



## Data Sheet

**Issued:**

16-Mar-2007

**Product Name**

# Methyl PROXITOL

**Product Code****U5141****Product Category****Propylene Glycol Ethers****CAS Registry Number**

107-98-2

**EINECS Number**

203-539-1

**Alternate Name**

1-methoxy-2-propanol, propylene glycol monomethyl ether, PGME, PM

**Description**

Methyl PROXITOL is a colourless, hygroscopic solvent with a volatility, viscosity and solvent power similar to those of ethylene oxide-based glycol ethers, e.g. Methyl OXITOL and ethyl OXITOL.

**Typical Properties**

<b>Property</b>	<b>Unit</b>	<b>Method</b>	<b>Value</b>
Purity	% m/m	DIN 55689	min. 99.5
Water	% m/m	ASTM D1364	0.05
Density @20°C	kg/L	ASTM D4052	0.921
Cubic Expansion Coefficient @20°C	(10 <sup>-4</sup> )/°C	Calculated	10
Refractive Index @20°C	-	ASTM D1218	1.403
Color	Pt-Co	ASTM D1209	< 5
Boiling Point	°C	-	120
Relative Evaporation Rate (nBuAc=1)	-	ASTM D3539	0.75
Relative Evaporation Rate (Ether=1)	-	DIN 53170	22
Antoine Constant A #	kPa, °C	-	7.01882
Antoine Constant B #	kPa, °C	-	1780.17
Antoine Constant C #	kPa, °C	-	236.322
Antoine Constants: Temperature range	°C	-	-30 to +130
Vapor Pressure @20°C	kPa	Calculated	1.2
Vapor Pressure @50°C	kPa	Calculated	6.3
Saturated Vapor Concentration @20°C	g/m <sup>3</sup>	Calculated	44
Flash Point	°C	IP 170	30
Auto Ignition Temperature	°C	ASTM E659	290
Explosion Limit: Lower	%v/v	-	1.9
Explosion Limit: Upper	%v/v	-	13.1
Electrical Conductivity @20°C	µS/m	ASTM D4308	30
Dielectric Constant @20°C	-	-	12.3

Freezing Point	°C	-	-96
Surface Tension @20°C	mN/m	-	28
Viscosity @20°C	mPa.s	ASTM D445	1.9
Hildebrand Solubility Parameter	(cal/cm <sup>3</sup> ) <sup>1/2</sup>	-	9.5
Hydrogen Bonding Index	-	-	0.0
Fractional Polarity	-	-	0.110
Dilution Ratio: Toluene	-	ASTM D1720	4.0
Dilution Ratio: SBP 100/140	-	ASTM D1720	0.8
Heat of Vaporization @Tboil	kJ/kg	-	427
Heat of Combustion (Net) @25°C	kJ/kg	-	26000
Specific Heat @20°C	kJ/kg/°C	-	2.2
Thermal Conductivity @20°C	W/m/°C	-	0.18
Miscibility @20°C: Solvent in Water	% m/m	-	Complete
Miscibility @20°C: Water in Solvent	% m/m	-	Complete
Azeotrope with Water: Boiling Point	°C	-	96.5
Azeotrope with Water: Solvent Content	% m/m	-	52.9
Molecular Weight	g/mol	-	90

(#) 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](http://www.astm.org)  
Energy Institute (IP) : [www.energyinst.org.uk](http://www.energyinst.org.uk)  
Deutsches Institut für Normung (DIN) : [www.din.de](http://www.din.de)

For routine quality control analyses, local test methods may be applied that are different from those mentioned in this datasheet. Such methods have been validated and can be obtained through your local Shell Chemicals company.

## Quality

Methyl PROXITOL can be supplied to meet the requirements of ASTM D4837, BS 509 and DIN 55998.

## Storage and Handling

Provided proper storage and handling precautions are taken we would expect Methyl PROXITOL to be technically stable for at least 12 months. For detailed advice on Storage and Handling please refer to the Material Safety Data Sheet on [www.shell.com/chemicals](http://www.shell.com/chemicals).

## Hazard Information

For detailed Hazard Information please refer to the Material Safety Data Sheet on [www.shell.com/chemicals](http://www.shell.com/chemicals).

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