

# DIPHENYL ETHER

DPE

CAUTIONARY RESPONSE INFORMATION			
Common Synonyms Diphenyl oxide Phenoxybenzene Phenyl ether	Liquid May float or sink in water. Freezing point is 81°F.	Colorless	Mild pleasant odor
<p>Shut off ignition sources. Call fire department. Keep people away. Call fire department. Avoid contact with liquid and solid. Notify local health and pollution control agencies. Protect water intakes.</p>			
Fire	Combustible. Extinguish with dry chemicals or carbon dioxide. Water and foam may be ineffective on fire.		
<p>Exposure</p> <p>Call for medical aid.</p> <p>LIQUID OR SOLID 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.</p>			
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	2. CHEMICAL DESIGNATIONS	4. FIRE HAZARDS	7. SHIPPING INFORMATION
Stop discharge Contain Collection Systems: Skim; Pump; Dredge Chemical and Physical Treatment: Absorb Clean shore line Salvage waterfowl	<p>2.1 CG Compatibility Group: Not listed. 2.2 Formula: C<sub>12</sub>H<sub>10</sub>O<sub>2</sub> 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: Not listed 2.5 CAS Registry No.: 101-84-8 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51616</p>	<p>4.1 Flash Point: 239°F C.C. 4.2 Flammable Limits in Air: 0.8%-1.5% 4.3 Fire Extinguishing Agents: Dry chemical, 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: 1,148°F 4.8 Electrical Hazards: Currently not available 4.9 Burning Rate: 3.2 mm/min. 4.10 Adiabatic Flame Temperature: Currently not available 4.11 Stoichiometric Air to Fuel Ratio: 66.6 (calc.) 4.12 Flame Temperature: Currently not available 4.13 Combustion Molar Ratio (Reactant to Product): 17.0 (calc.) 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7.1 Grades of Purity: Pure grade; Technical grade; Perfume grade 7.2 Storage Temperature: Ambient 7.3 Inert Atmosphere: No requirement 7.4 Venting: Pressure-vacuum 7.5 IMO Pollution Category: A 7.6 Ship Type: 3 7.7 Barge Hull Type: Currently not available</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: Inhalation may cause nausea because of disagreeable odor. Contact of liquid with eyes causes mild irritation. Prolonged exposure of skin to liquid causes reddening and irritation. Ingestion produces nausea.</p> <p>3.3 Treatment of Exposure: EYES: flush with water for at least 15 min. SKIN: wipe off, wash with soap and water. INGESTION: induce vomiting and get medical attention.</p> <p>3.4 TLV-TWA: 1 ppm 3.5 TLV-STEL: 2 ppm 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 2; oral LD<sub>50</sub> = 3,370 mg/kg (rat) 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Currently not available 3.10 Vapor (Gas) Irritant Characteristics: Currently not available 3.11 Liquid or Solid Characteristics: Currently not available 3.12 Odor Threshold: 0.1 ppm 3.13IDLH Value: 100 ppm 3.14 OSHA PEL-TWA: 1 ppm 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA AEGL: Not listed</p>			
<p>5. CHEMICAL REACTIVITY</p> <p>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</p> <p>6. WATER POLLUTION</p> <p>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: T Damage to living resources: 3 Human Oral hazard: 1 Human Contact hazard: I Reduction of amenities: X</p>			
<p>9. PHYSICAL &amp; CHEMICAL PROPERTIES</p> <p>9.1 Physical State at 15° C and 1 atm: Liquid 9.2 Molecular Weight: 170.2 9.3 Boiling Point at 1 atm: 495°F = 257°C = 530°K 9.4 Freezing Point: 81°F = 27°C = 300°K 9.5 Critical Temperature: 921.2°F = 494°C = 767.2°K 9.6 Critical Pressure: 478 psia = 32.5 atm = 3.30 MN/m<sup>2</sup> 9.7 Specific Gravity: 1.07 at 27°C (liquid) 9.8 Liquid Surface Tension: 40.05 dynes/cm = 0.0401 N/m at 20°C 9.9 Liquid Water Interfacial Tension: (est.) 36 dynes/cm = 0.036 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: 130 Btu/lb = 72 cal/g = 3.0 X 10<sup>3</sup> J/kg 9.13 Heat of Combustion: -15,520 Btu/lb = -8,620 cal/g = -361 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: Low</p>			

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
81	66.509	81	0.460	85	0.873		C
82	66.480	82	0.460	90	0.870		U
83	66.450	83	0.460	95	0.866		R
84	66.419	84	0.460	100	0.863		E
85	66.389	85	0.460	105	0.859		N
86	66.349	86	0.460	110	0.856		T
87	66.320	87	0.460	115	0.852		L
88	66.290	88	0.460	120	0.849		A
89	66.259	89	0.460	125	0.845		V
90	66.230	90	0.460	130	0.842		I
91	66.200	91	0.460	135	0.838		B
92	66.169	92	0.460	140	0.835		A
93	66.139	93	0.460	145	0.831		V
94	66.110	94	0.460	150	0.828		I
95	66.070	95	0.460	155	0.824		B
				160	0.821		A
				165	0.818		V
				170	0.814		I
				175	0.811		B
				180	0.807		A
				185	0.804		V
				190	0.800		I
				195	0.797		B
				200	0.793		A
				205	0.790		V
				210	0.786		I

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		310	0.887	310	0.01828		N
N		320	1.069	320	0.02173		O
S		330	1.261	330	0.02572		T
O		340	1.529	340	0.03032		E
L		350	1.817	350	0.03558		P
U		360	2.150	360	0.04159		R
B		370	2.534	370	0.04842		E
L		380	2.974	380	0.05617		N
E		390	3.478	390	0.06491		T
		400	4.053	400	0.07475		I
		410	4.706	410	0.08580		B
		420	5.446	420	0.09816		A
		430	6.281	430	0.11190		V
		440	7.222	440	0.12730		I
		450	8.278	450	0.14430		B
		460	9.460	460	0.16310		A
		470	10.780	470	0.18390		V
		480	12.250	480	0.20670		I
		490	13.880	490	0.23180		B