

# OILS, MISCELLANEOUS: LINSEED

OLS

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Flaxseed oil Linseed oil Raw linseed oil		Liquid	Light yellow to dark yellow	Paint-like odor
		Floats on water.		
<p>Call fire department.                  Avoid contact with liquid.                  Notify local health and pollution control agencies.                  Protect water intakes.</p>				
<b>Fire</b>	Combustible. Extinguish with dry chemicals, foam or carbon dioxide. Water may be ineffective on fire.			
<b>Exposure</b>	LIQUID Not harmful. Do not induce vomiting.			
<b>Water Pollution</b>	Effect of low concentrations on aquatic life is unknown. Fouling to shoreline. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.			

<p><b>1. CORRECTIVE RESPONSE ACTIONS</b></p> Stop discharge Contain Collection Systems: Skim Clean shore line Salvage waterfowl	<p><b>2. CHEMICAL DESIGNATIONS</b></p> <p>2.1 <b>CG Compatibility Group:</b> 33;                  Miscellaneous hydrocarbon mixture</p> <p>2.2 <b>Formula:</b> Not applicable</p> <p>2.3 <b>IMO/UN Designation:</b> Not listed</p> <p>2.4 <b>DOT ID No.:</b> Not listed</p> <p>2.5 <b>CAS Registry No.:</b> Currently not available</p> <p>2.6 <b>NAERG Guide No.:</b> Not listed</p> <p>2.7 <b>Standard Industrial Trade Classification:</b> 9899</p>
<p><b>3. HEALTH HAZARDS</b></p> <p>3.1 <b>Personal Protective Equipment:</b> Goggles or face shield; rubber gloves</p> <p>3.2 <b>Symptoms Following Exposure:</b> Contact of liquid with eyes causes mild irritation. Prolonged contact with skin can cause dermatitis. Ingestion of large doses (over 1 oz) has laxative effect.</p> <p>3.3 <b>Treatment of Exposure:</b> EYES: flush with water for at least 15 min. SKIN: wipe off; wash with soap and water. INGESTION: do NOT induce vomiting.</p> <p>3.4 <b>TLV-TWA:</b> Not listed.</p> <p>3.5 <b>TLV-STEL:</b> Not listed.</p> <p>3.6 <b>TLV-Ceiling:</b> Not listed.</p> <p>3.7 <b>Toxicity by Ingestion:</b> Grade 0; LD<sub>50</sub> &gt;15 g/kg</p> <p>3.8 <b>Toxicity by Inhalation:</b> Currently not available.</p> <p>3.9 <b>Chronic Toxicity:</b> Liver damage in rats (from addition of oil to diet)</p> <p>3.10 <b>Vapor (Gas) Irritant Characteristics:</b> Currently not available</p> <p>3.11 <b>Liquid or Solid Characteristics:</b> Currently not available</p> <p>3.12 <b>Odor Threshold:</b> Currently not available</p> <p>3.13 <b>IDLH Value:</b> Not listed.</p> <p>3.14 <b>OSHA PEL-TWA:</b> Not listed.</p> <p>3.15 <b>OSHA PEL-STEL:</b> Not listed.</p> <p>3.16 <b>OSHA PEL-Ceiling:</b> Not listed.</p> <p>3.17 <b>EPA AEGL:</b> Not listed</p>	

## 4. FIRE HAZARDS

- 4.1 **Flash Point:** 535°F O.C. 403°F C.C.
- 4.2 **Flammable Limits in Air:** Not pertinent
- 4.3 **Fire Extinguishing Agents:** Dry chemical, foam, carbon dioxide
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Water or foam may cause frothing; water may be ineffective
- 4.5 **Special Hazards of Combustion Products:** Not pertinent
- 4.6 **Behavior in Fire:** Not pertinent
- 4.7 **Auto Ignition Temperature:** 650°F
- 4.8 **Electrical Hazards:** Not pertinent
- 4.9 **Burning Rate:** 4 mm/min.
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** Not pertinent.
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** Not pertinent.
- 4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

