**Shell Chemicals**

Technical Datasheet

# Ethyl DIPROXITOL

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|---|---|
| Product Code | U5151 |
| Region | Global |
| Product Category | Propylene Glycol Ethers |
| CAS Registry Number | 30025-38-8 |
| Synonym(s) | 1-(2-ethoxymethylethoxy)-2-propanol, ethoxypropoxy propanol, dipropylene glycol ethyl ether, EtDIPROX, DPGEE, EDP, DPE |
| Description | Ethyl DIPROXITOL is a colourless, hygroscopic, high boiling liquid with a mild odour. It is miscible in any proportion with water and many organic solvents and has good solvent power for nitrocellulose and dyestuffs. |

## Typical Properties

| Property | Unit | Method | Value |
|---|---|---|---|
| Purity | %m/m | GC | 97.5 |
| Water | %m/m | ASTM D1364 | 0.08 |
| Acidity (as Acetic Acid) | %m/m | ASTM D1613 | 0.001 |
| Density at 20°C | kg/l | ASTM D4052 | 0.932 |
| Specific Gravity at 20°C/20°C | - | ASTM D4052 | 0.934 |
| Specific Gravity at 25°C/25°C | - | ASTM D4052 | 0.930 |
| Coefficient of Cubic Expansion at 20°C | $10^{-4}$/°C | Calculated | 10 |
| Refractive Index at 20°C | - | ASTM D1218 | 1.422 |
| Colour | Pt-Co | ASTM D1209 | < 5 |
| Boiling Point | °C | - | 194 |
| Relative Evaporation Rate (nBuAc=1) | - | ASTM D3539 | 0.03 |
| Relative Evaporation Rate (Ether=1) | - | DIN 53170 | 450 |
| Antoine Constant A # | kPa. °C | | 6.214 |

| | | | |
|---|---|---|---|
| Antoine Constant B # | kPa. °C | | 1574.903 |
| Antoine Constant C # | kPa. °C | | 176.128 |
| Temperature Limits for Antoine Equation # | °C | | 0 to 200 |
| Vapour Pressure at 20°C | kPa | Calculated | 0.02 |
| Vapour Pressure at 50°C | kPa | Calculated | 0.19 |
| Saturated Vapor Concentration at 20°C | g/m3 | Calculated | 1 |
| Volatile Organic Compound (VOC) | g/l | EU / EPA | 932 |
| Flash Point (Abel) | °C | ASTM D93 | 78 |
| Auto Ignition Temperature | °C | ASTM E659 | 199 |
| Lower Explosion Limit | %v/v | - | 0.8 |
| Upper Explosion Limit | %v/v | - | 9.6 |
| Electrical Conductivity at 20°C | pS/m | ASTM D4308 | $1*10^7$ |
| Dielectric Constant at 20°C | - | - | 10.5 |
| Freezing Point | °C | - | -77 |
| Surface Tension at 20°C | mN/m | - | 29 |
| Viscosity at 20°C | mPa.s | - | 4.2 |
| Hildebrand Solubility Parameter | $(cal/cm^3)^{1/2}$ | - | 9.1 |
| Hydrogen Bonding Index | - | - | 0.0 |
| Fractional Polarity | - | - | 0.050 |
| Heat of Vaporisation at $T_{boil}$ | kJ/kg | - | 318 |
| Heat of Combustion (Net) at 25°C | kJ/kg | - | 29000 |
| Specific Heat at 20°C | kJ/kg/°C | - | 2.20 |
| Miscibility at 20°C: Solvent in water | %m/m | - | complete |
| Miscibility at 20°C: Water in solvent | %m/m | - | complete |
| Molecular Weight | g/mol | - | 162 |

(#) In the Antoine temperature range, the vapour pressure p (kPa) at temperature T (°C) can be calculated by means of the Antoine equation: log p = A - B/(T+C).

## Test Methods

Copies of copyrighted test methods can be obtained from the issuing organisations:

American Society for Testing and Materials (ASTM) : www.astm.org
Energy Institute (IP) : www.energyinst.org.uk
Deutsches Institut für Normung (DIN) : www.din.de

N.B: For routine quality control local test methods may be applied. Such methods have been validated against those mentioned in this datasheet.

## Quality

Ethyl DIPROXITOL does not contain detectable quantities of polycyclic aromatics, heavy metals or chlorinated compounds.

## Hazard Information

For detailed Hazard Information please refer to the Safety Data Sheet on ww.shell.com/chemicals.

## Storage Handling

Provided proper storage and handling precautions are taken we would expect Ethyl DIPROXITOL to be technically stable for at least 12 months. For detailed advice on Storage and Handling please refer to the Safety Data Sheet on www.shell.com/chemicals.

## Trademark

DIPROXITOL is a Shell Trademark.