



## Physical properties of TPX® MX004 & MX004XB

Highly recommended for injection moulding, film and mandrel extrusion,  
and possible use for fibre extrusion and blow moulding

Physical Properties	Item	Test Condition	Unit	Test Method	Value	
Basic Properties	Density		kg/m <sup>3</sup>	ASTM-D1505	833	
	MFR	P=5kg, 260°C	g/10 min	ASTM-D1238	25	
	Melting Point	Peak Temp.	°C	JIS-K7121 (DSC method)	228	
	Water Absorption		%	ASTM-D570	<0.01	
Thermal Properties	Vicat Softening Point		°C	ASTM-D1525	165	
	Heat Distortion Temperature (HDT)	0.43 MPa	°C	ASTM-D648	100	
	Expansion Coefficient		10 <sup>-6</sup> K <sup>-1</sup>	ASTM-E831	1.17x10 <sup>-4</sup>	
Mechanical Properties @ 23°C	Yield Stress		MPa	ASTM-D638	25	
	Tensile Strength		MPa	ASTM-D638	20	
	Elongation at Break		%	ASTM-D638	30	
	Tensile Modulus		MPa	ASTM-D638	1300	
	Flexural Modulus		MPa	ASTM-D790	1050	
	Flexural Strength		MPa	ASTM-D790	32	
	Izod Impact Strength	With Notch		J/m	ASTM-D256	24
		Without Notch		KJ/m <sup>2</sup>	ASTM-D256	40
Rockwell Hardness	R Scale		-	ASTM-D785	75	
Optical Properties	Haze		%	ASTM-D1003	0.7	
	Transmittance		%	ASTM-D1003	94	
	Refractive Index		-	ASTM-D542	1.46	
Electrical Properties	Volume Resistivity		Ω . cm	ASTM-D257	>10 <sup>16</sup>	
	Dielectric Breakdown Voltage		kV/mm	ASTM-D149	65	
	Dielectric Constant		-	ASTM-D150	2.1	
Moulding Properties	Spiral flow	Mould temp. 73°C	cm	MCI method 1	53	
	Mould shrinkage	Longitudinal	%	MCI method 2	1.5	
		Transverse	%	MCI method 2	1.1	

### Notes:

MCI method 1 moulding temp: 310~330°C (depending on the grade)  
MCI method 2 moulding temp: 260~280°C (depending on the grade)

All information and technical data are given as a guide only. Although every effort has been made to ensure that the information is correct, no warranty is given as to its completeness or accuracy.

**Goodfellow Cambridge Limited**  
Ermine Business Park  
Huntingdon, Cambridgeshire PE29 6WR  
Tel: +44 1480 424 800  
Fax: +44 1480 424 900  
Email: [tpx@goodfellow.com](mailto:tpx@goodfellow.com)  
Web: [www.goodfellow.com](http://www.goodfellow.com)