97W-I: Carcinogenic effects
Fundamental and Applied Toxicology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1981- FAATDF 9, 297, 87

Diesel Exhaust:
Inhalation-Rat TCLo: 4900 mg/m^3/8H/2Y-C: Carcinogenic effects
Developments in Toxicology and Environmental Science. (Elsevier, Scientific Publishing Co., POB 211, 1000 AE Amsterdam, Netherlands) V.1- 1977-DTESD7 13, 349, 86
Inhalation-Rat TC: 7 mg/m^3/7H/2Y-I: Carcinogenic effects
Fundamental and Applied Toxicology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1981- FAATDF 9, 208, 87
Inhalation-Rat TCLo: 2200 mg/m^3/16H/2Y-I: Neoplastic effects
Developments in Toxicology and Environmental Science. (Elsevier, Scientific Publishing Co., POB 211, 1000 AE Amsterdam, Netherlands) V.1- 1977-DTESD7 13, 471, 86
Inhalation-Rat TC: 8300 mg/m^3/6H/86W-I :Equivocal tumorigenic agent
American Industrial Hygiene Association Journal. (AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311) V.19- 1958- AIHAAP 42, 382, 81
Inhalation-Rat TC: 7 mg/m^3/7H/2Y-I: Equivocal tumorigenic agent
Annals of the American Conference of Governmental Industrial Hygienists. (American Conference of Governmental Industrial Hygienists, Inc., 6500 Glenway Ave., Bldg. D-5, Cincinnati, OH, 54211) V.1- 1981- ACGHD2 13,3,85

Section Ref. (5, 10)

Section 12 - Ecological Information

Ecotoxicity:
Dangerous to aquatic life in high concentrations.
Fouling to shoreline.
May be dangerous if it enters water intakes.
Notify local health and wildlife officials.
Notify operators of nearby water intakes
Aquatic toxicity: 204 mg/l/24 hr/juvenile American shad/TLm/salt water.
Waterfowl toxicity: more than 20 ml/kg/LD50/mallards

Section Ref. (10)

Section 13 - Disposal Considerations

Disposal: Local, state and federal disposal regulations must be followed.
Container Cleaning and Disposal: "Empty" Container Warning: "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description information.

Transportation Information for Bulk Shipments

DOT Shipping Name: Diesel Fuel
DOT Hazard Class: 3
DOT ID No.: UN 1202
DOT Packing Group: III
Hazard Label: Flammable Liquid

Section 15 - Regulatory Information

CERCLA Reportable Quantity (RQ) (40 CFR 302.4):

Compound	CAS Number	RQ
Xylenes (mixed isomers)	1330-20-7	100
Naphthalene	91-20-3	100

SARA 311/312 Codes (40 CFR 370 / 29 CFR 1910.1200):

Fire	Yes
Pressure	No
Reactivity	No
Immediate (acute)	Yes
Delayed (chronic)	Yes

SARA Toxic Chemical (40 CFR 372) Section 313:

Compound	CAS Number	Concentration %
Xylenes (mixed isomers)	1330-20-7	0-0.2
Naphthalene	91-20-3	0-1.0

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): None

TSCA (40 CFR 710): All components of this product are listed on the TSCA Inventory.

State Regulations: The following chemicals are specifically listed by individual states, for details on each states regulatory requirements you should contact the appropriate agency in that state.

Compound	CAS Number	States
Xylenes (mixed isomers)	1330-20-7	CA, MA, NY, NJ, TX, FL, IL, PA
Naphthalene	91-20-3	CA, MA, NJ, TX, FL, IL, PA

CA – CALIFORNIA STATE SUPERFUND HAZARDOUS SUBSTANCE
MA – MASSACHUSETTS SUBSTANCE LIST
NY – NEW YORK HAZARDOUS SUBSTANCE BULK STORAGE LIST
NJ – NEW JERSEY RIGHT TO KNOW HAZARDOUS SUBSTANCE
TX – TEXAS AIR CONTAMINANTS WITH HEALTH EFFECTS SCREENING LEVEL
FL – FLORIDA TOXIC SUBSTANCE LIST
IL – TOXIC SUBSTANCE DISCLOSURE TO EMPLOYEES LIST
PA – PENNSYLVANIA HAZARDOUS SUBSTANCE LIST

Section Ref. (6)

SECTION 16 - Other Information

Prepared By: Tommy Rowland, 05-06-2011
Revision Notes: Swapped sections 2 and 3.

Hazardous Materials Information System (U.S.A.)

HMIS	
H	1
F	2
PH	0
PPE†	
†Sec. 8	

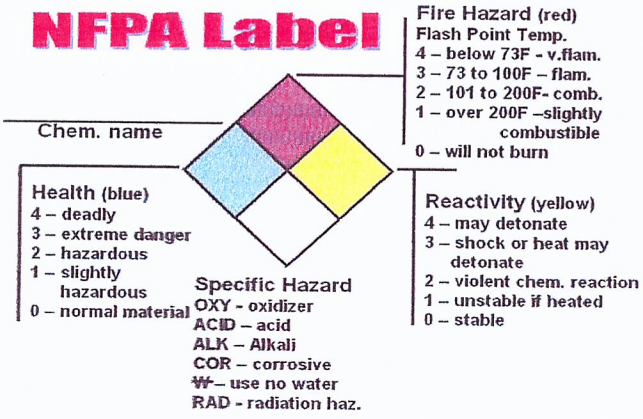
Hazard Ratings

H – Health
F – Fire Hazard
PH – Physical Hazard

4 – Extreme
3 – Serious
2 – Moderate
1 – Slight
0 – Minimal

*** Chronic Hazard** - Chronic (long-term) health effects may result from repeated over exposure.

National Fire Protection Association



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Reference and research:

(1) The International Chemical Safety Card - http://www.cdc.gov/niosh/ipcs/icstart.html

(2) NIOSH Pocket Guide to Chemical Hazards - http://www.cdc.gov/niosh/npg/

(3) 2007 Guide to Occupational Exposure Values – Compiled by ACGIH

(4) 2008 Emergency Response Guidebook - http://hazmat.dot.gov/pubs/erg/unidnum.htm

(5) Sax's Dangerous Properties of Industrial Materials, 9th Edition; Edited by Richard J. Lewis, Sr.; Version 1.6; Copyright © 1997 by John Wiley & Sons, Inc.

(6) Touchstone Environmental, Inc.; Chemcheck Handbook (educational resource)

(7) Hawley's Condensed Chemical Dictionary, 13th Edition; Edited by Richard J. Lewis, Sr.; Version 1.1 Copyright© 1997 by John Wiley & Sons, Inc.

(8) Environmental Contaminant Reference Databook; VOLUMES I, II and III; by Jan. C. Prager; Version 2.0; Copyright © 1997 by John Wiley & Sons, Inc.

(9) Fire Protection Guide to Hazardous Materials, Twelfth Edition; National Fire Protection Association (NFPA 325) Guide to Hazardous Chemical Properties of Flammable Liquids, Gases, and Volatile Solids. 1994 edition.

(10) Hazardous Materials Handbook; Richard P. Pohanish and Stanley A. Greene, Version 1.3 Copyright© 1997 by Richard P. Pohanish and Stanley A. Greene