

# CAMPHENE

CPH

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> 2,2-Dimethyl-3-methylene norborane 3,3-Dimethyl-2-methylene norcamphane		Solid White Camphor-like odor
Keep people away. Avoid inhalation. Shut off ignition sources and call fire department. Avoid contact with solid and dust. Notify local health and pollution control agencies. Protect water intakes.		Floats on water.
<b>Fire</b>	Combustible. Extinguish with dry chemicals, foam or carbon dioxide. Water may be ineffective on fire.	
<b>Exposure</b>	CALL FOR MEDICAL AID. DUST Irritating to eyes, nose and throat. If inhaled will cause headache or difficult breathing. If in eyes, hold eyelids open and flush with plenty of water. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.  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. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.	
<b>Water Pollution</b>	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  
 Contain  
 Collection Systems: Skim  
 Chemical and Physical Treatment: Burn

### 2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed.  
 2.2 Formula: C<sub>10</sub>H<sub>16</sub>  
 2.3 IMO/UN Designation: Not listed  
 2.4 DOT ID No.: 9011  
 2.5 CAS Registry No.: 79-92-5  
 2.6 NAERG Guide No.: 133  
 2.7 Standard Industrial Trade Classification: 51129

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Gloves and face shield  
 3.2 **Symptoms Following Exposure:** Inhalation causes irritation of nose and throat. Contact with eyes or skin causes irritation.  
 3.3 **Treatment of Exposure:** INHALATION: move victim to fresh air; call physician immediately. EYES: flush immediately with clean, cool water; call physician immediately. SKIN: wash with alcohol, follow with soap and water wash.  
 3.4 TLV-TWA: Not listed.  
 3.5 TLV-STEL: Not listed.  
 3.6 TLV-Ceiling: Not listed.  
 3.7 **Toxicity by Ingestion:** Currently not available  
 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:** 108°F O.C. 92°F C.C. (typical)  
 4.2 **Flammable Limits in Air:** Currently not available  
 4.3 **Fire Extinguishing Agents:** Foam, dry chemical, carbon dioxide  
 4.4 **Fire Extinguishing Agents Not to Be Used:** Water  
 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:** 66.6 (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:** 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

### 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:** Commercial, 75+%  
 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:** 136  
 9.3 **Boiling Point at 1 atm:** 310°F = 154°C = 427°K  
 9.4 **Freezing Point:** 122°F = 50°C = 323°K  
 9.5 **Critical Temperature:** Not pertinent  
 9.6 **Critical Pressure:** Not pertinent  
 9.7 **Specific Gravity:** 0.87 at 15°C (solid)  
 9.8 **Liquid Surface Tension:** Not pertinent  
 9.9 **Liquid Water Interfacial Tension:** Not pertinent  
 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:** -19,400 Btu/lb = -10,800 cal/g = -452 X 10<sup>5</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

# CAMPHENE

CPH

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

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 I L I T Y	180	1.039	180	0.02059		N O T  P E R T I N E N T
		185	1.174	185	0.02306		
		190	1.322	190	0.02579		
		195	1.487	195	0.02879		
		200	1.670	200	0.03208		
		205	1.872	205	0.03568		
		210	2.095	210	0.03963		
		215	2.340	215	0.04394		
		220	2.610	220	0.04865		
		225	2.906	225	0.05377		
		230	3.231	230	0.05935		
		235	3.586	235	0.06540		
		240	3.975	240	0.07198		
		245	4.399	245	0.07910		
		250	4.862	250	0.08680		
		255	5.366	255	0.09513		
		260	5.914	260	0.10410		
		265	6.510	265	0.11380		
		270	7.156	270	0.12420		
		275	7.855	275	0.13550		
		280	8.613	280	0.14750		
		285	9.432	285	0.16050		
		290	10.320	290	0.17430		
		295	11.270	295	0.18920		
		300	12.300	300	0.20510		
		305	13.400	305	0.22210		