

# ETHYLENE GLYCOL ISOPROPYL ETHER

EGI

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b>		Liquid
Dowanol eipat Ethanol, 2-isopropoxy b-Hydroxyethyl isopropyl ether 2-Isopropoxyethanol Isopropyl cellosolve Isopropyl glycol		
<p><b>Call fire department.</b>  <b>Wear self-contained breathing apparatus and protective equipment.</b>  <b>Avoid contact with liquid.</b>  <b>Notify local health and pollution control agencies.</b>  <b>Protect water intakes.</b></p>		
<b>Fire</b>	<b>COMBUSTIBLE.</b> Extinguish with dry chemical, alcohol foam, or CO <sub>2</sub> . Cool exposed containers with water.	
<b>Exposure</b>	<b>CALL FOR MEDICAL AID.</b>  <b>LIQUID</b> Irritating to skin and eyes. Harmful if swallowed. 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, immediately induce vomiting.	
<b>Water Pollution</b>	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.	

<b>1. CORRECTIVE RESPONSE ACTIONS</b> Stop discharge Dilute and disperse	<b>2. CHEMICAL DESIGNATIONS</b> 2.1 <b>CG Compatibility Group:</b> 40; Glycol ethers 2.2 <b>Formula:</b> (CH <sub>2</sub> ) <sub>2</sub> CHOCH <sub>2</sub> CH <sub>2</sub> OH 2.3 <b>IMO/UN Designation:</b> Currently not available 2.4 <b>DOT ID No.:</b> Not listed 2.5 <b>CAS Registry No.:</b> 109-59-1 2.6 <b>NAERG Guide No.:</b> Not listed 2.7 <b>Standard Industrial Trade Classification:</b> 51616
<b>3. HEALTH HAZARDS</b>  3.1 <b>Personal Protective Equipment:</b> Wear approved respirator, chemical resistant gloves, chemical safety goggles or full-face mask, boots, and apron. 3.2 <b>Symptoms Following Exposure:</b> May be harmful by inhalation, ingestion or skin absorption. May cause skin and eye irritation. 3.3 <b>Treatment of Exposure:</b> INHALATION: Consult a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. INGESTION: Immediately induce vomiting. EYES: Immediately flush with plenty of water for at least 15 minutes. SKIN: Wash with soap and water. 3.4 <b>TLV-TWA:</b> 25 ppm 3.5 <b>TLV-STEL:</b> Not listed. 3.6 <b>TLV-Ceiling:</b> Not listed. 3.7 <b>Toxicity by Ingestion:</b> Grade 2; LD <sub>50</sub> = 4.9 g/kg (mouse) 3.8 <b>Toxicity by Inhalation:</b> Currently not available. 3.9 <b>Chronic Toxicity:</b> Currently not available 3.10 <b>Vapor (Gas) Irritant Characteristics:</b> Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary. 3.11 <b>Liquid or Solid Characteristics:</b> Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of skin. 3.12 <b>Odor Threshold:</b> Currently not available 3.13 <b>IDLH Value:</b> Not listed. 3.14 <b>OSHA PEL-TWA:</b> Not listed. 3.15 <b>OSHA PEL-STEL:</b> Not listed. 3.16 <b>OSHA PEL-Ceiling:</b> Not listed. 3.17 <b>EPA AEGL:</b> Not listed	

## 4. FIRE HAZARDS

- 4.1 **Flash Point:** 91.4°F C.C.
- 4.2 **Flammable Limits in Air:** Currently not available
- 4.3 **Fire Extinguishing Agents:** Water, carbon dioxide, dry chemical, alcohol foam.
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Currently not available
- 4.5 **Special Hazards of Combustion Products:** Emits toxic fumes when heated upon decomposition.
- 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:** 33.3 (calc.)
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** 11.0 (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:** Will not occur.
- 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:** Currently not available
- 6.5 **GESAMP Hazard Profile:** Not listed

## 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 99%
- 7.2 **Storage Temperature:** Ambient.
- 7.3 **Inert Atmosphere:** Currently not available
- 7.4 **Venting:** Currently not available
- 7.5 **IMO Pollution Category:** D
- 7.6 **Ship Type:** 3
- 7.7 **Barge Hull Type:** 3

## 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).....	3
Instability (Yellow).....	0
- 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:** Not listed

## 9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Liquid
- 9.2 **Molecular Weight:** 104.15
- 9.3 **Boiling Point at 1 atm:** 285.8°F = 141°C = 414.2°K
- 9.4 **Freezing Point:** Currently not available
- 9.5 **Critical Temperature:** Currently not available
- 9.6 **Critical Pressure:** Currently not available
- 9.7 **Specific Gravity:** 0.91
- 9.8 **Liquid Surface Tension:** Currently not available
- 9.9 **Liquid Water Interfacial Tension:** Currently not available
- 9.10 **Vapor (Gas) Specific Gravity:** 3.59
- 9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available
- 9.12 **Latent Heat of Vaporization:** Currently not available
- 9.13 **Heat of Combustion:** Currently not available
- 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		C U R R E N T L Y  N O T  A V A I L A B L E

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
	C U R R E N T L Y  N O T  A V A I L A B L E	68	0.027		C U R R E N T L Y  N O T  A V A I L A B L E		0 0.329 25 0.341 50 0.353 75 0.364 100 0.376 125 0.387 150 0.398 175 0.408 200 0.419 225 0.429 250 0.439 275 0.449 300 0.459 325 0.469 350 0.479 375 0.488 400 0.497 425 0.506 450 0.515 475 0.524 500 0.532 525 0.540 550 0.549 575 0.557 600 0.565