

# PENTAERYTHRITOL

PET

CAUTIONARY RESPONSE INFORMATION				7. SHIPPING INFORMATION	
Common Synonyms 2,2-bis(Hydroxymethyl)-1,3-propanediol Mono PE PE Pentaerythrite Penteck Tetrahydroxymethylmethane	Solid	White	Odorless	7.1 Grades of Purity: Technical: 86-90% plus 10-14% dimer. Pure: 98+%	7.1 Grades of Purity: Technical: 86-90% plus 10-14% dimer. Pure: 98+%
Keep people away. Shut off ignition sources and call fire department. Notify local health and pollution control agencies. Protect water intakes.				7.2 Storage Temperature: Ambient	7.2 Storage Temperature: Ambient
Fire Combustible. Extinguish with water, dry chemicals, foam, or carbon dioxide.				7.3 Inert Atmosphere: No requirement	7.3 Inert Atmosphere: No requirement
Exposure VAPOR OR DUST Not harmful. If in eyes, hold eyelids open and flush with plenty of water.				7.4 Venting: Open	7.4 Venting: Open
Water Pollution 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.				7.5 IMO Pollution Category: Currently not available	7.5 IMO Pollution Category: Currently not available
7.6 Ship Type: Currently not available				7.7 Barge Hull Type: Currently not available	7.7 Barge Hull Type: Currently not available
1. CORRECTIVE RESPONSE ACTIONS				8. HAZARD CLASSIFICATIONS	
Dilute and disperse Stop discharge Collection Systems: Dredge	2. CHEMICAL DESIGNATIONS			8.1 49 CFR Category: Not listed	8.1 49 CFR Category: Not listed
3.1 Personal Protective Equipment: Dust mask; goggles	2.1 CG Compatibility Group: Not listed.	8.2 49 CFR Class: Not pertinent	8.2 49 CFR Class: Not pertinent		
3.2 Symptoms Following Exposure: Non-toxic; no symptoms likely	2.2 Formula: C(CH <sub>2</sub> OH) <sub>4</sub>	8.3 49 CFR Package Group: Not listed.	8.3 49 CFR Package Group: Not listed.		
3.3 Treatment of Exposure: None needed	2.3 IMO/UN Designation: Not listed	8.4 Marine Pollutant: No	8.4 Marine Pollutant: No		
3.4 TLV-TWA: 10 mg/m <sup>3</sup>	2.4 DOT ID No.: Not listed	8.5 NFPA Hazard Classification: Not listed	8.5 NFPA Hazard Classification: Not listed		
3.5 TLV-STEL: Not listed.	2.5 CAS Registry No.: Currently not available	8.6 EPA Reportable Quantity: Not listed.	8.6 EPA Reportable Quantity: Not listed.		
3.6 TLV-Ceiling: Not listed.	2.6 NAERG Guide No.: Not listed	8.7 EPA Pollution Category: Not listed.	8.7 EPA Pollution Category: Not listed.		
3.7 Toxicity by Ingestion: Grade 0; LD <sub>50</sub> > 15 g/kg	2.7 Standard Industrial Trade Classification: 51229	8.8 RCRA Waste Number: Not listed	8.8 RCRA Waste Number: Not listed		
3.8 Toxicity by Inhalation: Currently not available.	3. HEALTH HAZARDS			8.9 EPA FWPCA List: Not listed	8.9 EPA FWPCA List: Not listed
3.9 Chronic Toxicity: None	3.1 Personal Protective Equipment: Dust mask; goggles				9. PHYSICAL & CHEMICAL PROPERTIES
3.10 Vapor (Gas) Irritant Characteristics: Currently not available	3.2 Symptoms Following Exposure: Non-toxic; no symptoms likely				9.1 Physical State at 15° C and 1 atm: Solid
3.11 Liquid or Solid Characteristics: Currently not available	3.3 Treatment of Exposure: None needed				9.2 Molecular Weight: 136.2
3.12 Odor Threshold: Odorless	3.4 TLV-TWA: 10 mg/m <sup>3</sup>				9.3 Boiling Point at 1 atm: Not pertinent (sublimes)
3.13IDLH Value: Not listed.	3.5 TLV-STEL: Not listed.				9.4 Freezing Point: 502°F = 261°C = 534°K
3.14 OSHA PEL-TWA: 15 mg/m <sup>3</sup> ; total dust; 5 mg/m <sup>3</sup> respirable fraction.	3.6 TLV-Ceiling: Not listed.				9.5 Critical Temperature: Not pertinent
3.15 OSHA PEL-STEL: Not listed.	3.7 Toxicity by Ingestion: Grade 0; LD <sub>50</sub> > 15 g/kg				9.6 Critical Pressure: Not pertinent
