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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

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**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

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	95-100
B100 Biodiesel: (68937-84-8) Fatty Acid Methyl Ester, FAME (67784-80-9) Soybean derived (61788-61-2) Tallow derived (129828-16-6) Canola derived (73891-99-3) Rapeseed derived	mixture	≤ 5.4
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

**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, CO<sub>2</sub>, 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 H<sub>2</sub>S, and other decomposition products, in the case of incomplete combustion.

**Fire-Fighting Instructions:** Extinguish with dry chemical, CO<sub>2</sub>, 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.

NFPA rating ®	
<b>H</b>	<b>1</b>
<b>F</b>	<b>2</b>
<b>R</b>	<b>0</b>

**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		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Diesel Fuel			100 mg/m <sup>3</sup>				
Polynuclear aromatics	0.2 g/m <sup>3</sup>		0.2 mg/m <sup>3</sup>		0.1 mg/m <sup>3</sup>		
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<sub>2</sub>O=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, H<sub>2</sub>S, 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, 1983 52MLA2 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<sup>3</sup>/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<sup>3</sup>/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<sup>3</sup>/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<sup>3</sup>/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<sup>3</sup>/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

<b>SARA 311/312 Codes (40 CFR 370 / 29 CFR 1910.1200):</b>	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:** 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.)**

HMIS		Hazard Ratings	
H	1	.....	H – Health
F	2	.....	F – Fire Hazard
PH	0	.....	PH – Physical Hazard
PPE <sup>†</sup>		.....	4 – Extreme
†Sec. 8		.....	3 – Serious
		.....	2 – Moderate
		.....	1 – Slight
		.....	0 – Minimal

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



**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, 13<sup>th</sup> 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