

EPOXIDIZED VEGETABLE OILS

EVO

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Drying oil epoxides Epoxidized drying oils Epoxidized oils	Oily liquid Pale yellow Odorless Floats on water.
<p>Call fire department. Notify local health and pollution control agencies. Protect water intakes.</p>	
Fire	Combustible. Extinguish with foam, dry chemical or carbon dioxide.
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:** Not listed.
2.2 **Formula:** (O₂CRHCHR₂COO)₂C₁₈H₃₄
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:**
42000

3. HEALTH HAZARDS

3.1 **Personal Protective Equipment:** Currently not available
3.2 **Symptoms Following Exposure:** Currently not available
3.3 **Treatment of Exposure:** Currently not available
3.4 **TLV-TWA:** Not listed.
3.5 **TLV-STEL:** Not listed.
3.6 **TLV-Ceiling:** Not listed.
3.7 **Toxicity by Ingestion:** Grade 0; LD₅₀ above 15 g/kg (rat)
3.8 **Toxicity by Inhalation:** Currently not available.
3.9 **Chronic Toxicity:** Currently not available
3.10 **Vapor (Gas) Irritant Characteristics:** Not pertinent
3.11 **Liquid or Solid Characteristics:** Currently not available
3.12 **Odor Threshold:** Odorless
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:** 585°F O.C.
4.2 **Flammable Limits in Air:** Not pertinent
4.3 **Fire Extinguishing Agents:** Foam, dry chemical, carbon dioxide
4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
4.5 **Special Hazards of Combustion Products:** Not pertinent
4.6 **Behavior in Fire:** Not pertinent
4.7 **Auto Ignition Temperature:** Currently not available
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

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

6. WATER POLLUTION

6.1 **Aquatic Toxicity:**
240 ppm/24 hr/brine shrimp/TL_m
6.2 **Waterfowl Toxicity:** Currently not available
6.3 **Biological Oxygen Demand (BOD):** 4% of theoretical in 5 days, fresh water, acclimated seed
6.4 **Food Chain Concentration Potential:** Currently not available
6.5 **GESAMP Hazard Profile:** Not listed

7. SHIPPING INFORMATION

7.1 **Grades of Purity:** Epoxidized vegetable oil; Epoxidized soybean oil
7.2 **Storage Temperature:** Ambient
7.3 **Inert Atmosphere:** No requirement
7.4 **Venting:** Open
7.5 **IMO Pollution Category:** Currently not available
7.6 **Ship Type:** Currently 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

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:** Very high
9.4 **Freezing Point:** Not pertinent
9.5 **Critical Temperature:** Not pertinent
9.6 **Critical Pressure:** Not pertinent
9.7 **Specific Gravity:** 1.0 at 20°C (liquid)
9.8 **Liquid Surface Tension:** 36.2 dynes/cm = 0.0362 N/m at 24°C
9.9 **Liquid Water Interfacial Tension:** 50 dynes/cm = 0.05 N/m at 22.7°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:** (est.) -13,000 Btu/lb = -7,000 cal/g = -300 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:** Currently not available

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	63.600	85	0.458	50	1.109	68	518.000
36	63.530	90	0.462	52	1.109		
38	63.460	95	0.466	54	1.109		
40	63.390	100	0.470	56	1.109		
42	63.320	105	0.474	58	1.109		
44	63.260	110	0.478	60	1.109		
46	63.190	115	0.482	62	1.109		
48	63.120	120	0.486	64	1.109		
50	63.050	125	0.489	66	1.109		
52	62.980	130	0.493	68	1.109		
54	62.910	135	0.497	70	1.109		
56	62.840	140	0.501	72	1.109		
58	62.770	145	0.505	74	1.109		
60	62.700	150	0.509	76	1.109		
62	62.630			78	1.109		
64	62.560			80	1.109		
66	62.490			82	1.109		
68	62.420			84	1.109		
70	62.350						
72	62.280						
74	62.210						
76	62.150						
78	62.080						
80	62.010						
82	61.940						
84	61.870						

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 I L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		N O T P E R T I N E N T