3.16 OSHA PEL-Ceiling: Not listed.	3.8 Toxicity by Inhalation: Currently not available.				9.7 Specific Gravity: 1.39 at 25°C (solid)
3.17 EPA A EGL: Not listed	3.9 Chronic Toxicity: None				9.8 Liquid Surface Tension: Not pertinent
3.10 Vapor (Gas) Irritant Characteristics: Currently not available	3.11 Liquid or Solid Characteristics: Currently not available				9.9 Liquid Water Interfacial Tension: Not pertinent
3.12 Odor Threshold: Odorless	3.13IDLH Value: Not listed.				9.10 Vapor (Gas) Specific Gravity: Not pertinent
3.14 OSHA PEL-TWA: 15 mg/m <sup>3</sup> ; total dust; 5 mg/m <sup>3</sup> respirable fraction.	3.15 OSHA PEL-STEL: Not listed.				9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent
3.16 OSHA PEL-Ceiling: Not listed.	3.17 EPA A EGL: Not listed				9.12 Latent Heat of Vaporization: Not pertinent
4. FIRE HAZARDS	6. WATER POLLUTION		9.13 Heat of Combustion: -8,730 Btu/lb = -4,850 cal/g = -203 X 10 <sup>6</sup> J/kg		
4.1 Flash Point: Not pertinent	6.1 Aquatic Toxicity: Currently not available	6.2 Waterfowl Toxicity: Currently not available	6.3 Biological Oxygen Demand (BOD): Currently not available	9.14 Heat of Decomposition: Not pertinent	9.15 Heat of Solution: Not pertinent
4.2 Flammable Limits in Air: Not pertinent	6.4 Food Chain Concentration Potential: None	6.5 GESAMP Hazard Profile: Not listed	9.16 Heat of Polymerization: Not pertinent	9.17 Heat of Fusion: Currently not available	9.18 Limiting Value: Currently not available
4.3 Fire Extinguishing Agents: Water, dry chemical, carbon dioxide	6.6 Notes: None	6.7 Notes: None	9.19 Reid Vapor Pressure: Currently not available	NOTES	
4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent	7. SHIPPING INFORMATION				
4.5 Special Hazards of Combustion Products: Not pertinent	7.1 Grades of Purity: Technical: 86-90% plus 10-14% dimer. Pure: 98+%	7.2 Storage Temperature: Ambient	7.3 Inert Atmosphere: No requirement	7.4 Venting: Open	
4.6 Behavior in Fire: Not pertinent	7.5 IMO Pollution Category: Currently not available	7.6 Ship Type: Currently not available	7.7 Barge Hull Type: Currently not available		
4.7 Auto Ignition Temperature: 842°F (dust cloud)	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.	
4.8 Electrical Hazards: Not pertinent	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.	
4.9 Burning Rate: Not pertinent	8.8 RCRA Waste Number: Not listed	8.9 EPA FWPCA List: Not listed	9.1 Physical State at 15° C and 1 atm: Solid	9.2 Molecular Weight: 136.2	
4.10 Adiabatic Flame Temperature: Currently not available	9.3 Boiling Point at 1 atm: Not pertinent (sublimes)	9.4 Freezing Point: 502°F = 261°C = 534°K	9.5 Critical Temperature: Not pertinent	9.6 Critical Pressure: Not pertinent	
4.11 Stoichiometric Air to Fuel Ratio: 28.6 (calc.)	9.7 Specific Gravity: 1.39 at 25°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	
4.12 Flame Temperature: Currently not available	9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent	9.12 Latent Heat of Vaporization: Not pertinent	9.13 Heat of Combustion: -8,730 Btu/lb = -4,850 cal/g = -203 X 10 <sup>6</sup> J/kg	9.14 Heat of Decomposition: Not pertinent	
4.13 Combustion Molar Ratio (Reactant to Product): 11.0 (calc.)	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	
4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed	9.17 Heat of Fusion: Currently not available	9.18 Limiting Value: Currently not available	9.19 Reid Vapor Pressure: Currently not available		
5. CHEMICAL REACTIVITY	6. WATER POLLUTION		NOTES		
5.1 Reactivity with Water: No reaction	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
