

# ACETOPHENONE

ACP

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Acetylbenzene Methyl phenyl ketone 1-Phenylethanone		Liquid	Colorless	Flowery, sweet odor
Sinks slowly in water. Freezing point is 68°F.				
<p>Stop discharge if possible. Call fire department. Avoid contact with liquid. Isolate and remove discharged material. Notify local health and pollution control agencies. Protect water intakes.</p>				
<b>Fire</b>	Combustible Extinguish with water, dry chemical, foam, or carbon dioxide. Cool exposed containers with water.			
<b>Exposure</b>	CALL FOR MEDICAL AID.  LIQUID OR SOLID Irritating to skin or 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.			
<b>Water Pollution</b>	Effect of low concentrations on aquatic life is unknown. 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> Stop discharge Contain Collection Systems: Skim; Pump; Dredge Clean shore line Salvage waterfowl	<p><b>2. CHEMICAL DESIGNATIONS</b></p> 2.1 <b>CG Compatibility Group:</b> Not listed 2.2 <b>Formula:</b> C <sub>8</sub> H <sub>8</sub> COCH <sub>3</sub> 2.3 <b>IMO/IUN Designation:</b> Not listed 2.4 <b>DOT ID No.:</b> Not listed 2.5 <b>CAS Registry No.:</b> 98-86-2 2.6 <b>NAERG Guide No.:</b> Not listed. 2.7 <b>Standard Industrial Trade Classification:</b> 51372
<p><b>3. HEALTH HAZARDS</b></p> 3.1 <b>Personal Protective Equipment:</b> Protect eyes and skin from direct contact. 3.2 <b>Symptoms Following Exposure:</b> No toxicity expected from inhalation or ingestion except slight narcotic effect. Liquid can cause eye and skin irritation on contact. 3.3 <b>Treatment of Exposure:</b> SKIN OR EYE CONTACT: irrigate affected area with water for 15 min. 3.4 <b>TLV-TWA:</b> 10 ppm. 3.5 <b>TLV-STEL:</b> Not listed. 3.6 <b>TLV-Ceiling:</b> Not listed. 3.7 <b>Toxicity by Ingestion:</b> Grade 2; LD <sub>50</sub> = 0.5 to 5 g/kg 3.8 <b>Toxicity by Inhalation:</b> Currently not available. 3.9 <b>Chronic Toxicity:</b> Currently not available 3.10 <b>Vapor (Gas) Irritant Characteristics:</b> Nonirritating to the eyes and throat. 3.11 <b>Liquid or Solid Characteristics:</b> Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin. 3.12 <b>Odor Threshold:</b> 0.01-0.025 mg/m <sup>3</sup> 3.13 <b>IDLH Value:</b> Not listed. 3.14 <b>OSHA PEL-TWA:</b> Not listed. 3.15 <b>OSHA PEL-STEL:</b> Not listed. 3.16 <b>OSHA PEL-Ceiling:</b> Not listed. 3.17 <b>EPA AEGL:</b> Not listed	

## 4. FIRE HAZARDS

- 4.1 **Flash Point:** 180°F O.C.  
 4.2 **Flammable Limits in Air:** 1.1 ; 6.7  
 4.3 **Fire Extinguishing Agents:** Water, foam, dry chemical, carbon dioxide  
 4.4 **Fire Extinguishing Agents Not to Be Used:** None  
 4.5 **Special Hazards of Combustion Products:** Not pertinent  
 4.6 **Behavior in Fire:** Not pertinent  
 4.7 **Auto Ignition Temperature:** 1058°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:** Currently not available  
 4.12 **Flame Temperature:** Currently not available  
 4.13 **Combustion Molar Ratio (Reactant to Product):** Currently not available  
 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 noted  
 6.5 **GESAMP Hazard Profile:** Not listed

