

OILS, EDIBLE: SAFFLOWER

OSF

CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION		
Common Synonyms Carthamus tinctorius oil Safflower oil Safflower seed oil	Liquid Floats on water.	Light yellow	Bland fatty odor	<p>4.1 Flash Point: Currently not available</p> <p>4.2 Flammable Limits in Air: Not pertinent</p> <p>4.3 Fire Extinguishing Agents: Dry chemical, foam, or carbon dioxide</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective; water or foam may cause frothing.</p> <p>4.5 Special Hazards of Combustion Products: Not pertinent</p> <p>4.6 Behavior in Fire: Not pertinent</p> <p>4.7 Auto Ignition Temperature: Currently not available</p> <p>4.8 Electrical Hazards: Not pertinent</p> <p>4.9 Burning Rate: 4 mm/min.</p> <p>4.10 Adiabatic Flame Temperature: Currently not available</p> <p>4.11 Stoichiometric Air to Fuel Ratio: Not pertinent.</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): Not pertinent.</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7.1 Grades of Purity: Food grade: contains 0.02% propyl gallate, 0.01% citric acid, or may contain no additives. Technical: non-break and alkali-refined</p> <p>7.2 Storage Temperature: Ambient</p> <p>7.3 Inert Atmosphere: No requirement</p> <p>7.4 Venting: Open (flame arrester)</p> <p>7.5 IMO Pollution Category: D</p> <p>7.6 Ship Type: Data not available</p> <p>7.7 Barge Hull Type: Currently not available</p>		
Call fire department. Notify local health and pollution control agencies.				8. HAZARD CLASSIFICATIONS			
Fire	Combustible. Extinguish with dry chemicals, foam or carbon dioxide. Water may be ineffective on fire.				<p>8.1 49 CFR Category: Not listed</p> <p>8.2 49 CFR Class: Not pertinent</p> <p>8.3 49 CFR Package Group: Not listed.</p> <p>8.4 Marine Pollutant: No</p> <p>8.5 NFPA Hazard Classification: Not listed</p> <p>8.6 EPA Reportable Quantity: Not listed.</p> <p>8.7 EPA Pollution Category: Not listed.</p> <p>8.8 RCRA Waste Number: Not listed</p> <p>8.9 EPA FWPCA List: Not listed</p>		
Exposure	LIQUID Not harmful. DO NOT INDUCE VOMITING.				9. PHYSICAL & CHEMICAL PROPERTIES		
Water Pollution	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>9.1 Physical State at 15° C and 1 atm: Liquid</p> <p>9.2 Molecular Weight: Not pertinent</p> <p>9.3 Boiling Point at 1 atm: Not pertinent (very high)</p> <p>9.4 Freezing Point: Not pertinent</p> <p>9.5 Critical Temperature: Not pertinent</p> <p>9.6 Critical Pressure: Not pertinent</p> <p>9.7 Specific Gravity: 0.923 at 25°C (liquid)</p> <p>9.8 Liquid Surface Tension: (est.) 25 dynes/cm = 0.025 N/m at 20°C</p> <p>9.9 Liquid Water Interfacial Tension: (est.) 50 dynes/cm = 0.050 N/m at 20°C</p> <p>9.10 Vapor (Gas) Specific Gravity: Not pertinent</p> <p>9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent</p> <p>9.12 Latent Heat of Vaporization: Not pertinent</p> <p>9.13 Heat of Combustion: (est.) -15,500 Btu/lb = -8,600 cal/g = -360 X 10³ J/kg</p> <p>9.14 Heat of Decomposition: Not pertinent</p> <p>9.15 Heat of Solution: Not pertinent</p> <p>9.16 Heat of Polymerization: Not pertinent</p> <p>9.17 Heat of Fusion: Currently not available</p> <p>9.18 Limiting Value: Currently not available</p> <p>9.19 Reid Vapor Pressure: Currently not available</p>		
