

HEPTANOL

HTN

| CAUTIONARY RESPONSE INFORMATION | | | | 4. FIRE HAZARDS | 7. SHIPPING INFORMATION |
|--|--|-----------|-------------------|--|---|
| Common Synonyms Enanthic alcohol 1-Heptanol Heptyl alcohol 1-Hydroxyheptane | Watery liquid Floats on water. | Colorless | Weak alcohol odor | <p>4.1 Flash Point: 170°F O.C. 4.2 Flammable Limits in Air: Currently not available 4.3 Fire Extinguishing Agents: Foam, carbon dioxide, or dry chemical 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: Currently not available 4.8 Electrical Hazards: Not pertinent 4.9 Burning Rate: 3.2 mm/min. 4.10 Adiabatic Flame Temperature: Currently not available 4.11 Stoichiometric Air to Fuel Ratio: 50.0 (calc.) 4.12 Flame Temperature: Currently not available 4.13 Combustion Molar Ratio (Reactant to Product): 15.0 (calc.) 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p> | <p>7.1 Grades of Purity: Currently not available 7.2 Storage Temperature: Ambient 7.3 Inert Atmosphere: No requirement 7.4 Venting: Open (flame arrester) 7.5 IMO Pollution Category: C 7.6 Ship Type: 3 7.7 Barge Hull Type: Currently not available</p> |
| Shut off ignition sources and call fire department. Notify local health and pollution control agencies. | | | | | |
| Fire | Combustible. Extinguish with dry chemical, foam, or carbon dioxide. Cool exposed containers with water. | | | <p>8. HAZARD CLASSIFICATIONS</p> <p>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</p> | |
| Exposure | Not harmful. | | | <p>9. PHYSICAL & CHEMICAL PROPERTIES</p> <p>9.1 Physical State at 15°C and 1 atm: Liquid 9.2 Molecular Weight: 116.20 9.3 Boiling Point at 1 atm: 349°F = 176°C = 449°K 9.4 Freezing Point: -29°F = -34°C = 239°K 9.5 Critical Temperature: 680.0°F = 360°C = 633.2°K 9.6 Critical Pressure: 440 psia = 30 atm = 3.0 MN/m² 9.7 Specific Gravity: 0.822 at 20°C (liquid) 9.8 Liquid Surface Tension: 26.2 dynes/cm = 0.0262 N/mm at 15°C 9.9 Liquid Water Interfacial Tension: 7.7 dynes/cm = 0.0077 N/m at 25°C 9.10 Vapor (Gas) Specific Gravity: Not pertinent 9.11 Ratio of Specific Heats of Vapor (Gas): 1.049 9.12 Latent Heat of Vaporization: 189 Btu/lb = 105 cal/g = 4.40 X 10³ J/kg 9.13 Heat of Combustion: -15,810 Btu/lb = -5784 cal/g = -367.8 X 10³ 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</p> | |
| Water Pollution | 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>5. CHEMICAL REACTIVITY</p> <p>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: Not pertinent 5.6 Inhibitor of Polymerization: Not pertinent</p> <p>6. WATER POLLUTION</p> <p>6.1 Aquatic Toxicity: Currently not available 6.2 Waterfowl Toxicity: Currently not available 6.3 Biological Oxygen Demand (BOD): 20.4% (theor.), 5 days 6.4 Food Chain Concentration Potential: None 6.5 GESAMP Hazard Profile: Bioaccumulation: 0 Damage to living resources: 2 Human Oral hazard: 1 Human Contact hazard: I Reduction of amenities: 0</p> | |
| 1. CORRECTIVE RESPONSE ACTIONS | <p>Stop discharge Contain Collection Systems: Skim Chemical and Physical Treatment: Absorb Clean shore line Salvage waterfowl</p> <p>2. CHEMICAL DESIGNATIONS</p> <p>2.1 CG Compatibility Group: Not listed. 2.2 Formula: C₇H₁₆OH 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: Not listed 2.5 CAS Registry No.: 111-70-6 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51219</p> | | | <p>NOTES</p> | |
| 3. HEATH HAZARDS | <p>3.1 Personal Protective Equipment: Chemical goggles or face shield. 3.2 Symptoms Following Exposure: Low toxicity; liquid may irritate eyes. 3.3 Treatment of Exposure: Flush all affected parts with plenty of water. 3.4 TLV-TWA: Not listed. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 2; oral rat LD₅₀ = 1.87 g/kg 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Currently not available 3.10 Vapor (Gas) Irritant Characteristics: Nonirritating 3.11 Liquit or Solid Characteristics: Liquid may irritate eyes; it is not irritating to skin. 3.12 Odor Threshold: 0.49 ppm. 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> | | | | |

