

P-CHLOROTOLUENE

CRN

CAUTIONARY RESPONSE INFORMATION			7. SHIPPING INFORMATION								
Common Synonyms 1-Chloro-4-methylbenzene 4-Chloro-1-methylbenzene 4-Chlorotoluene p-Tolyl chloride	Liquid Colorless Sinks slowly in water.	<p>4. FIRE HAZARDS</p> <p>4.1 Flash Point: 120°F O.C. 4.2 Flammable Limits in Air: Currently not available 4.3 Fire Extinguishing Agents: Alcohol foam; CO₂; dry chemical 4.4 Fire Extinguishing Agents Not to Be Used: Currently not available 4.5 Special Hazards of Combustion Products: Currently not available 4.6 Behavior in Fire: Not pertinent 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: 40.5 (calc.) 4.12 Flame Temperature: Currently not available 4.13 Combustion Molar Ratio (Reactant to Product): 11.0 (calc.) 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p> <p>5. CHEMICAL REACTIVITY</p> <p>5.1 Reactivity with Water: Currently not available 5.2 Reactivity with Common Materials: Currently not available 5.3 Stability During Transport: Currently not available 5.4 Neutralizing Agents for Acids and Caustics: Currently not available 5.5 Polymerization: Currently not available 5.6 Inhibitor of Polymerization: Currently not available</p> <p>6. WATER POLLUTION</p> <p>6.1 Aquatic Toxicity: 1-10 ppm/96 hour/Finfish/TL_m 6.2 Waterfowl Toxicity: Currently not available 6.3 Biological Oxygen Demand (BOD): Currently not available 6.4 Food Chain Concentration Potential: Currently not available 6.5 GESAMP Hazard Profile: Bioaccumulation: 2 Damage to living resources: 3 Human Oral hazard: 1 Human Contact hazard: I Reduction of amenities: X</p>									
<p>Keep people away. Avoid contact with liquid. Avoid inhalation. Wear goggles and self-contained breathing apparatus. Call fire department. Notify local health and pollution control agencies. Protect water intakes.</p> <p>Fire Exposure Water Pollution</p>			<p>7.1 Grades of Purity: Currently not available 7.2 Storage Temperature: Currently not available 7.3 Inert Atmosphere: Currently not available 7.4 Venting: Currently not available 7.5 IMO Pollution Category: B 7.6 Ship Type: 2 7.7 Barge Hull Type: Currently not available</p> <p>8. HAZARD CLASSIFICATIONS</p> <p>8.1 49 CFR Category: Flammable liquid 8.2 49 CFR Class: 3 8.3 49 CFR Package Group: III 8.4 Marine Pollutant: Yes 8.5 NFPA Hazard Classification:</p> <table> <thead> <tr> <th>Category</th> <th>Classification</th> </tr> </thead> <tbody> <tr> <td>Health Hazard (Blue)</td> <td>2</td> </tr> <tr> <td>Flammability (Red)</td> <td>2</td> </tr> <tr> <td>Instability (Yellow)</td> <td>0</td> </tr> </tbody> </table> <p>8.6 EPA Reportable Quantity: Not listed. 8.7 EPA Pollution Category: Not listed. 8.8 RCRA Waste Number: Not listed 8.9 EPA FWCNA List: Not listed</p> <p>9. PHYSICAL & CHEMICAL PROPERTIES</p> <p>9.1 Physical State at 15°C and 1 atm: Liquid 9.2 Molecular Weight: 126.6 9.3 Boiling Point at 1 atm: 324°F = 162°C = 435.2°K 9.4 Freezing Point: 45.5°F = 7.50°C = 280.7°K 9.5 Critical Temperature: Currently not available 9.6 Critical Pressure: Currently not available 9.7 Specific Gravity: 1.0697 at 20°C 9.8 Liquid Surface Tension: 32.24 dynes/cm = 0.03224 N/m at 25°C 9.9 Liquid Water Interfacial Tension: Currently not available 9.10 Vapor (Gas) Specific Gravity: 4.36 (estimated) 9.11 Ratio of Specific Heats of Vapor (Gas): Currently not available 9.12 Latent Heat of Vaporization: At boiling point 136.8 Btu/lb = 76 cal/g = 3.18 X 10⁵ J/kg 9.13 Heat of Combustion: Currently not available 9.14 Heat of Decomposition: Currently not available 9.15 Heat of Solution: Not pertinent 9.16 Heat of Polymerization: Currently not available 9.17 Heat of Fusion: Currently not available 9.18 Limiting Value: Currently not available 9.19 Reid Vapor Pressure: Currently not available</p>	Category	Classification	Health Hazard (Blue)	2	Flammability (Red)	2	Instability (Yellow)	0
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Health Hazard (Blue)	2										
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<p>1. CORRECTIVE RESPONSE ACTIONS</p> <p>Stop discharge Contain Collection Systems: Pump; Dredge Chemical and Physical Treatment: Absorb Dilute and disperse dissolved material</p> <p>2. CHEMICAL DESIGNATIONS</p> <p>2.1 CG Compatibility Group: Currently not available; Halogenated compound 2.2 Formula: C₇H₇Cl 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: 2238 2.5 CAS Registry No.: 106-43-4 2.6 NAERG Guide No.: 130 2.7 Standard Industrial Trade Classification: 51139</p> <p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Respirator with proper filter, goggles. 3.2 Symptoms Following Exposure: INHALATION: Irritation of respiratory system. EYES AND SKIN: Severe irritation. INGESTION: Severe internal damage if swallowed. 3.3 Treatment of Exposure: Get medical aid. INHALATION: Move to fresh air. Remove contaminated clothing. Keep warm and quiet. If breathing has stopped give artificial respiration. EYES AND SKIN: Wash with plenty of water. INGESTION: Give one or two glasses of water or milk. Induce vomiting. Give cathartics. 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 Liquor 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</p>			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
68	66.780				C	50	0.102
69	66.780				U	60	0.094
70	66.783				R	70	0.087
71	66.783				R	80	0.082
72	66.785				E	90	0.076
73	66.787				N	100	0.072
74	66.787				T	110	0.067
75	66.789				L	120	0.064
		32	0.316		Y	130	0.060
					A	140	0.057
					V	150	0.054
					A	160	0.051
					I	170	0.048
					B	180	0.046
					L	190	0.043
					A	200	0.041
					V	210	0.039
					E		

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	110	0.070	50	0.00047	C		
N	120	0.109	55	0.00055	U		
S	130	0.164	60	0.00064	R		
O	140	0.239	65	0.00075	R		
L	150	0.338	70	0.00088	E		
U	160	0.469	75	0.00104	N		
B	170	0.638	80	0.00122	O		
L	180	0.853	85	0.00143	T		
E	190	1.122	90	0.00168	T		
	200	1.455	95	0.00197	L		
	210	1.863	100	0.00231	Y		
	220	2.358	105	0.00270	N		
	230	2.954	110	0.00317	O		
	240	3.665	115	0.00372	A		
	250	4.507	120	0.00437	V		
	260	5.499	125	0.00512	A		
	270	6.658	130	0.00601	I		
	280	8.005	135	0.00705	B		
	290	9.563	140	0.00827	L		
	300	11.356			A		
	310	13.409			V		
	320	15.751			A		
	330	18.409			I		