Shell Chemicals

Technical Datasheet

Methyl PROXITOL Acetate

Product Code	U5126
Region	Global
Product Category	Propylene Glycol Ethers Acetates
CAS Registry Number	108-65-6
Synonym(s)	1-methoxy-2-propyl acetate, MePROXAc, MPA, PMA
Description	Methyl 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	99.5
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	0.967
Specific Gravity at 20°C/20°C	-	ASTM D4052	0.969
Specific Gravity at 25°C/25°C	-	ASTM D4052	0.965
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	-	146
Relative Evaporation Rate (nBuAc=1)	-	ASTM D3539	0.33
Relative Evaporation Rate (Ether=1)	-	DIN 53170	34
Antoine Constant A #	kPa. °C	-	6.02968
Antoine Constant B #	kPa. °C	-	1353.82
Antoine Constant C #	kPa. °C	-	192.628
Temperature Limits for Antoine Equation #	°C	-	0 to +150
Vapour Pressure at 20°C	kPa	Calculated	0.46

Vapour Pressure at 50°C	kPa	Calculated	2.8
Saturated Vapor Concentration at 20°C	g/m^3	Calculated	25
Volatile Organic Compound (VOC)	g/l	EU / EPA	967
Flash Point (Abel)	°C	IP 170	45
Auto Ignition Temperature	°C	ASTM E659	315
Lower Explosion Limit	%v/v	-	1.5
Upper Explosion Limit	%v/v	-	7.0
Electrical Conductivity at 20°C	pS/m	ASTM D4308	$2*10^5$
Dielectric Constant at 20°C	-	-	8.3
Freezing Point	°C	-	-65
Surface Tension at 20°C	mN/m	-	28
Viscosity at 20°C	mPa.s	-	1.3
Hildebrand Solubility Parameter	$(cal/cm^3)^{1/2}$	-	8.5
Hydrogen Bonding Index	-	-	10.0
Fractional Polarity	-	-	0.090
Heat of Vaporisation at T_{boil}	kJ/kg	-	302
Heat of Combustion (Net) at 25°C	kJ/kg	-	24000
Specific Heat at 20°C	kJ/kg/°C	-	1.81
Thermal Conductivity at 20°C	W/m/°C	-	0.13
Miscibility at 20°C: Solvent in water	%m/m	-	23
Miscibility at 20°C: Water in solvent	%m/m	-	5.5
Azeotrope with Water: Boiling Point	°C	-	98.3
Azeotrope with Water: Solvent Content	%m/m	-	51.5
Molecular Weight	g/mol	-	132

(#) 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

Methyl 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 Methyl 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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