Shell Chemicals

Technical Datasheet

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

Property	Unit	Method	Value
Purity, min.	%m/m	GC	98.0
Water	%m/m	ASTM D1364	0.02
Acidity (as Acetic Acid)	%m/m	ASTM D1613	0.01
Density at 20°C	kg/l	ASTM D4052	0.941
Specific Gravity at 20°C/20°C	-	ASTM D4052	0.943
Specific Gravity at 25°C/25°C	-	ASTM D4052	0.939
Coefficient of Cubic Expansion at 20°C	10^{-4}/°C	Calculated	10
Refractive Index at 20°C	-	ASTM D1218	1.403
Colour	Pt-Co	ASTM D1209	< 5
Boiling Point	°C	-	159
Relative Evaporation Rate (nBuAc=1)	-	ASTM D3539	0.18
Relative Evaporation Rate (Ether=1)	-	DIN 53170	48
Antoine Constant A #	kPa. °C	-	8.70243
Antoine Constant B #	kPa. °C	-	1776.54
Antoine Constant C #	kPa. °C	-	214.3

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/m^3	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	$2*10^5$
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	$(cal/cm^3)^{1/2}$	-	8.7
Hydrogen Bonding Index	-	-	10.3
Fractional Polarity	-	-	0.070
Heat of Vaporisation at T_{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:

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 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 ww.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.

Trademark

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