# HEXYLENE GLYCOL

**HXG**

## CAUTIONARY RESPONSE INFORMATION

| | | | |
|---|---|---|---|
| **Common Synonyms**<br>2-Methyl-2,4-pentanediol | Oily liquid | Colorless | Mild sweet odor |
| | Floats and mixes slowly with water. | | |

Call fire department.
Notify local health and pollution control agencies.
Protect water intakes.

| | |
|---|---|
| **Fire** | Combustible.<br>Extinguish with dry chemical, alcohol foam, or carbon dioxide.<br>Water may be ineffective on fire.<br>Cool exposed containers with water. |
| **Exposure** | CALL FOR MEDICAL AID.<br><br>LIQUID<br>Irritating to skin and eyes.<br>Remove contaminated clothing and shoes.<br>Flush affected areas with plenty of water.<br>IF IN EYES, hold eyelids open and flush with plenty of water. |
| **Water Pollution** | Effect of low concentrations on aquatic life is unknown.<br>May be dangerous if it enters water intakes.<br>Notify local health and wildlife officials.<br>Notify operators of nearby water intakes. |

### 1. CORRECTIVE RESPONSE ACTIONS

Dilute and disperse
Stop discharge

### 2. CHEMICAL DESIGNATIONS

**2.1 CG Compatibility Group:** 20; Alcohol, glycol
**2.2 Formula:** $C_6H_{14}O_2$
**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:** 51229

### 3. HEALTH HAZARDS

**3.1 Personal Protective Equipment:** Organic canister or air pack; rubber gloves; goggles
**3.2 Symptoms Following Exposure:** Irritation of eyes, nose and throat; headache, dizziness, and nausea.
**3.3 Treatment of Exposure:** INHALATION: remove victim to fresh air; if breathing has stopped, give artificial respiration. SKIN OR EYES: wash affected areas with water; flush eyes with water; get medical care if discomfort persists.
**3.4 TLV-TWA:** Not listed.
**3.5 TLV-STEL:** Not listed.
**3.6 TLV-Ceiling:** 25 ppm
**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:** Currently not available
**3.10 Vapor (Gas) Irritant Characteristics:** Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.
**3.11 Liquid or Solid Characteristics:** No appreciable hazard. Practically harmless to the skin.
**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

### 4. FIRE HAZARDS

**4.1 Flash Point:** 200°F O.C.
**4.2 Flammable Limits in Air:** 1.2%-8.1% (calc.)
**4.3 Fire Extinguishing Agents:** Alcohol foam, dry chemical, or carbon dioxide
**4.4 Fire Extinguishing Agents Not to Be Used:** Water or foam may cause frothing.
**4.5 Special Hazards of Combustion Products:** Not pertinent
**4.6 Behavior in Fire:** Not pertinent
**4.7 Auto Ignition Temperature:** 583°F (calc.)
**4.8 Electrical Hazards:** Not pertinent
**4.9 Burning Rate:** Currently not available
**4.10 Adiabatic Flame Temperature:** Currently not available
**4.11 Stoichometric Air to Fuel Ratio:** 40.5 (calc.)
**4.12 Flame Temperature:** Currently not available
**4.13 Combustion Molar Ratio (Reactant to Product):** 13.0 (calc.)
**4.14 Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

### 5. CHEMICAL REACTIVITY

**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

### 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:**
**Bioaccumulation:** 0
**Damage to living resources:** 0
**Human Oral hazard:** 1
**Human Contact hazard:** 0
**Reduction of amenities:** 0

### 7. SHIPPING INFORMATION

**7.1 Grades of Purity:** 99%
**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

### 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.
**8.4 Marine Pollutant:** No
**8.5 NFPA Hazard Classification:**

| Category | Classification |
|---|---|
| **Health Hazard (Blue).....** | 1 |
| **Flammability (Red).....** | 1 |
| **Instability (Yellow).....** | 0 |

**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

### 9. PHYSICAL & CHEMICAL PROPERTIES

**9.1 Physical State at 15° C and 1 atm:** Liquid
**9.2 Molecular Weight:** 118.19
**9.3 Boiling Point at 1 atm:** 387°F = 197°C = 470°K
**9.4 Freezing Point:** –58°F = –50°C = 223°K
**9.5 Critical Temperature:** 752.0°F = 400°C = 673.2°K
**9.6 Critical Pressure:** 497 psia = 33.8 atm = 3.42 $MN/m^2$
**9.7 Specific Gravity:** 0.923 at 20°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:** 187 Btu/lb = 104 cal/g = 4.35 X $10^5$ J/kg
**9.13 Heat of Combustion:** (est.) –13,600 Btu/lb = –7,550 cal/g = –316 X $10^5$ J/kg
**9.14 Heat of Decomposition:** Not pertinent
**9.15 Heat of Solution:** (est.) –11 Btu/lb = –6 cal/g = –0.25 X $10^5$ 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**

