



Physical properties of TPX[®] RT31 & RT31XB

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

Physical Properties	Item	Test Condition	Unit	Test Method	Value	
Basic Properties	Density		kg/m ³	ASTM-D1505	833	
	MFR	P=5kg, 260°C	g/10 min	ASTM-D1238	21	
	Melting Point	Peak Temp.	°C	JIS-K7121 (DSC method)	233	
	Water Absorption		%	ASTM-D570	<0.01	
Thermal Properties	Vicat Softening Point		°C	ASTM-D1525	174	
	Heat Distortion Temperature (HDT)	0.43 MPa	°C	ASTM-D648	127	
	Expansion Coefficient		10 ⁻⁶ K ⁻¹	ASTM-E831	1.17x10 ⁻⁴	
Mechanical Properties @ 23°C	Yield Stress		MPa	ASTM-D638	30	
	Tensile Strength		MPa	ASTM-D638	25	
	Elongation at Break		%	ASTM-D638	12	
	Tensile Modulus		MPa	ASTM-D638	1900	
	Flexural Modulus		MPa	ASTM-D790	1600	
	Flexural Strength		MPa	ASTM-D790	44	
	Izod Impact Strength	With Notch		J/m	ASTM-D256	20
		Without Notch		KJ/m ²	ASTM-D256	9
Rockwell Hardness	R Scale		-	ASTM-D785	87	
Optical Properties	Haze		%	ASTM-D1003	0.8	
	Transmittance		%	ASTM-D1003	94	
	Refractive Index		-	ASTM-D542	1.46	
Electrical Properties	Volume Resistivity		Ω . cm	ASTM-D257	>10 ¹⁶	
	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	51	
	Mould shrinkage	Longitudinal	%	MCI method 2	1.5	
		Transverse	%	MCI method 2	1.2	

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.

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