

ETHOXYLATED PENTADECANOL

EOP

| CAUTIONARY RESPONSE INFORMATION | | | | 4. FIRE HAZARDS | 7. SHIPPING INFORMATION |
|--|---|---|--------------------|--|--|
| Common Synonyms Ethoxylated pentadecylalcohol Poly(oxyethyl) pentadecyl ether Tergitol nonionic 4S-S-10 | Liquid | Colorless to yellow | Pleasant odor | 4.1 Flash Point: 470°F O.C. 4.2 Flammable Limits in Air: Not pertinent 4.3 Fire Extinguishing Agents: Carbon dioxide or dry chemical for small fires; alcohol foam and water for large fires 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: Currently not available 4.10 Adiabatic Flame Temperature: Currently not available 4.11 Stoichiometric Air to Fuel Ratio: Not pertinent 4.12 Flame Temperature: Currently not available 4.13 Combustion Molar Ratio (Reactant to Product): Not pertinent 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed | 7.1 Grades of Purity: Usually 100% 7.2 Storage Temperature: Ambient 7.3 Inert Atmosphere: No requirement 7.4 Venting: Open (flame arrester) 7.5 IMO Pollution Category: Currently not available 7.6 Ship Type: Currently not available 7.7 Barge Hull Type: Currently not available |
| Avoid contact with liquid. Call fire department. Notify local health and pollution control agencies. Protect water intakes. | | | | | 8. HAZARD CLASSIFICATIONS |
| Fire Exposure Water Pollution | Combustible. Extinct with water, dry chemical, alcohol foam, or carbon dioxide. Cool exposed containers with water. CALL FOR MEDICAL AID. LIQUID Irritating to skin. Will burn eyes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. 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. | | | 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 | 8. HAZARD CLASSIFICATIONS |
| 1. CORRECTIVE RESPONSE ACTIONS Dilute and disperse Stop discharge | 2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: 20; Alcohol, glycol 2.2 Formula: $C_{15}H_{31}O(CH_2CH_2O)_nCH_2CH_2OH$ where n = 10 (average) 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: Not listed 2.5 CAS Registry No.: Currently not available 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51219 | 3. HEALTH HAZARDS 3.1 Personal Protective Equipment: Plastic gloves, goggles 3.2 Symptoms Following Exposure: Liquid causes eye injury and de-fats the skin, causing irritation. 3.3 Treatment of Exposure: Flush eyes with water for at least 15 min. Wash skin well with water. Get medical attention. 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) Irritancy Characteristics: None 3.11 Liquid or Solid Characteristics: Liquid causes eye injury. Contact with skin may cause irritation. 3.12 Odor Threshold: Currently not available 3.13IDLH 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 | 4. FIRE HAZARDS | 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 | 9. PHYSICAL & CHEMICAL PROPERTIES |
| | | 3. HEALTH HAZARDS | 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 | 9.1 Physical State at 15°C and 1 atm: Liquid 9.2 Molecular Weight: 660 9.3 Boiling Point at 1 atm: Very high 9.4 Freezing Point: 59°F = 15°C = 288°K 9.5 Critical Temperature: Not pertinent 9.6 Critical Pressure: Not pertinent 9.7 Specific Gravity: 1.007 at 15°C (liquid) 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 9.13 Heat of Combustion: (est.) = -11,000 Btu/lb = -6,200 cal/g = -260 X 10 ⁶ J/kg 9.14 Heat of Decomposition: Not pertinent 9.15 Heat of Solution: (est.) -9 Btu/lb = -5 cal/g = -0.2 X 10 ⁶ J/kg 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 |
| | | | | | NOTES |

ETHOXYLATED PENTADECANOL

EOP

| 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 |
| 60 | 62.700 | 68 | 0.478 | | N | | NOT |
| 61 | 62.670 | 69 | 0.478 | | O | | NOT |
| 62 | 62.630 | 70 | 0.478 | | T | | PERTINENT |
| 63 | 62.600 | 71 | 0.478 | | P | | PERTINENT |
| 64 | 62.560 | 72 | 0.478 | | R | | PERTINENT |
| 65 | 62.530 | 73 | 0.478 | | T | | PERTINENT |
| 66 | 62.490 | 74 | 0.478 | | I | | PERTINENT |
| 67 | 62.460 | 75 | 0.478 | | N | | PERTINENT |
| 68 | 62.420 | 76 | 0.478 | | E | | PERTINENT |
| 69 | 62.390 | 77 | 0.478 | | N | | PERTINENT |
| 70 | 62.350 | 78 | 0.478 | | E | | PERTINENT |
| 71 | 62.320 | 79 | 0.478 | | N | | PERTINENT |
| 72 | 62.280 | 80 | 0.478 | | O | | PERTINENT |
| 73 | 62.250 | 81 | 0.478 | | T | | PERTINENT |
| 74 | 62.210 | 82 | 0.478 | | P | | PERTINENT |
| 75 | 62.180 | 83 | 0.478 | | R | | PERTINENT |
| 76 | 62.150 | 84 | 0.478 | | T | | PERTINENT |
| 77 | 62.110 | 85 | 0.478 | | I | | PERTINENT |
| 78 | 62.080 | | | | N | | PERTINENT |
| 79 | 62.040 | | | | O | | PERTINENT |
| 80 | 62.010 | | | | T | | PERTINENT |
| 81 | 61.970 | | | | P | | PERTINENT |
| 82 | 61.940 | | | | R | | PERTINENT |
| 83 | 61.900 | | | | T | | PERTINENT |
| 84 | 61.870 | | | | I | | PERTINENT |
| 85 | 61.830 | | | | N | | 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 |
| 68 | 10.000 | | NOT PERTINENT | | NOT PERTINENT | | NOT PERTINENT |