## 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Technical: 99+% acetophenone  
 7.2 **Storage Temperature:** Not pertinent  
 7.3 **Inert Atmosphere:** Not pertinent  
 7.4 **Venting:** Not pertinent  
 7.5 **IMO Pollution Category:** D  
 7.6 **Ship Type:** Data 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:**
- | Category                  | Classification |
|---------------------------|----------------|
| Health Hazard (Blue)..... | 1              |
| Flammability (Red).....   | 2              |
| Instability (Yellow)..... | 0              |
- 8.6 **EPA Reportable Quantity:** 5000  
 8.7 **EPA Pollution Category:** D  
 8.8 **RCRA Waste Number:** U004  
 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:** 120.15  
 9.3 **Boiling Point at 1 atm:** 395.1°F = 201.7°C = 474.9°K  
 9.4 **Freezing Point:** 67.5°F = 19.7°C = 292.9°K  
 9.5 **Critical Temperature:** 802.4°F = 428°C = 701.2°K  
 9.6 **Critical Pressure:** 560 pisa = 38 atm = 3.8 MN/m<sup>2</sup>  
 9.7 **Specific Gravity:** 1.028 at 20°C (liquid)  
 9.8 **Liquid Surface Tension:** 12 dynes/cm = 0.012 N/m at 30°C  
 9.9 **Liquid Water Interfacial Tension:** (est.) 40 dynes/cm = 0.04 N/m at 27°C  
 9.10 **Vapor (Gas) Specific Gravity:** 4.1  
 9.11 **Ratio of Specific Heats of Vapor (Gas):** (est.) 1.071  
 9.12 **Latent Heat of Vaporization:** 150 Btu/lb = 83.6 cal/g = 3.5 X 10<sup>5</sup> J/kg  
 9.13 **Heat of Combustion:** -14,850 Btu/lb = -8250 cal/g = -345.4 X 10<sup>6</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

## 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
70	64.110	68	0.474	67	0.998	68	1.872
75	63.950	70	0.474			70	1.841
80	63.800	72	0.474			72	1.811
85	63.640	74	0.474			74	1.781
90	63.480	76	0.474			76	1.753
95	63.330	78	0.474			78	1.724
100	63.170	80	0.474			80	1.697
105	63.010	82	0.474			82	1.670
110	62.860	84	0.474			84	1.644
115	62.700	86	0.474			86	1.618
120	62.550						
125	62.390						
130	62.230						
135	62.080						
140	61.920						
145	61.770						
150	61.610						
155	61.450						
160	61.300						
165	61.140						
170	60.990						
175	60.830						
180	60.670						
185	60.520						
190	60.360						
195	60.210						

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
68	0.550	220	0.632	220	0.01042	30	0.231
		230	0.798	230	0.01295	40	0.236
		240	0.998	240	0.01596	50	0.241
		250	1.239	250	0.01954	60	0.246
		260	1.527	260	0.02374	70	0.250
		270	1.868	270	0.02866	80	0.255
		280	2.271	280	0.03437	90	0.260
		290	2.744	290	0.04097	100	0.264
		300	3.295	300	0.04855	110	0.269
		310	3.934	310	0.05721	120	0.273
		320	4.671	320	0.06706	130	0.278
		330	5.518	330	0.07822	140	0.282
		340	6.487	340	0.09079	150	0.287
		350	7.588	350	0.10490	160	0.291
		360	8.837	360	0.12070	170	0.295
		370	10.250	370	0.13820	180	0.300
		380	11.830	380	0.15770	190	0.304
		390	13.610	390	0.17920	200	0.308
		400	15.590	400	0.20300	210	0.312
		410	17.790	410	0.22900	220	0.317
		420	20.240	420	0.25750	230	0.321
		430	22.940	430	0.28870	240	0.325
		440	25.920	440	0.32250	250	0.329
		450	29.200	450	0.35930	260	0.333
		460	32.790	460	0.39910		
		470	36.720	470	0.44210		