5.2 Reactivity with Common Materials: No reaction	6.6 Notes: None	6.7 Notes: None	6.8 Notes: None	6.9 Notes: None	6.10 Notes: None
5.3 Stability During Transport: Stable	6.11 Notes: None	6.12 Notes: None	6.13 Notes: None	6.14 Notes: None	6.15 Notes: None
5.4 Neutralizing Agents for Acids and Caustics: Not pertinent	6.16 Notes: None	6.17 Notes: None	6.18 Notes: None	6.19 Notes: None	6.20 Notes: None
5.5 Polymerization: Not pertinent	6.21 Notes: None	6.22 Notes: None	6.23 Notes: None	6.24 Notes: None	6.25 Notes: None
5.6 Inhibitor of Polymerization: Not pertinent	6.26 Notes: None	6.27 Notes: None	6.28 Notes: None	6.29 Notes: None	6.30 Notes: None
9. PHYSICAL & CHEMICAL PROPERTIES				NOTES	
9.1 Physical State at 15° C and 1 atm: Solid	9.2 Molecular Weight: 136.2	9.3 Boiling Point at 1 atm: Not pertinent (sublimes)	9.4 Freezing Point: 502°F = 261°C = 534°K	9.5 Critical Temperature: Not pertinent	9.6 Critical Pressure: Not pertinent
9.2 Molecular Weight: 136.2	9.5 Critical Temperature: Not pertinent	9.6 Critical Pressure: Not pertinent	9.7 Specific Gravity: 1.39 at 25°C (solid)	9.8 Liquid Surface Tension: Not pertinent	9.9 Liquid Water Interfacial Tension: Not pertinent
9.3 Boiling Point at 1 atm: Not pertinent (sublimes)	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
9.4 Freezing Point: 502°F = 261°C = 534°K	9.12 Latent Heat of Vaporization: Not pertinent	9.13 Heat of Combustion: -8,730 Btu/lb = -4,850 cal/g = -203 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
9.5 Critical Temperature: 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
9.6 Critical Pressure: Not pertinent	9.17 Heat of Fusion: Currently not available	9.18 Limiting Value: Currently not available	9.20 Notes: None		
9.7 Specific Gravity: 1.39 at 25°C (solid)	9.19 Reid Vapor Pressure: Currently not available	9.21 Notes: None			
9.8 Liquid Surface Tension: Not pertinent	9.22 Notes: None	9.23 Notes: None			
9.9 Liquid Water Interfacial Tension: Not pertinent	9.24 Notes: None	9.25 Notes: None			
9.10 Vapor (Gas) Specific Gravity: Not pertinent	9.26 Notes: None	9.27 Notes: None			
9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent	9.28 Notes: None	9.29 Notes: None			
9.12 Latent Heat of Vaporization: Not pertinent	9.30 Notes: None	9.31 Notes: None			
9.13 Heat of Combustion: -8,730 Btu/lb = -4,850 cal/g = -203 X 10 <sup>6</sup> J/kg	9.32 Notes: None	9.33 Notes: None			
9.14 Heat of Decomposition: Not pertinent	9.34 Notes: None	9.35 Notes: None			
9.15 Heat of Solution: Not pertinent	9.36 Notes: None	9.37 Notes: None			
9.16 Heat of Polymerization: Not pertinent	9.38 Notes: None	9.39 Notes: None			
9.17 Heat of Fusion: Currently not available	9.40 Notes: None	9.41 Notes: None			
9.18 Limiting Value: Currently not available	9.42 Notes: None	9.43 Notes: None			
9.19 Reid Vapor Pressure: Currently not available	9.44 Notes: None	9.45 Notes: None			

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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
	NOT PERTINENT		NOT PERTINENT		NOT PERTINENT		NOT PERTINENT

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
34	1.974		NOT		NOT		NOT
36	2.218						
38	2.463						
40	2.707						
42	2.952						
44	3.196		PERTINENT		PERTINENT		PERTINENT
46	3.441						
48	3.685						
50	3.929						
52	4.174						
54	4.418						
56	4.663						
58	4.907						
60	5.152						
62	5.396						
64	5.641						
66	5.885						
68	6.129						
70	6.374						
72	6.618						
74	6.863						
76	7.107						
78	7.352						
80	7.596						
82	7.841						
84	8.085						