

P-NITROTOLUENE

NTT

CAUTIONARY RESPONSE INFORMATION

Common Synonyms		Solid (crystalline)	Yellow	Bitter almond
Methyl nitrobenzene 4-Methyl nitrobenzene 4-Nitrotoluol Toluene, p-nitro-		Sinks in water.		
<p>Keep people away. Avoid contact with solid and dust. Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves.) Shut off ignition sources and call fire department. Notify local health and pollution control agencies. Protect water intakes.</p>				
Fire	Combustible. POISONOUS GASES MAY BE PRODUCED IN FIRE. Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves). Extinguish with carbon dioxide or dry chemical. Water or foam may be ineffective on fire.			
Exposure	CALL FOR MEDICAL AID. DUST OR SOLID If inhaled, swallowed, or skin is exposed, may cause headache, dizziness, nausea, vomiting, and difficult breathing. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. 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 and have victim induce vomiting.			
Water Pollution	HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. 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 Collection Systems: Pump; Dredge	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: 42; Nitrocompound 2.2 Formula: C ₇ H ₇ NO ₂ 2.3 IMO/UN Designation: 6.1/1664 2.4 DOT ID No.: 1664 2.5 CAS Registry No.: 99-99-0 2.6 NAERG Guide No.: 152 2.7 Standard Industrial Trade Classification: 51140
3. HEALTH HAZARDS 3.1 Personal Protective Equipment: Wear butyl rubber gloves, protective clothing and shoes, and self-contained breathing apparatus. 3.2 Symptoms Following Exposure: INHALATION, INGESTION, OR SKIN: Headache, flushed face, dizziness, dyspnea (difficult breathing), cyanosis, nausea, vomiting, muscular weakness, rapid pulse and respiration, irritability, and convulsions. 3.3 Treatment of Exposure: Call a physician. INHALATION: Move to fresh air. EYES: Flush with water. SKIN: Wash with soap and water. INGESTION: Gastric lavage and catharsis. 3.4 TLV-TWA: 2 ppm 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 2; LD ₅₀ = 0.5 to 5 g/kg. 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Moderate methemoglobin formation; moderate kidney and liver damage. Changes in conditioned reflex activity with high dosage. 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: 200 ppm 3.14 OSHA PEL-TWA: 5 ppm. 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: 223°F C.C. 4.2 Flammable Limits in Air: Currently not available 4.3 Fire Extinguishing Agents: CO ₂ , dry chemical 4.4 Fire Extinguishing Agents Not to Be Used: Water, foam 4.5 Special Hazards of Combustion Products: Yields toxic oxides of nitrogen when burning. 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: Currently not available 4.10 Adiabatic Flame Temperature: Currently not available 4.11 Stoichiometric Air to Fuel Ratio: 41.6 (calc.) 4.12 Flame Temperature: Currently not available 4.13 Combustion Molar Ratio (Reactant to Product): 11.5 (calc.) 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed	7. SHIPPING INFORMATION 7.1 Grades of Purity: Currently not available 7.2 Storage Temperature: Cool 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								
5. CHEMICAL REACTIVITY 5.1 Reactivity with Water: No reaction 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	8. HAZARD CLASSIFICATIONS 8.1 49 CFR Category: Poison 8.2 49 CFR Class: 6.1 8.3 49 CFR Package Group: II 8.4 Marine Pollutant: Yes 8.5 NFPA Hazard Classification: <table border="1"> <tr> <td>Category</td> <td>Classification</td> </tr> <tr> <td>Health Hazard (Blue).....</td> <td>3</td> </tr> <tr> <td>Flammability (Red).....</td> <td>1</td> </tr> <tr> <td>Instability (Yellow).....</td> <td>1</td> </tr> </table> 8.6 EPA Reportable Quantity: 1000 pounds 8.7 EPA Pollution Category: C 8.8 RCRA Waste Number: Not listed 8.9 EPA FWPCA List: Yes	Category	Classification	Health Hazard (Blue).....	3	Flammability (Red).....	1	Instability (Yellow).....	1
Category	Classification								
Health Hazard (Blue).....	3								
Flammability (Red).....	1								
Instability (Yellow).....	1								
6. WATER POLLUTION 6.1 Aquatic Toxicity: 10 to 22 ppm/6-hour/TL _m /Minnow/distilled water 45 to 50 ppm/6-hour/TL _m /Minnow/hard water 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: (T) Damage to living resources: 2 Human Oral hazard: 1 Human Contact hazard: 1 Reduction of amenities: XX	9. PHYSICAL & CHEMICAL PROPERTIES 9.1 Physical State at 15° C and 1 atm: Solid 9.2 Molecular Weight: 137.15 9.3 Boiling Point at 1 atm: 461°F = 238.3°C = 511.5°K 9.4 Freezing Point: 125°F = 51.7°C = 324.9°K 9.5 Critical Temperature: Currently not available 9.6 Critical Pressure: Currently not available 9.7 Specific Gravity: 1.286 at 20°C 9.8 Liquid Surface Tension: 36.83 dynes/cm = 0.03683 N/m at 60°C 35.64 dynes/cm = 0.03564 N/m at 70°C 9.9 Liquid Water Interfacial Tension: Currently not available 9.10 Vapor (Gas) Specific Gravity: 4.72 9.11 Ratio of Specific Heats of Vapor (Gas): Currently not available 9.12 Latent Heat of Vaporization: 157 Btu/lb = 87 cal/g = 3.64 X 10 ⁵ J/kg 9.13 Heat of Combustion: -11,181 Btu/lb = -6212 cal/g = -260 X 10 ³ J/kg 9.14 Heat of Decomposition: Currently not available 9.15 Heat of Solution: Currently not available 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								

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
	C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E	140 142 144 146 148 150 152 154 156 158 160 162 164 166	1.173 1.152 1.132 1.114 1.096 1.080 1.064 1.050 1.036 1.023 1.010 0.998 0.987 0.976

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	135 140 145 150 155 160 165 170 175	0.024 0.027 0.031 0.036 0.042 0.048 0.056 0.064 0.074	135 140 145 150 155 160 165 170 175 180 185 190	0.00050 0.00058 0.00068 0.00078 0.00090 0.00103 0.00117 0.00133 0.00150 0.00170 0.00190 0.00213		C U R R E N T L Y N O T A V A I L A B L E