

## Physical Properties of Pure Methanol

<b>Molecular Weight</b>	32.04 g mol <sup>-1</sup>	<b>Boiling Point</b>	760 mm Hg (101.3 kPa)	64.6°C (148.3°F)
<b>Critical Temperature</b>	512.5K (239°C; 463°F)	<b>Freezing Point</b>		-97.6°C (-143.7°F)
<b>Critical Pressure</b>	8.084MPa (78.5 atm)	<b>Reid Vapour Pressure</b>		32 kPa
<b>Critical Density</b>	0.2715 g cm <sup>-3</sup>	<b>Flash Point</b>	Closed vessel (TCC method)	12°C (54°F)
<b>Critical Compressibility Factor</b>	0.224	Open vessel (TOC method)		15.6°C (60.1°F)
<b>Specific Gravity</b>		<b>Auto Ignition Temperature</b>		470°C (878°F)
<i>Liquid</i>		<b>Viscosity</b>		
(25°/4°C)	0.7866	<i>Liquid</i>		
(20°/4°C)	0.7915	-25°C (-13°F)		1.258 mPa s
(15°/4°C)	0.7960	0°C (32°F)		0.793 mPa s
<i>Vapour</i>	1.11	25°C (77°F)		0.544 mPa s
<b>Vapour Pressure</b>		<i>Vapour</i>		
20°C (68°F)	12.8 kPa (1.856 psia) (96 mm Hg)	25°C (77°F)		9.68 µPa s
		127°C (261°F)		13.2 µPa s
25°C (77°F)	16.96 kPa (2.459 psia) (127.2 mm Hg)	<b>Surface Tension</b>		
		20°C (68°F)		22.6 mN m <sup>-1</sup>
		25°C (77°F)		22.07 mN m <sup>-1</sup>
<b>Latent Heat of Vapourization</b>		<b>Refractive Index</b>		
25°C (77°F)	37.43 kJ mol <sup>-1</sup> (279.0 cal g <sup>-1</sup> )	15°C (59°F)		1.33066
		20°C (68°F)		1.32840
64.6°C (148.3°F)	35.21 kJ mol <sup>-1</sup> (262.5 cal g <sup>-1</sup> )	25°C (77°F)		1.32652
<b>Heat Capacity at Constant Pressure</b>		<b>Thermal Conductivity</b>		
25°C (77°F) (101.3kPa)		<i>Liquid</i>		
<i>Liquid</i>		0°C (32°F)		207 mW m <sup>-1</sup> K <sup>-1</sup>
	81.08 J mol <sup>-1</sup> K <sup>-1</sup> (0.604 cal g <sup>-1</sup> K <sup>-1</sup> ) (0.604 Btu lb <sup>-1</sup> °F <sup>-1</sup> )	25°C (77°F)		200. mW m <sup>-1</sup> K <sup>-1</sup>
<i>Vapour</i>		<i>Vapour</i>		
	44.06 J mol <sup>-1</sup> K <sup>-1</sup> [1] (0.328 cal g <sup>-1</sup> K <sup>-1</sup> ) (0.328 Btu lb <sup>-1</sup> °F <sup>-1</sup> )	100°C (212°F)		14.07 mW m <sup>-1</sup> K <sup>-1</sup>
		127°C (261°F)		26.2 mW m <sup>-1</sup> K <sup>-1</sup>
<b>Coefficient of Cubic Thermal Expansion</b>		<b>Heat of Combustion</b>		
20°C		Higher heating value (HHV)		726.1 kJ mol <sup>-1</sup> (22.7 kJ g <sup>-1</sup> )
40°C	0.00149 per °C 0.00159 per °C	(25°C, 101.325kPa )		
		Lower heating value (LHV)		638.1 kJ mol <sup>-1</sup> [calc] (19.9 kJ g <sup>-1</sup> )
		(25°C, 101.325kPa )		
		<b>Flammable Limits (in air)</b>		Lower 6.0(v/v)% Upper 36.5(v/v)%

A copy of the MSDS for methanol can be obtained from the Methanex Corporation web site:

[www.methanex.com/methanol/techsafetydata.htm](http://www.methanex.com/methanol/techsafetydata.htm)