

# PTFE

Polytetrafluoroethylene (PTFE), also known as Teflon<sup>®</sup>, is a high-molecular-weight compound composed of carbon and fluorine.

It offers excellent chemical resistance and non-reactivity, the ability to withstand extreme temperatures, good wear properties, and the lowest kinetic and static friction of any man-made solid. It is best known as a non-stick coating for frying pans, but is also used as a high-performance industrial lubricant. Teflon<sup>®</sup> is a registered trademark of DuPont.

<i>Key Properties</i>		<i>Units</i>	<i>Test Method</i>
<b>General</b>			
Density	2.19 (0.08)	g/cm <sup>3</sup> (lb/in <sup>3</sup> )	BS 2782-3
Density Relative to Water (=1)	2.19	-	-
Water absorption (24 hrs)	Nil	%	-
<b>Thermal</b>			
Maximum Service Temperature	260 (500)	°C (°F)	-
Minimum Service Temperature	-200 (-328)	°C (°F)	-
Linear Thermal Expansion	14.8	x10 <sup>-5</sup> / °C	ASTM D696
Point of Fusion (DSC)	325 (617)	°C (°F)	ASTM D3417
Flash Point	525 (986)	°C (°F)	ASTM D1929
Thermal Conductivity	0.24	W/mK	ASTM C177
Flammability Rating	V0	-	UL 94
<b>Mechanical</b>			
Impact Strength, Notched Izod @ 23°C	1.9 (3.5)	J/cm (ft-lbs/in)	-
Flexural Strength (23°C)	-	MPa	ASTM D790
Flexural Modulus (23°C)	689	MPa	ASTM D790
Tensile Strength (23°C)	18 - 35	MPa	BS 2782-3
Elongation at Break (23°C)	150 - 340	%	BS 2782-3
Shore Hardness (D)	57 - 64	N/mm <sup>2</sup>	ASTM D2240
Coefficient of Friction (Static)	0.08	-	ASTM D1894
<b>Optical</b>			
Dielectric Strength	60 - 80	kV/mm	ASTM D149
Dielectric Constant	2.1	-	ASTM D150
Surface Resistivity	10 <sup>17</sup>	Ohm	ASTM D257
Dissipation Factor	< 0.0003	-	ASTM D150

## Notes

Figures shown are for panel thickness 3mm

**DISCLAIMER:** The purpose of this data sheet is to enable a consistent comparison with other products to help users to make an informed choice. The information provided in this product data sheet is for comparison and reference purposes only and is based on generic information gathered from a number of sources. In some cases the data provided is an average value only and represents our best attempt to describe the material's properties under typical factory conditions. We make no representations or warranties as to the completeness or accuracy of any of the data contained in this data sheet and users should use them as a general decision-making guide only. Branded data sheets are available on request. The information contained in this data sheet is subject to copyright. This data sheet cannot be reproduced for commercial purposes, apart from assisting users with making a purchasing decision, without the express permission of Plastic Wholesale.