

BUTYL BENZYL PHTHALATE

BPH

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Benzyl n-butyl phthalate Phthalic acid, benzyl butyl ether		Liquid	Colorless	Slight odor
Sinks in water.				
Avoid contact with liquid. Notify local health and pollution control agencies. Protect water intakes.				
Fire	Combustible. Irritating gases may be produced when heated. Extinguish with dry chemicals, alcohol foam, or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.			
Exposure	CALL FOR MEDICAL AID. LIQUID Irritating to skin and eyes. Remove contaminated clothing and shoes. Flush affected areas with plenty of water.			
Water Pollution	Effect of low concentrations on aquatic life is unknown. 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
Collection Systems: Pump; Dredge

2. CHEMICAL DESIGNATIONS

- 2.1 CG Compatibility Group: 4; Esters
- 2.2 Formula: $C_{19}H_{20}O_4$
- 2.3 IMO/UN Designation: Not listed
- 2.4 DOT ID No.: Not listed
- 2.5 CAS Registry No.: 85-68-7
- 2.6 NAERG Guide No.: Not listed
- 2.7 Standard Industrial Trade Classification: 51129

3. HEALTH HAZARDS

- 3.1 Personal Protective Equipment: Protective gloves and goggles
- 3.2 Symptoms Following Exposure: Prolonged contact with liquid causes some irritation of eyes and skin.
- 3.3 Treatment of Exposure: EYES: flush with water for 15 min. SKIN: wash well 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; oral rat LD_{50} = 13,500 mg/kg
- 3.8 Toxicity by Inhalation: Currently not available.
- 3.9 Chronic Toxicity: Currently not available
- 3.10 Vapor (Gas) Irritant Characteristics: Vapors are nonirritating to eyes and throat.
- 3.11 Liquid or Solid Characteristics: No appreciable hazard; practically harmless to 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

4. FIRE HAZARDS

- 4.1 Flash Point: 390°F O.C.
- 4.2 Flammable Limits in Air: Currently not available
- 4.3 Fire Extinguishing Agents: Dry chemical, 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: Irritating vapors of unburned chemical may form in fires.
- 4.6 Behavior in Fire: Currently not available
- 4.7 Auto Ignition Temperature: Currently not available
- 4.8 Electrical Hazards: Currently not available
- 4.9 Burning Rate: Currently not available
- 4.10 Adiabatic Flame Temperature: Currently not available
- 4.11 Stoichiometric Air to Fuel Ratio: 105.9 (calc.)
- 4.12 Flame Temperature: Currently not available
- 4.13 Combustion Molar Ratio (Reactant to Product): 29.5 (calc.)
- 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed

7. SHIPPING INFORMATION

- 7.1 Grades of Purity: Commercial
- 7.2 Storage Temperature: Ambient
- 7.3 Inert Atmosphere: No requirement
- 7.4 Venting: Open
- 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: 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:

Category	Classification
Health Hazard (Blue).....	1
Flammability (Red).....	1
Instability (Yellow).....	0
- 8.6 EPA Reportable Quantity: 100 pounds
- 8.7 EPA Pollution Category: B
- 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: Currently not available
- 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: 313
- 9.3 Boiling Point at 1 atm: 698°F = 380°C = 643°K
- 9.4 Freezing Point: Not pertinent
- 9.5 Critical Temperature: Not pertinent
- 9.6 Critical Pressure: Not pertinent
- 9.7 Specific Gravity: 1.12 at 20°C (liquid)
- 9.8 Liquid Surface Tension: Currently not available
- 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): Not pertinent
- 9.12 Latent Heat of Vaporization: Currently not available
- 9.13 Heat of Combustion: -14,550 Btu/lb = -8,090 cal/g = -338 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: Low

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:
 - Bioaccumulation: Z
 - Damage to living resources: 4
 - Human Oral hazard: 1
 - Human Contact hazard: 0
 - Reduction of amenities: X

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
52	70.469	51	0.500	51	1.048	70	24.590
54	70.400	52	0.500	52	1.048	75	22.160
56	70.330	53	0.500	53	1.048	80	20.020
58	70.259	54	0.500	54	1.048	85	18.120
60	70.190	55	0.500	55	1.048	90	16.420
62	70.120	56	0.500	56	1.048	95	14.910
64	70.049	57	0.500	57	1.048	100	13.570
66	69.980	58	0.500	58	1.048	105	12.360
68	69.910	59	0.500	59	1.048	110	11.280
70	69.839	60	0.500	60	1.048	115	10.320
72	69.770	61	0.500	61	1.048	120	9.445
74	69.700	62	0.500	62	1.048	125	8.661
76	69.639	63	0.500	63	1.048	130	7.953
78	69.570	64	0.500	64	1.048	135	7.314
80	69.500	65	0.500	65	1.048	140	6.736
82	69.429	66	0.500	66	1.048	145	6.211
84	69.360	67	0.500	67	1.048	150	5.736
86	69.290	68	0.500	68	1.048	155	5.303
		69	0.500	69	1.048	160	4.910
		70	0.500	70	1.048	165	4.551
		71	0.500	71	1.048	170	4.223
		72	0.500	72	1.048	175	3.924
		73	0.500	73	1.048	180	3.650
		74	0.500	74	1.048	185	3.399
		75	0.500	75	1.048	190	3.169
		76	0.500	76	1.048		

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
86	0.000	320	0.005	320	0.00020		C
		340	0.010	340	0.00037		U
		360	0.018	360	0.00063		R
		380	0.031	380	0.00107		R
		400	0.052	400	0.00176		E
		420	0.085	420	0.00282		N
		440	0.137	440	0.00444		T
		460	0.216	460	0.00685		L
		480	0.334	480	0.01037		Y
		500	0.507	500	0.01542		
		520	0.757	520	0.02254		N
		540	1.113	540	0.03245		O
		560	1.610	560	0.04603		T
		580	2.296	580	0.06440		
		600	3.232	600	0.08893		A
		620	4.491	620	0.12130		V
		640	6.167	640	0.16350		A
		660	8.373	660	0.21810		I
		680	11.250	680	0.28780		L
							A
							B
							L
							E