1. CORRECTIVE RESPONSE ACTIONS	<p>Stop discharge Contain Collection Systems: Skim Chemical and Physical Treatment: Absorb Clean shore line Salvage waterfowl</p> <p>2. CHEMICAL DESIGNATIONS</p> <p>2.1 CG Compatibility Group: 34; Ester 2.2 Formula: Not applicable 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: Not listed 2.5 CAS Registry No.: Currently not available 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 9899</p>	<p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Goggles or face shield; rubber gloves</p> <p>3.2 Symptoms Following Exposure: Oil is essentially nontoxic. Contact with eyes can cause mild irritation.</p> <p>3.3 Treatment of Exposure: EYES: flush with water for at least 15 min. INGESTION: do NOT induce vomiting.</p> <p>3.4 TLV-TWA: Not listed.</p> <p>3.5 TLV-STEL: Not listed.</p> <p>3.6 TLV-Ceiling: Not listed.</p> <p>3.7 Toxicity by Ingestion: Currently not available</p> <p>3.8 Toxicity by Inhalation: Currently not available.</p> <p>3.9 Chronic Toxicity: None</p> <p>3.10 Vapor (Gas) Irritant Characteristics: Currently not available</p> <p>3.11 Liquid or Solid Characteristics: Currently not available</p> <p>3.12 Odor Threshold: Currently not available</p> <p>3.13 IDLH Value: Not listed.</p> <p>3.14 OSHA PEL-TWA: Not listed.</p> <p>3.15 OSHA PEL-STEL: Not listed.</p> <p>3.16 OSHA PEL-Ceiling: Not listed.</p> <p>3.17 EPA AEGL: Not listed</p>	<p>5. CHEMICAL REACTIVITY</p> <p>5.1 Reactivity with Water: No reaction</p> <p>5.2 Reactivity with Common Materials: No reaction</p> <p>5.3 Stability During Transport: Stable</p> <p>5.4 Neutralizing Agents for Acids and Caustics: Not pertinent</p> <p>5.5 Polymerization: Not pertinent</p> <p>5.6 Inhibitor of Polymerization: Not pertinent</p> <p>6. WATER POLLUTION</p> <p>6.1 Aquatic Toxicity: Currently not available</p> <p>6.2 Waterfowl Toxicity: Currently not available</p> <p>6.3 Biological Oxygen Demand (BOD): Currently not available</p> <p>6.4 Food Chain Concentration Potential: None</p> <p>6.5 GESAMP Hazard Profile:</p> <ul style="list-style-type: none"> Bioaccumulation: 0 Damage to living resources: 0 Human Oral hazard: 0 Human Contact hazard: 0 Reduction of amenities: XX 	<p>NOTES</p>			

OILS, EDIBLE: SAFFLOWER

OSF

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
52	58.120	52	0.480	35	0.918		N O T
54	58.070	54	0.480	40	0.917		
56	58.010	56	0.480	45	0.916		
58	57.960	58	0.480	50	0.915		
60	57.900	60	0.480	55	0.914		
62	57.840	62	0.480	60	0.913		
64	57.790	64	0.480	65	0.912		
66	57.730	66	0.480	70	0.911		
68	57.680	68	0.480	75	0.909		
70	57.620	70	0.480	80	0.908		
72	57.570	72	0.480	85	0.907		
74	57.510	74	0.480	90	0.906		
76	57.460	76	0.480	95	0.905		
78	57.400	78	0.480	100	0.904		
80	57.350	80	0.480	105	0.903		
82	57.290	82	0.480	110	0.902		
84	57.230	84	0.480	115	0.900		
86	57.180	86	0.480	120	0.899		
88	57.120	88	0.480				
90	57.070	90	0.480				
92	57.010	92	0.480				
94	56.960	94	0.480				
96	56.900	96	0.480				
98	56.850	98	0.480				
100	56.790	100	0.480				
102	56.730	102	0.480				

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 T		N O T P E R T I N E T		N O T P E R T I N E T