

# DIBUTYL PHTHALATE

DPA

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b>		Oily liquid	Colorless	Odorless
Butyl phthalate DBP Phthalic acid, dibutyl ester RC plasticizer DBP Witicizer 300		Sinks slowly in water.		
<p style="color: red;">Call fire department. Notify local health and pollution control agencies. Protect water intakes.</p>				
<b>Fire</b>	Combustible. Extinguish with dry chemical, foam, or carbon dioxide.			
<b>Exposure</b>	LIQUID No appreciable harm.			
<b>Water Pollution</b>	Dangerous to aquatic life in high concentrations. Fouling to shoreline. May be dangerous if it enters water intakes. Notify local health and pollution control officials. Notify operators of nearby water intakes.			

<p><b>1. CORRECTIVE RESPONSE ACTIONS</b></p> <p>Stop discharge Collection Systems: Pump; Dredge Clean shore line Salvage waterfowl</p>	<p><b>2. CHEMICAL DESIGNATIONS</b></p> <p>2.1 CG Compatibility Group: 34; Ester 2.2 Formula: <math>O=C_2H_4[COO(CH_2)_4CH_3]_2</math> 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: Not listed. 2.5 CAS Registry No.: 84-74-2 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51385</p>
<p><b>3. HEALTH HAZARDS</b></p> <p>3.1 Personal Protective Equipment: Eye protection. 3.2 Symptoms Following Exposure: Vapors from very hot material may irritate eyes and produce headache, drowsiness, and convulsions. 3.3 Treatment of Exposure: Remove to fresh air. Wash affected skin areas with water. Flush eyes with water. 3.4 TLV-TWA: 5 mg/m<sup>3</sup> 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 1; LD<sub>50</sub> = 5 to 15 g/kg (rat) 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Birth defects in rats; polyneuritis in humans 3.10 Vapor (Gas) Irritant Characteristics: Not pertinent 3.11 Liquid or Solid Characteristics: No appreciable hazard. Practically harmless to the skin. 3.12 Odor Threshold: Currently not available 3.13 IDLH Value: 4,000 mg/m<sup>3</sup> 3.14 OSHA PEL-TWA: 5 mg/m<sup>3</sup> 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA AEGL: Not listed</p>	

<p><b>4. FIRE HAZARDS</b></p> <p>4.1 Flash Point: 355°F O.C. 315°F C.C. 4.2 Flammable Limits in Air: 0.5%-2.5% (calculated) 4.3 Fire Extinguishing Agents: Dry powder, carbon dioxide, foam 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: 757°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: 92.8 (calc.) 4.12 Flame Temperature: Currently not available 4.13 Combustion Molar Ratio (Reactant to Product): 27.0 (calc.) 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p><b>7. SHIPPING INFORMATION</b></p> <p>7.1 Grades of Purity: 99.6% 7.2 Storage Temperature: Currently not available 7.3 Inert Atmosphere: Currently not available 7.4 Venting: Currently not available 7.5 IMO Pollution Category: A 7.6 Ship Type: 2 7.7 Barge Hull Type: Currently not available</p> <p><b>8. HAZARD CLASSIFICATIONS</b></p> <p>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: Yes 8.5 NFPA Hazard Classification:</p> <table border="0"> <tr> <td>Category</td> <td>Classification</td> </tr> <tr> <td>Health Hazard (Blue).....</td> <td>0</td> </tr> <tr> <td>Flammability (Red).....</td> <td>1</td> </tr> <tr> <td>Instability (Yellow).....</td> <td>0</td> </tr> </table> <p>8.6 EPA Reportable Quantity: 10 pounds 8.7 EPA Pollution Category: A 8.8 RCRA Waste Number: U069 8.9 EPA FWPCA List: Not listed</p>	Category	Classification	Health Hazard (Blue).....	0	Flammability (Red).....	1	Instability (Yellow).....	0
Category	Classification								
Health Hazard (Blue).....	0								
Flammability (Red).....	1								
Instability (Yellow).....	0								
<p><b>5. CHEMICAL REACTIVITY</b></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><b>9. PHYSICAL &amp; CHEMICAL PROPERTIES</b></p> <p>9.1 Physical State at 15° C and 1 atm: Liquid 9.2 Molecular Weight: 278.35 9.3 Boiling Point at 1 atm: 635°F = 335°C = 608°K 9.4 Freezing Point: -31°F = -35°C = 238°K 9.5 Critical Temperature: 932.0°F = 500°C = 773.2°K 9.6 Critical Pressure: 250 psia = 17 atm = 1.7 MN/m<sup>2</sup> 9.7 Specific Gravity: 1.049 at 20°C (liquid) 9.8 Liquid Surface Tension: 34 dynes/cm = 0.034 N/m at 20°C 9.9 Liquid Water Interfacial Tension: 27 dynes/cm = 0.027 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: -13,300 Btu/lb = -7400 cal/g = -310 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: Currently not available</p>								
<p><b>6. WATER POLLUTION</b></p> <p>6.1 Aquatic Toxicity: 1230 ppm/24 hr/bluegill/TL<sub>m</sub>/fresh water 6.2 Waterfowl Toxicity: LC<sub>50</sub> &gt; 5000 ppm 6.3 Biological Oxygen Demand (BOD): 0.43lb/lb, 5 days 6.4 Food Chain Concentration Potential: None 6.5 GESAMP Hazard Profile: Bioaccumulation: 0 Damage to living resources: 2 Human Oral hazard: 1 Human Contact hazard: II Reduction of amenities: XX</p>									
<p>NOTES</p>									

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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
40	66.309	32	0.430	45	0.956	55	24.790
50	66.020	34	0.430	50	0.954	60	22.770
60	65.730	36	0.430	55	0.952	65	20.950
70	65.440	38	0.430	60	0.949	70	19.310
80	65.139	40	0.430	65	0.947	75	17.820
90	64.849	42	0.430	70	0.945	80	16.470
100	64.559	44	0.430	75	0.943	85	15.250
110	64.270	46	0.430	80	0.941	90	14.140
120	63.980	48	0.430	85	0.939	95	13.120
130	63.690	50	0.430	90	0.937	100	12.200
140	63.400	52	0.430	95	0.934	105	11.350
150	63.100	54	0.430	100	0.932	110	10.580
160	62.810	56	0.430	105	0.930	115	9.870
170	62.520	58	0.430	110	0.928	120	9.220
180	62.230	60	0.430	115	0.926		
190	61.940	62	0.430	120	0.924		
200	61.650	64	0.430	125	0.921		
210	61.360	66	0.430	130	0.919		
		68	0.430	135	0.917		
		70	0.430	140	0.915		
				145	0.913		
				150	0.911		
				155	0.908		
				160	0.906		
				165	0.904		
				170	0.902		

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	220	0.001	220	0.00003		N
	N	230	0.001	230	0.00005		O
	S	240	0.002	240	0.00008		T
	O	250	0.003	250	0.00011		P
	L	260	0.004	260	0.00016		E
	U	270	0.006	270	0.00023		R
	B	280	0.009	280	0.00032		T
	L	290	0.013	290	0.00045		I
	E	300	0.018	300	0.00062		N
		310	0.025	310	0.00086		E
		320	0.035	320	0.00117		N
		330	0.048	330	0.00158		T
		340	0.066	340	0.00213		N
		350	0.089	350	0.00284		T
		360	0.119	360	0.00376		
		370	0.158	370	0.00494		
		380	0.209	380	0.00646		
		390	0.274	390	0.00838		