## 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Raw grade; varnish grade; grinding grade; heat-bodied grade; blown grade
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** No requirement
- 7.4 **Venting:** Open (flame arrester)
- 7.5 **IMO Pollution Category:** D
- 7.6 **Ship Type:** Data not available
- 7.7 **Barge Hull Type:** Currently not available

## 8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Not listed
- 8.2 **49 CFR Class:** Not pertinent
- 8.3 **49 CFR Package Group:** Not listed.
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:**

<b>Category</b>	<b>Classification</b>
Health Hazard (Blue).....	0
Flammability (Red).....	1
Instability (Yellow).....	0
- 8.6 **EPA Reportable Quantity:** Not listed.
- 8.7 **EPA Pollution Category:** Not listed.
- 8.8 **RCRA Waste Number:** Not listed
- 8.9 **EPA FWPCA List:** Not listed

## 5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction
- 5.2 **Reactivity with Common Materials:** No reaction
- 5.3 **Stability During Transport:** Stable
- 5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
- 5.5 **Polymerization:** Not pertinent
- 5.6 **Inhibitor of Polymerization:** Not pertinent

## 9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Liquid
- 9.2 **Molecular Weight:** Not pertinent
- 9.3 **Boiling Point at 1 atm:** Not pertinent (very high)
- 9.4 **Freezing Point:** -2°F = -19°C = 254°K
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 0.932 at 20°C (liquid)
- 9.8 **Liquid Surface Tension:** (est.) 25 dynes/cm = 0.025 N/m at 20°C
- 9.9 **Liquid Water Interfacial Tension:** (est.) 50 dynes/cm = 0.050 N/m at 20°C
- 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
- 9.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent
- 9.12 **Latent Heat of Vaporization:** Not pertinent
- 9.13 **Heat of Combustion:** -16,800 Btu/lb = -9,300 cal/g = -390 X 10<sup>3</sup> J/kg
- 9.14 **Heat of Decomposition:** Not pertinent
- 9.15 **Heat of Solution:** Not pertinent
- 9.16 **Heat of Polymerization:** Not pertinent
- 9.17 **Heat of Fusion:** Currently not available
- 9.18 **Limiting Value:** Currently not available
- 9.19 **Reid Vapor Pressure:** Currently not available

## 6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:** Currently not available
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):** Currently not available
- 6.4 **Food Chain Concentration Potential:** None
- 6.5 **GESAMP Hazard Profile:**
  - Bioaccumulation: 0
  - Damage to living resources: 0
  - Human Oral hazard: 0
  - Human Contact hazard: I
  - Reduction of amenities: XX

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
34	59.250	65	0.456	35	1.158	60	56.030
36	59.190	70	0.458	40	1.158	61	54.880
38	59.130	75	0.459	45	1.158	62	53.760
40	59.080	80	0.461	50	1.158	63	52.660
42	59.020	85	0.463	55	1.158	64	51.590
44	58.970	90	0.465	60	1.158	65	50.550
46	58.910	95	0.466	65	1.158	66	49.530
48	58.860	100	0.468	70	1.158	67	48.530
50	58.800	105	0.470	75	1.158	68	47.560
52	58.750	110	0.471	80	1.158	69	46.620
54	58.690	115	0.473	85	1.158	70	45.690
56	58.640	120	0.475	90	1.158	71	44.790
58	58.580	125	0.477	95	1.158	72	43.900
60	58.520	130	0.478	100	1.158	73	43.040
62	58.470	135	0.480	105	1.158	74	42.200
64	58.410	140	0.482	110	1.158	75	41.380
66	58.360	145	0.484	115	1.158	76	40.570
68	58.300	150	0.485	120	1.158	77	39.790
70	58.250	155	0.487				
72	58.190	160	0.489				
74	58.140	165	0.491				
76	58.080	170	0.492				
78	58.020						
80	57.970						
82	57.910						
84	57.860						

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	I N S O L U B L E		N O T  P E R T I N E N T		N O T  P E R T I N E N T		N O T  P E R T I N E N T