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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 |
| 40 | 52.140 | 0 | 0.418 | 30 | 1.064 | 55 | 9.131 |
| 50 | 51.850 | 10 | 0.429 | 40 | 1.057 | 60 | 8.244 |
| 60 | 51.560 | 20 | 0.441 | 50 | 1.051 | 65 | 7.458 |
| 70 | 51.270 | 30 | 0.453 | 60 | 1.044 | 70 | 6.759 |
| 80 | 50.970 | 40 | 0.464 | 70 | 1.038 | 75 | 6.137 |
| 90 | 50.680 | 50 | 0.476 | 80 | 1.031 | 80 | 5.583 |
| 100 | 50.390 | 60 | 0.488 | 90 | 1.025 | 85 | 5.087 |
| 110 | 50.100 | 70 | 0.499 | 100 | 1.018 | 90 | 4.643 |
| 120 | 49.810 | 80 | 0.511 | 110 | 1.011 | 95 | 4.245 |
| 130 | 49.520 | 90 | 0.523 | 120 | 1.005 | 100 | 3.887 |
| 140 | 49.230 | 100 | 0.534 | 130 | 0.998 | 105 | 3.565 |
| 150 | 48.940 | 110 | 0.546 | 140 | 0.992 | 110 | 3.275 |
| 160 | 48.640 | 120 | 0.558 | 150 | 0.985 | 115 | 3.012 |
| 170 | 48.350 | 130 | 0.569 | 160 | 0.979 | 120 | 2.775 |
| 180 | 48.060 | 140 | 0.581 | 170 | 0.972 | 125 | 2.560 |
| 190 | 47.770 | 150 | 0.593 | 180 | 0.966 | 130 | 2.365 |
| 200 | 47.480 | 160 | 0.604 | 190 | 0.959 | 135 | 2.188 |
| 210 | 47.190 | 170 | 0.616 | 200 | 0.952 | 140 | 2.026 |
| | | 180 | 0.628 | | | | |
| | | 190 | 0.639 | | | | |
| | | 200 | 0.651 | | | | |
| | | 210 | 0.663 | | | | |
| | | 220 | 0.674 | | | | |
| | | 230 | 0.686 | | | | |
| | | 240 | 0.698 | | | | |

| 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 | 0.095 | 110 | 0.031 | 110 | 0.00060 | 0 | 0.326 |
| 36 | 0.096 | 120 | 0.045 | 120 | 0.00084 | 25 | 0.339 |
| 38 | 0.096 | 130 | 0.064 | 130 | 0.00117 | 50 | 0.353 |
| 40 | 0.096 | 140 | 0.089 | 140 | 0.00161 | 75 | 0.366 |
| 42 | 0.096 | 150 | 0.123 | 150 | 0.00219 | 100 | 0.380 |
| 44 | 0.097 | 160 | 0.169 | 160 | 0.00295 | 125 | 0.393 |
| 46 | 0.097 | 170 | 0.229 | 170 | 0.00394 | 150 | 0.406 |
| 48 | 0.097 | 180 | 0.308 | 180 | 0.00521 | 175 | 0.419 |
| 50 | 0.097 | 190 | 0.409 | 190 | 0.00682 | 200 | 0.431 |
| 52 | 0.098 | 200 | 0.540 | 200 | 0.00886 | 225 | 0.444 |
| 54 | 0.098 | 210 | 0.706 | 210 | 0.01142 | 250 | 0.456 |
| 56 | 0.098 | 220 | 0.917 | 220 | 0.01460 | 275 | 0.469 |
| 58 | 0.098 | 230 | 1.181 | 230 | 0.01854 | 300 | 0.481 |
| 60 | 0.099 | 240 | 1.510 | 240 | 0.02337 | 325 | 0.493 |
| 62 | 0.099 | 250 | 1.918 | 250 | 0.02926 | 350 | 0.505 |
| 64 | 0.099 | 260 | 2.420 | 260 | 0.03640 | 375 | 0.516 |
| 66 | 0.100 | 270 | 3.033 | 270 | 0.04500 | 400 | 0.528 |
| 68 | 0.100 | 280 | 3.779 | 280 | 0.05531 | 425 | 0.540 |
| 70 | 0.100 | 290 | 4.681 | 290 | 0.06760 | 450 | 0.551 |
| 72 | 0.100 | 300 | 5.766 | 300 | 0.08216 | 475 | 0.562 |
| 74 | 0.101 | 310 | 7.064 | 310 | 0.09934 | 500 | 0.573 |
| 76 | 0.101 | 320 | 8.608 | 320 | 0.11950 | 525 | 0.584 |
| 78 | 0.101 | 330 | 10.440 | 330 | 0.14310 | 550 | 0.595 |
| 80 | 0.101 | | | | | 575 | 0.606 |
| 82 | 0.102 | | | | | 600 | 0.616 |
| 84 | 0.102 | | | | | | |