Ethyl PROXITOL Acetate

Product Code: U5149
Region: Global
Product Category: Propylene Glycol Ether Acetates
CAS Registry Number: 54839-24-6
Synonym(s): EPA, Propylene glycol mono ethyl acetate, 1-Ethoxy-2-propanol acetate

Description: Ethyl PROXITOL acetate is a colourless, neutral propylene oxide-based glycol ether acetate with a mild odour and a volatility, viscosity and solvent power similar to those of ethylene glycol-based glycol ether acetates.

Typical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity, min.</td>
<td>%m/m</td>
<td>GC</td>
<td>98.0</td>
</tr>
<tr>
<td>Water</td>
<td>%m/m</td>
<td>ASTM D1364</td>
<td>0.02</td>
</tr>
<tr>
<td>Acidity (as Acetic Acid)</td>
<td>%m/m</td>
<td>ASTM D1613</td>
<td>0.01</td>
</tr>
<tr>
<td>Density at 20°C</td>
<td>kg/l</td>
<td>ASTM D4052</td>
<td>0.941</td>
</tr>
<tr>
<td>Specific Gravity at 20°C/20°C</td>
<td>-</td>
<td>ASTM D4052</td>
<td>0.943</td>
</tr>
<tr>
<td>Specific Gravity at 25°C/25°C</td>
<td>-</td>
<td>ASTM D4052</td>
<td>0.939</td>
</tr>
<tr>
<td>Coefficient of Cubic Expansion at 20°C</td>
<td>10&lt;sup&gt;-4&lt;/sup&gt;/°C</td>
<td>Calculated</td>
<td>10</td>
</tr>
<tr>
<td>Refractive Index at 20°C</td>
<td>-</td>
<td>ASTM D1218</td>
<td>1.403</td>
</tr>
<tr>
<td>Colour</td>
<td>Pt-Co</td>
<td>ASTM D1209</td>
<td>&lt; 5</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>°C</td>
<td>-</td>
<td>159</td>
</tr>
<tr>
<td>Relative Evaporation Rate (nBuAc=1)</td>
<td>-</td>
<td>ASTM D3539</td>
<td>0.18</td>
</tr>
<tr>
<td>Relative Evaporation Rate (Ether=1)</td>
<td>-</td>
<td>DIN 53170</td>
<td>48</td>
</tr>
<tr>
<td>Antoine Constant A &lt;sup&gt;1&lt;/sup&gt;</td>
<td>kPa. °C</td>
<td>-</td>
<td>8.70243</td>
</tr>
<tr>
<td>Antoine Constant B &lt;sup&gt;1&lt;/sup&gt;</td>
<td>kPa. °C</td>
<td>-</td>
<td>1776.54</td>
</tr>
<tr>
<td>Antoine Constant C &lt;sup&gt;1&lt;/sup&gt;</td>
<td>kPa. °C</td>
<td>-</td>
<td>214.3</td>
</tr>
</tbody>
</table>
Temperature Limits for Antoine Equation * °C - +10 to +120

Vapour Pressure at 20°C kPa Calculated 0.13
Vapour Pressure at 50°C kPa Calculated 0.9

Saturated Vapor Concentration at 20°C g/m³ Calculated 13

Volatile Organic Compound (VOC) g/l EU / EPA 941

Flash Point (Abel) °C IP 170 51

Auto Ignition Temperature °C ASTM E659 325

Lower Explosion Limit %v/v - 1.0
Upper Explosion Limit %v/v - 9.8

Electrical Conductivity at 20°C pS/m ASTM D4308 $2 \times 10^5$

Dielectric Constant at 20°C - - 8.3

Freezing Point °C - -62

Surface Tension at 20°C mN/m - 28

Viscosity at 20°C mPa.s - 1.3

Hildebrand Solubility Parameter (cal/cm³)¹/² - 8.7

Hydrogen Bonding Index - - 10.3

Fractional Polarity - - 0.070

Heat of Vaporisation at $T_{\text{boil}}$ kJ/kg - 362

Heat of Combustion (Net) at 25°C kJ/kg - 26300

Miscibility at 20°C: Solvent in water %m/m - 18

Miscibility at 20°C: Water in solvent %m/m - 4.5

Molecular Weight g/mol - 146

(* In the Antoine temperature range, the vapor 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:

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 PROXITOL Acetate 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 www.shell.com/chemicals.

Storage Handling

Provided proper storage and handling precautions are taken we would expect Ethyl PROXITOL Acetate 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.

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