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### 9.20 SATURATED LIQUID DENSITY

| Temperature (degrees F) | Pounds per cubic foot |
|---|---|
| 40 | 58.500 |
| 50 | 58.190 |
| 60 | 57.890 |
| 70 | 57.580 |
| 80 | 57.270 |
| 90 | 56.970 |
| 100 | 56.660 |
| 110 | 56.360 |
| 120 | 56.050 |
| 130 | 55.750 |
| 140 | 55.440 |
| 150 | 55.140 |
| 160 | 54.830 |
| 170 | 54.530 |
| 180 | 54.220 |
| 190 | 53.920 |
| 200 | 53.610 |
| 210 | 53.310 |

### 9.21 LIQUID HEAT CAPACITY

| Temperature (degrees F) | British thermal unit per pound-F |
|---|---|
| 34 | 0.421 |
| 36 | 0.422 |
| 38 | 0.423 |
| 40 | 0.424 |
| 42 | 0.425 |
| 44 | 0.427 |
| 46 | 0.428 |
| 48 | 0.429 |
| 50 | 0.430 |
| 52 | 0.431 |
| 54 | 0.432 |
| 56 | 0.433 |
| 58 | 0.434 |
| 60 | 0.435 |
| 62 | 0.437 |
| 64 | 0.438 |
| 66 | 0.439 |
| 68 | 0.440 |
| 70 | 0.441 |
| 72 | 0.442 |
| 74 | 0.443 |
| 76 | 0.444 |
| 78 | 0.445 |
| 80 | 0.447 |
| 82 | 0.448 |
| 84 | 0.449 |

### 9.22 LIQUID THERMAL CONDUCTIVITY

| Temperature (degrees F) | British thermal unit inch per hour-square foot-F |
|---|---|
| | NOT PERTINENT |

### 9.23 LIQUID VISCOSITY

| Temperature (degrees F) | Centipoise |
|---|---|
| | NOT PERTINENT |

### 9.24 SOLUBILITY IN WATER

| Temperature (degrees F) | Pounds per 100 pounds of water |
|---|---|
| | MISCIBLE |

### 9.25 SATURATED VAPOR PRESSURE

| Temperature (degrees F) | Pounds per square inch |
|---|---|
| 70 | 0.002 |
| 80 | 0.003 |
| 90 | 0.004 |
| 100 | 0.006 |
| 110 | 0.009 |
| 120 | 0.014 |
| 130 | 0.020 |
| 140 | 0.029 |
| 150 | 0.041 |
| 160 | 0.059 |
| 170 | 0.082 |
| 180 | 0.114 |
| 190 | 0.156 |
| 200 | 0.212 |
| 210 | 0.286 |
| 220 | 0.382 |
| 230 | 0.506 |
| 240 | 0.664 |
| 250 | 0.865 |
| 260 | 1.119 |
| 270 | 1.438 |
| 280 | 1.835 |

### 9.26 SATURATED VAPOR DENSITY

| Temperature (degrees F) | Pounds per cubic foot |
|---|---|
| 70 | 0.00003 |
| 80 | 0.00005 |
| 90 | 0.00008 |
| 100 | 0.00012 |
| 110 | 0.00018 |
| 120 | 0.00026 |
| 130 | 0.00037 |
| 140 | 0.00053 |
| 150 | 0.00075 |
| 160 | 0.00104 |
| 170 | 0.00144 |
| 180 | 0.00196 |
| 190 | 0.00265 |
| 200 | 0.00355 |
| 210 | 0.00470 |
| 220 | 0.00619 |
| 230 | 0.00807 |
| 240 | 0.01045 |
| 250 | 0.01342 |
| 260 | 0.01713 |
| 270 | 0.02170 |
| 280 | 0.02731 |

### 9.27 IDEAL GAS HEAT CAPACITY

| Temperature (degrees F) | British thermal unit per pound-F |
|---|---|
| | NOT PERTINENT |