

OILS, MISCELLANEOUS: COAL TAR

OCT

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Light oil				Liquid	Colorless to yellow	Pleasant odor
Floats on water. Flammable, irritating vapor is produced.						
<p>Keep people away. Shut off ignition sources and call fire department. Stay upwind and use water spray to "knock down" vapor. Avoid contact with liquid and vapor. Notify local health and pollution control agencies. Protect water intakes.</p>						
Fire	<p>FLAMMABLE. Flashback along vapor trail may occur. Vapor may explode if ignited in an enclosed area. Extinguish with dry chemical, foam or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.</p>					
Exposure	<p>CALL FOR MEDICAL AID.</p> <p>VAPOR Irritating to eyes, nose and throat. Move to fresh air.</p> <p>LIQUID Irritating to skin and eyes. Harmful if swallowed. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. DO NOT INDUCE VOMITING.</p>					
Water Pollution	<p>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>					

<p>1. CORRECTIVE RESPONSE ACTIONS</p> <p>Stop discharge Contain Collection Systems: Skim Chemical and Physical Treatment: Burn; Absorb Clean shore line Salvage waterfowl</p>	<p>2. CHEMICAL DESIGNATIONS</p> <p>2.1 CG Compatibility Group: 33; Miscellaneous Hydrocarbon Mixtures 2.2 Formula: Not applicable 2.3 IMO/UN Designation: 3.2/1136 2.4 DOT ID No.: 1136 2.5 CAS Registry No.: Currently not available 2.6 NAERG Guide No.: 128 2.7 Standard Industrial Trade Classification: 33521</p>
<p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Protective gloves; goggles or face shield. 3.2 Symptoms Following Exposure: Vapor causes slight irritation of nose and throat, smarting of eyes. Liquid may irritate skin on prolonged contact. 3.3 Treatment of Exposure: INGESTION: have victim drink water or milk; do NOT induce vomiting. EYES: flush with water for at least 15 min. SKIN: wipe off and 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: Currently not available 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Currently not available 3.10 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary. 3.11 Liquid or Solid Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin. 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</p>	

4. FIRE HAZARDS

- 4.1 Flash Point: 60°-77°F C.C.
- 4.2 Flammable Limits in Air: 1.3%-8%
- 4.3 Fire Extinguishing Agents: Dry chemical, foam, or carbon dioxide
- 4.4 Fire Extinguishing Agents Not to Be Used: 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: Currently not available
- 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

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: 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

7. SHIPPING INFORMATION

- 7.1 Grades of Purity: Various compositions, depending on type of coal used and boiling range taken.
- 7.2 Storage Temperature: Ambient
- 7.3 Inert Atmosphere: No requirement
- 7.4 Venting: Open (flame arrester) or pressure-vacuum
- 7.5 IMO Pollution Category: A
- 7.6 Ship Type: 2
- 7.7 Barge Hull Type: Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 49 CFR Category: Flammable liquid
- 8.2 49 CFR Class: 3
- 8.3 49 CFR Package Group: II
- 8.4 Marine Pollutant: No
- 8.5 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue).....	2
Flammability (Red).....	3
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

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: 223-333°F = 106-167°C = 379-440°K
- 9.4 Freezing Point: Not pertinent
- 9.5 Critical Temperature: Not pertinent
- 9.6 Critical Pressure: Not pertinent
- 9.7 Specific Gravity: (est.) 0.90 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: Currently not available
- 9.10 Vapor (Gas) Specific Gravity: Not pertinent
- 9.11 Ratio of Specific Heats of Vapor (Gas): (est.) 1.071
- 9.12 Latent Heat of Vaporization: (est.) 107 Btu/lb = 59.8 cal/g = 2.5 X 10⁵ J/kg
- 9.13 Heat of Combustion: -17,440 Btu/lb = -9,690 cal/g = -405.7 X 10³ 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
50	56.180	50	0.344	35	0.920	50	9.343
52	56.180	52	0.344	40	0.919	52	8.841
54	56.180	54	0.344	45	0.918	54	8.370
56	56.180	56	0.344	50	0.917	56	7.927
58	56.180	58	0.344	55	0.916	58	7.511
60	56.180	60	0.344	60	0.915	60	7.119
62	56.180	62	0.344	65	0.914	62	6.751
64	56.180	64	0.344	70	0.913	64	6.404
66	56.180	66	0.344	75	0.912	66	6.078
68	56.180	68	0.344	80	0.911	68	5.770
70	56.180	70	0.344	85	0.910	70	5.481
72	56.180	72	0.344	90	0.909	72	5.207
74	56.180	74	0.344	95	0.908	74	4.950
76	56.180	76	0.344	100	0.907	76	4.707
78	56.180	78	0.344	105	0.906	78	4.477
80	56.180	80	0.344	110	0.905	80	4.260
82	56.180	82	0.344	115	0.904	82	4.056
84	56.180	84	0.344	120	0.903	84	3.862
		86	0.344				
		88	0.344				
		90	0.344				
		92	0.344				
		94	0.344				
		96	0.344				
		98	0.344				
		100	0.344				

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	70	0.042		N		C
	N	75	0.049		O		U
	S	80	0.057		T		R
	O	85	0.065				R
	L	90	0.076		P		E
	U	95	0.087		E		N
	B	100	0.100		R		T
	L	105	0.114		T		L
	E	110	0.131		I		Y
		115	0.149		N		
		120	0.170		E		N
		125	0.193		N		O
		130	0.218		T		T
		135	0.247				
		140	0.279				
		145	0.314				
		150	0.352				A
		155	0.395				V
		160	0.443				A
		165	0.495				I
		170	0.552				L
		175	0.615				A
		180	0.683				B
		185	0.758				L
		190	0.841				E
		195	0.930				