



## PRSPEEK<sup>®</sup> – 990CA30

Test Item	Test Method	Conditions	Units	Test Data
<b>Mechanical Data</b>				
Tensile Strength	ISO 527	Break, 23°C	MPa	260
Tensile Elongation	ISO 527	Break, 23°C	%	1.7
Flexural Strength	ISO 178	Break, 23°C	MPa	380
Flexural Modulus	ISO 178	23°C	GPa	23
Compressive Strength	ISO 604	23°C	MPa	300
Charpy Impact Strength	ISO 179/1eA	Notched	kJ m <sup>-2</sup>	7
	ISO 179/1U	Unnotched	kJ m <sup>-2</sup>	45
Izod Impact Strength	ISO 180/A	Notched	kJ m <sup>-2</sup>	9
	ISO 180/U	Unnotched	kJ m <sup>-2</sup>	45
Mould Shrinkage	ISO 294-4	Along Flow	%	0.1
		Across Flow	%	0.5
<b>Thermal Data</b>				
Melting Point	ISO 11357	-	°C	343
Glass Transition (Tg)	ISO 11357	Onset	°C	143
Special Heat Capacity	DSC	23°C	kJ kg <sup>-1</sup> °C <sup>-1</sup>	1.8
Coefficient of Thermal Expansion	ISO 11359	Along flow below Tg	ppm K <sup>-1</sup>	5
		Along flow above Tg	ppm K <sup>-1</sup>	6
Heat Deflection Temperature	ISO 75	1.8 Mpa	°C	336
Thermal Conductivity	ISO 22007-4	23°C	W m <sup>-1</sup> K <sup>-1</sup>	0.95
<b>Flow</b>				
Melt Index	ISO 1133	380°C, 5kg	g 10min <sup>-1</sup>	2.3
<b>Miscellaneous</b>				
Density	ISO 1183	Crystalline	gcm <sup>-3</sup>	1.4
		Amorphous	gcm <sup>-3</sup>	-
Shore D Hardness	ISO 868	23°C		88
Water Absorption (3.2mm thick Tensile Bar) (by immersion)	ISO 62	24h, 23°C	%	0.04
		Equilibrium, 23°C	%	0.3

## Electrical Data

Dielectric Strength	IEC 60243-1	2mm	kV mm <sup>-1</sup>	-
Comparative Tracking Index	IEC 60112	-	V	-
Dielectric Constant	IEC 60250	23°C, 1kHz	-	-
		23°C, 50Hz	-	-
Loss Tangent	IEC 60250	23°C, 1MHz	-	-
Volume Resistivity	IEC 60093	23°C, 1V	Ω cm	10 <sup>5</sup>
		275°C	Ω cm	-

## Injection molding

Nozzle temperature			° C	390 (380~410)
Zone1 Temperature			° C	390 (380~410)
Zone2 Temperature			° C	380 (370~400)
Zone3 Temperature			° C	370(360~390)
Melt Temperature			° C	390 (380~410)
Mould Temperature			° C	180~210
Screw Speed			%	50-80
Back Pressure			Bar	4-12

## Predrying

Drying temperature/time			-	150°C/3h or 120°C/ over 6h
Water absorption			%	<0.3