

# DICYCLOPENTADIENE

DPT

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b>		Liquid, or solid crystals	Colorless	Camphor odor
Arcosolv Dicy 3a,4,7,7a-Tetrahydro-4,7-Methanoindene		Floats on water. Freezing point is 41°F.		
<p>Keep people away. Shut off ignition sources and call fire department. Avoid contact with liquid. Stay upwind and use water spray to "knock down" vapor. Notify local health and pollution control agencies. Protect water intakes.</p>				
<b>Fire</b>	<p>FLAMMABLE Flashback along vapor trail may occur. Vapor may explode if ignited in an enclosed area. Extinguish with water, dry chemical, foam, or carbon dioxide. Cool exposed containers with water.</p>			
<b>Exposure</b>	<p>CALL FOR MEDICAL AID.  LIQUID OR SOLID Irritating to skin and eyes. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water.</p>			
<b>Water Pollution</b>	<p>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.</p>			

### 1. CORRECTIVE RESPONSE ACTIONS

Stop discharge  
Contain  
Collection Systems: Skim  
Clean shore line  
Salvage waterfowl

### 2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** 30; Olefin  
2.2 **Formula:** C<sub>10</sub>H<sub>12</sub>  
2.3 **IMO/UN Designation:** 3.3/2048  
2.4 **DOT ID No.:** 2048  
2.5 **CAS Registry No.:** 77-73-6  
2.6 **NAERG Guide No.:** 129  
2.7 **Standard Industrial Trade Classification:** 51129

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Air-supplied mask in confined areas, rubber gloves, safety glasses.  
3.2 **Symptoms Following Exposure:** Vapor irritates mucous membranes and respiratory tract, causes nausea, vomiting, headache, and dizziness. Direct contact irritates skin.  
3.3 **Treatment of Exposure:** INHALATION: remove victim from contaminated area and call physician if unconscious; if breathing is irregular or stopped, give oxygen and start resuscitation. EYES OR SKIN: flush with plenty of water for 15 min.  
3.4 **TLV-TWA:** 5 ppm  
3.5 **TLV-STEL:** Not listed.  
3.6 **TLV-Ceiling:** Not listed.  
3.7 **Toxicity by Ingestion:** Grade 2; oral rat LD<sub>50</sub> = 0.82 g/kg  
3.8 **Toxicity by Inhalation:** Currently not available.  
3.9 **Chronic Toxicity:** Currently not available  
3.10 **Vapor (Gas) Irritant Characteristics:** Vapors cause a slight smarting of the eyes and respiratory system if present in high concentrations. The effect is temporary.  
3.11 **Liquid or Solid Characteristics:** Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.  
3.12 **Odor Threshold:** <0.003 ppm.  
3.13 **IDLH Value:** Currently not available  
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:** 90°F O.C.  
4.2 **Flammable Limits in Air:** 0.8%-6.3%  
4.3 **Fire Extinguishing Agents:** Foam, carbon dioxide, dry chemical, or water spray.  
4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent  
4.5 **Special Hazards of Combustion Products:** Not pertinent  
4.6 **Behavior in Fire:** Not pertinent  
4.7 **Auto Ignition Temperature:** 941°F  
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:** 61.9 (calc.)  
4.12 **Flame Temperature:** Currently not available  
4.13 **Combustion Molar Ratio (Reactant to Product):** 16.0 (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:** No reaction  
5.3 **Stability During Transport:** Stable  
5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent  
5.5 **Polymerization:** May occur in presence of acids, but not hazardous.  
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:** 97%  
7.2 **Storage Temperature:** Ambient  
7.3 **Inert Atmosphere:** No requirement  
7.4 **Venting:** Open (flame arrester)  
7.5 **IMO Pollution Category:** B  
7.6 **Ship Type:** 2  
7.7 **Barge Hull Type:** Currently not available

### 8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Flammable Liquid  
8.2 **49 CFR Class:** 3  
8.3 **49 CFR Package Group:** III  
8.4 **Marine Pollutant:** No  
8.5 **NFPA Hazard Classification:**
- |                           |                |
|---------------------------|----------------|
| Category                  | Classification |
| Health Hazard (Blue)..... | 1              |
| Flammability (Red).....   | 3              |
| Instability (Yellow)..... | 1              |
- 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:** Liquid  
9.2 **Molecular Weight:** 132.31  
9.3 **Boiling Point at 1 atm:** 338°F = 170°C = 443°K  
9.4 **Freezing Point:** 41°F = 5°C = 278°K  
9.5 **Critical Temperature:** Not pertinent  
9.6 **Critical Pressure:** Not pertinent  
9.7 **Specific Gravity:** 0.978 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:** Not pertinent  
9.13 **Heat of Combustion:** -18,800 Btu/lb = -10,400 cal/g = -437 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:** 0.16 psia

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	61.600	59	0.478	50	1.040	50	0.878
54	61.530	60	0.478	51	1.040	51	0.870
56	61.460	61	0.478	52	1.040	52	0.862
58	61.400	62	0.478	53	1.040	53	0.854
60	61.330	63	0.478	54	1.040	54	0.846
62	61.260	64	0.478	55	1.040	55	0.839
64	61.190	65	0.478	56	1.040	56	0.831
66	61.120	66	0.478	57	1.040	57	0.824
68	61.050	67	0.478	58	1.040	58	0.817
70	60.980	68	0.478	59	1.040	59	0.810
72	60.910	69	0.478	60	1.040	60	0.802
74	60.840	70	0.478	61	1.040	61	0.795
76	60.770	71	0.478	62	1.040	62	0.788
78	60.700	72	0.478	63	1.040	63	0.782
80	60.630	73	0.478	64	1.040	64	0.775
82	60.560	74	0.478	65	1.040	65	0.768
84	60.490	75	0.478	66	1.040	66	0.762
86	60.420	76	0.478	67	1.040	67	0.755
				68	1.040	68	0.749
				69	1.040	69	0.742
				70	1.040	70	0.736
				71	1.040	71	0.730
				72	1.040	72	0.724
				73	1.040	73	0.718
				74	1.040	74	0.712
				75	1.040	75	0.706

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	0.020	50	0.036	50	0.00088		N
		60	0.050	60	0.00119		O
		70	0.068	70	0.00159		T
		80	0.092	80	0.00210		
		90	0.122	90	0.00274		P
		100	0.161	100	0.00355		E
		110	0.210	110	0.00455		R
		120	0.272	120	0.00578		T
		130	0.348	130	0.00728		I
		140	0.443	140	0.00910		N
		150	0.558	150	0.01128		E
		160	0.698	160	0.01389		N
		170	0.868	170	0.01699		T
		180	1.071	180	0.02064		
		190	1.314	190	0.02492		
		200	1.601	200	0.02991		
		210	1.940	210	0.03570		
		220	2.337	220	0.04237		
		230	2.800	230	0.05003		
		240	3.337	240	0.05879		
		250	3.958	250	0.06875		
		260	4.673	260	0.08003		
		270	5.492	270	0.09276		
		280	6.425	280	0.10710		
		290	7.487	290	0.12310		
		300	8.688	300	0.14100		