

OILS, EDIBLE: CASTOR

OCA

CAUTIONARY RESPONSE INFORMATION

Common Synonyms	Oily liquid	Light yellow to green	Weak odor
	Floats on water.		
<p style="color: red;">Call fire department. Notify local health and pollution control agencies.</p>			
Fire	Combustible. Extinguish with dry chemical, foam or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.		
Exposure	Not harmful.		
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.		

1. CORRECTIVE RESPONSE ACTIONS

Stop discharge
 Contain
 Collection Systems: Skim
 Chemical and Physical Treatment:
 Absorb
 Clean shore line
 Salvage waterfowl

2. CHEMICAL DESIGNATIONS

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

3. HEALTH HAZARDS

3.1 **Personal Protective Equipment:** Goggles or face shield.
 3.2 **Symptoms Following Exposure:** If ingested causes severe diarrhea.
 3.3 **Treatment of Exposure:** INGESTION: if more than 2 tablespoons, consult physician. EYES: flush with water for at least 15 min. SKIN: wipe off, wash with soap and water.
 3.4 **TLV-TWA:** Not listed.
 3.5 **TLV-STEL:** Not listed.
 3.6 **TLV-Ceiling:** Not listed.
 3.7 **Toxicity by Ingestion:** Grade 1; LD₅₀ = 5 to 15 g/kg (Fatal dose unknown but presumably large).
 3.8 **Toxicity by Inhalation:** Currently not available.
 3.9 **Chronic Toxicity:** Not pertinent
 3.10 **Vapor (Gas) Irritant Characteristics:** None
 3.11 **Liquid or Solid Characteristics:** None
 3.12 **Odor Threshold:** Currently not available
 3.13 **IDLH Value:** Not listed.
 3.14 **OSHA PEL-TWA:** Not listed.
 3.15 **OSHA PEL-STEL:** Not listed.
 3.16 **OSHA PEL-Ceiling:** Not listed.
 3.17 **EPA AEGL:** Not listed

4. FIRE HAZARDS

4.1 **Flash Point:** 445°F C.C.
 4.2 **Flammable Limits in Air:** Currently not available
 4.3 **Fire Extinguishing Agents:** Dry chemical, foam, or carbon dioxide
 4.4 **Fire Extinguishing Agents Not to Be Used:** Water or foam may cause frothing.
 4.5 **Special Hazards of Combustion Products:** Not pertinent
 4.6 **Behavior in Fire:** Not pertinent
 4.7 **Auto Ignition Temperature:** 840°F
 4.8 **Electrical Hazards:** Not pertinent
 4.9 **Burning Rate:** Currently not available
 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:** Commercial: meets Mil. Specs. and ASTM; USP; USP Odorless; Technical. All grades differ only in color and acid values.
 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:** Not listed
 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:** Varies, depending on composition
 9.4 **Freezing Point:** 10°F = -12°C = 261°K
 9.5 **Critical Temperature:** Not pertinent
 9.6 **Critical Pressure:** Not pertinent
 9.7 **Specific Gravity:** 0.96 at 25°C (liquid)
 9.8 **Liquid Surface Tension:** 39 dynes/cm = 0.039 N/m at 20°C
 9.9 **Liquid Water Interfacial Tension:** 19.2 dynes/cm = 0.0192 N/m at 22°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:** -15,950 Btu/lb = -8,860 cal/g = -371.0 X 10⁵ 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:** 0.10 psia

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:** Not listed

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
50	60.860	35	0.478	70	1.206	50	3909.000
52	60.790	40	0.478	80	1.206	55	3027.000
54	60.720	45	0.478	90	1.206	60	2356.000
56	60.650	50	0.478	100	1.206	65	1842.000
58	60.580	55	0.478	110	1.206	70	1448.000
60	60.510	60	0.478	120	1.206	75	1142.000
62	60.450	65	0.478	130	1.206	80	905.500
64	60.380	70	0.478	140	1.206	85	720.799
66	60.310	75	0.478	150	1.206	90	576.199
68	60.240	80	0.478	160	1.206	95	462.399
70	60.170	85	0.478	170	1.206	100	372.599
72	60.100	90	0.478	180	1.206	105	301.399
74	60.030	95	0.478	190	1.206	110	244.699
76	59.960	100	0.478	200	1.206	115	199.299
78	59.890			210	1.206	120	163.000
80	59.820			220	1.206	125	133.699
82	59.750			230	1.206	130	110.099
84	59.680			240	1.206	135	90.940
86	59.610			250	1.206		
88	59.540			260	1.206		
90	59.470						
92	59.410						
94	59.340						
96	59.270						
98	59.200						
100	59.130						

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	35	0.013		N		N
	N	40	0.016		O		O
	S	45	0.018		T		T
	O	50	0.022		P		P
	L	55	0.026		E		E
	U	60	0.030		R		R
	B	65	0.035		T		T
	L	70	0.041		I		I
	E	75	0.048		N		N
		80	0.056		E		E
		85	0.065		N		N
		90	0.075		T		T
		95	0.086				
		100	0.099				
		105	0.113				
		110	0.129				
		115	0.147				
		120	0.168				