

BENZOPHENONE

BZP

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Benzoyl benzene Diphenyl ketone Diphenyl methanone alpha-Oxidophenylmethane alpha-Oxiditane	Solid White Flowery odor
May float or sink in water.	
<p>Keep people away. Avoid contact with liquid and solid. Notify local health and pollution control agencies. Protect water intakes.</p>	
Fire	Combustible. Extinguish with dry chemicals, alcohol foam, or carbon dioxide. Water may be ineffective on fire.
Exposure	CALL FOR MEDICAL AID. LIQUID OR SOLID Irritating to skin and eyes. If swallowed will cause nausea, or vomiting. 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. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.
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; Dredge

2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** Not listed.
2.2 **Formula:** C₁₃H₁₀O
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:** 51629

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Dust/mist respirator; goggles or face shield; rubber gloves
3.2 **Symptoms Following Exposure:** Ingestion causes gastrointestinal disturbances. Contact causes eye irritation and, if prolonged, irritation of skin.
3.3 **Treatment of Exposure:** INHALATION: remove to fresh air. INGESTION: get medical attention. EYES: flush with water for at least 15 min.; get medical attention if irritation persists. SKIN: flush with water, 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:** Grade 1; acute oral rat LD₅₀ > 10,000 mg/kg
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:** 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:** > 270°F C.C.
4.2 **Flammable Limits in Air:** Currently not available
4.3 **Fire Extinguishing Agents:** Foam, dry chemical, carbon dioxide, water spray.
4.4 **Fire Extinguishing Agents Not to Be Used:** Water may be ineffective.
4.5 **Special Hazards of Combustion Products:** Currently not available
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:** Not pertinent
4.10 **Adiabatic Flame Temperature:** Currently not available
4.11 **Stoichiometric Air to Fuel Ratio:** 71.4 (calc.)
4.12 **Flame Temperature:** Currently not available
4.13 **Combustion Molar Ratio (Reactant to Product):** 18.0 (calc.)
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:** Will attack some plastics
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:** 99+%
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:** Solid
9.2 **Molecular Weight:** 182
9.3 **Boiling Point at 1 atm:** 581.9°F = 305.5°C = 578.7°K
9.4 **Freezing Point:** 118.2°F = 47.9°C = 321.1°K
9.5 **Critical Temperature:** Not pertinent
9.6 **Critical Pressure:** Not pertinent
9.7 **Specific Gravity:** 1.085 at 50°C (liquid)
9.8 **Liquid Surface Tension:** 42 dynes/cm = 0.042 N/m at 50°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):** Not pertinent
9.12 **Latent Heat of Vaporization:** 126.0 Btu/lb = 70.0 cal/g = 2.93 X 10⁵ J/kg
9.13 **Heat of Combustion:** -15,400 Btu/lb = -8,550 cal/g = -358 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:** 25.53 cal/g
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
123	67.690		N		N	125	1.523
124	67.660		O		O	130	1.515
125	67.620		T		T	135	1.507
126	67.589					140	1.500
127	67.549		P		P	145	1.492
128	67.520		E		E	150	1.485
129	67.490		R		R	155	1.478
130	67.450		T		T	160	1.471
131	67.419		I		I	165	1.465
132	67.379		N		N	170	1.458
133	67.349		E		E	175	1.452
134	67.309		N		N	180	1.445
135	67.280		T		T	185	1.439
136	67.240					190	1.433
137	67.209					195	1.427
138	67.169					200	1.421
139	67.139					205	1.416
140	67.099					210	1.410
						215	1.404
						220	1.399
						225	1.394
						230	1.388
						235	1.383
						240	1.378
						245	1.373

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 L E		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T