**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, Red Dyed B5 Ultra 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**

<table>
<thead>
<tr>
<th>Health</th>
<th>Physical Haz.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fammability</td>
<td>PH</td>
</tr>
</tbody>
</table>

**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)
GHS CLASSIFICATION

Hazard class | Hazard Category | Hazard Statement
---|---|---
Combustible Liquid | Category 4 | H227
Aspiration hazard | Category 1 | H304
Carcinogenicity | Category 2 | H350
Acute toxicity, inhalation | Category 4 | H332
Specific target organ toxicity
  (Blood, Liver, Thymus, repeated exposure) | Category 2 | H373
Skin, corrosion/irritation | Category 2 | H315
Chronic hazards to the aquatic environment | Category 2 | H411

LABEL ELEMENTS

Pictogram:

Signal Word: Danger
Physical Hazard Statements:
H227 Combustible liquid; will ignite on surface at temperatures above auto-ignition temp.

Health Hazard Statements:
H304 May be fatal if swallowed and enters airways.
H350 May cause cancer.
H332 Harmful if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.
H315 Causes skin irritation.

Environmental Hazard Statements:
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:
Prevention: P280: Wear protective gloves/protective clothing/eye protection/face protection
P260 Do not breathe dust/fume/ gas/ mist/vapors/ spray.
Response: P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P331 Do NOT induce vomiting.
Disposal: P501 Dispose of contents/containers to an approved waste management company or reclaimer.

Unclassified hazards: Vapors in the headspace of tanks and containers may ignite and explode at temperatures exceeding auto-ignition temperature where vapor concentrations are within the flammability range. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.

Section 3 - Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>%wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>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)</td>
<td>68476-34-6</td>
<td>95-100</td>
</tr>
<tr>
<td>B100 Biodiesel: (68937-84-8) Soybean derived</td>
<td>mixture</td>
<td>≤ 5.4</td>
</tr>
<tr>
<td>(67784-80-9) Tallow derived</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(61788-61-2) Canola derived</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(129828-16-6) Rapeseed derived</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>0-1.0</td>
</tr>
<tr>
<td>Xylenes</td>
<td>1330-20-7</td>
<td>&lt;0.2</td>
</tr>
</tbody>
</table>
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

**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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>OSHA PEL TWA</th>
<th>STEL</th>
<th>ACGIH TLV TWA</th>
<th>STEL</th>
<th>NIOSH REL TWA</th>
<th>STEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel Fuel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polynuclear aromatics</td>
<td>0.2 g/m³</td>
<td>0.2 mg/m³</td>
<td>0.1 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naphthalene</td>
<td>10 ppm</td>
<td></td>
<td>15 ppm</td>
<td></td>
<td>10 ppm</td>
<td></td>
<td>250 ppm</td>
</tr>
<tr>
<td>Xylenes</td>
<td>100 ppm</td>
<td></td>
<td>150 ppm</td>
<td></td>
<td>100 ppm</td>
<td></td>
<td>900 ppm</td>
</tr>
</tbody>
</table>

**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 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 (H2O=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 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** TDL0: 243 g/kg/97W-I: Carcinogenic effects

Fundamental and Applied Toxicology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1981-FAAATDF 9, 297, 87
Diesel Exhaust:
Inhalation-Rat TCLo: 4900 mg/m³/8H/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/m³/7H/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/m³/16H/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/m³/6H/86W-I: Equivocal tumorigenic agent
Inhalation-Rat TC: 7 mg/m³/7H/2Y-I: Equivocal tumorigenic agent

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 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):

<table>
<thead>
<tr>
<th>Compound</th>
<th>CAS Number</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylenes (mixed isomers)</td>
<td>1330-20-7</td>
<td>100</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>100</td>
</tr>
</tbody>
</table>

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

SARA Toxic Chemical (40 CFR 372) Section 313:

<table>
<thead>
<tr>
<th>Compound</th>
<th>CAS Number</th>
<th>Concentration %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylenes (mixed isomers)</td>
<td>1330-20-7</td>
<td>0-0.2</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>0-1.0</td>
</tr>
</tbody>
</table>

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 state's regulatory requirements you should contact the appropriate agency in that state.

<table>
<thead>
<tr>
<th>Compound</th>
<th>CAS Number</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylenes (mixed isomers)</td>
<td>1330-20-7</td>
<td>CA, MA, NY, NJ, TX, FL, IL, PA</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>CA, MA, NJ, TX, FL, IL, PA</td>
</tr>
</tbody>
</table>

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: Lion Oil Control Lab
Revision Notes:
- 06-11-2013 GHS update
- 05-06-2011-Swapped sections 2 and 3.

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

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Hazard Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>H – Health</td>
</tr>
<tr>
<td>F2</td>
<td>F – Fire Hazard</td>
</tr>
<tr>
<td>PH0</td>
<td>PH – Physical Hazard</td>
</tr>
<tr>
<td>PPE†</td>
<td>Sec. 8</td>
</tr>
</tbody>
</table>

*Chronic Hazard* - Chronic (long-term) health effects may result from repeated over exposure.
Disclaimer: LION OIL COMPANY PROVIDES THIS INFORMATION FOR THE USER'S CONSIDERATION. LION OIL COMPANY BELIEVES THIS INFORMATION IS ACCURATE, BUT NOT ALL INCLUSIVE IN ALL CIRCUMSTANCES. USER SHOULD ENSURE THAT USER HAS CURRENT DATA RELEVANT FOR ITS PURPOSES. NO WARRANTY, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY, FITNESS OR OTHERWISE IS GIVEN.

Product Name: Off Road Diesel Fuel

Unclassified hazards: May ignite on surfaces at temperatures above auto-ignition temperature. Vapors in the headspace of tanks and containers may ignite and explode at temperatures exceeding auto-ignition temperature where vapor concentrations are within the flammability range. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.

Signal Word: Danger

Avoid Prolonged Breathing of Mist or Spray. Average exposure to airborne mist for an 8-hour workday should not exceed 5.0 milligrams of mist per cubic meter of air.

Avoid Eye and Skin Contact: Wear oil-impervious protective clothing. If clothes become contaminated, change to clean clothing after thoroughly washing exposed skin with soap and warm water.

FIRST AID

Inhalation: If overcome by fumes, remove from exposure immediately and call a physician.

Skin: Wash with warm water and soap until the exposed area is clean.

Eyes: Flush with water for at least fifteen (15) minutes. See physician if symptoms persist.

Ingestion: Do not induce vomiting. Obtain medical assistance. Small amounts that accidentally enter through the mouth should be rinsed out until no taste of it remains.

FIRE CONTROL

Use water spray or fog, chemical foam, dry powder or carbon dioxide.
Reference and research:

(2) NIOSH Pocket Guide to Chemical Hazards - http://www.cdc.gov/niosh/npg/
(3) 2007 Guide to Occupational Exposure Values – Compiled by ACGIH
(6) Touchstone Environmental, Inc.; Chemcheck Handbook (educational resource)
(8) Environmental Contaminant Reference Databook; VOLUMES I, II and III; by Jan. C. Prager; Version 2.0; Copyright © 1997 by John Wiley & Sons, Inc.
(10) Hazardous Materials Handbook; Richard P. Pohanchis and Stanley A. Greene, Version 1.3 Copyright© 1997 by Richard P. Pohanchis and Stanley A. Greene