



PRSPEEK[®] – 990GF30

Test Item	Test Method	Conditions	Units	Test Data
Mechanical Data				
Tensile Strength	ISO 527	Break, 23℃	MPa	175
Tensile Modulus	ISO 527	23℃	GPa	11.5
Tensile Elongation	ISO 527	Break, 23℃	%	2.7
Flexural Strength	ISO 178	Break, 23℃	MPa	265
Flexural Modulus	ISO 178	23℃	GPa	11
Compressive Strength	ISO 604	23℃	MPa	250
Charpy Impact Strength	ISO 179/1eA	Notched	kJ m ⁻²	8
	ISO 179/1U	Unnotched	kJ m ⁻²	55
Izod Impact Strength	ISO 180/A	Notched	kJ m ⁻²	10
	ISO 180/U	Unnotched	kJ m ⁻²	60
Mould Shrinkage	ISO 294-4	Along Flow	%	0.3
		Across Flow	%	0.8
Thermal Data				
Melting Point	ISO 11357	-	℃	343
Glass Transition (Tg)	ISO 11357	Onset	℃	143
Special Heat Capacity	DSC	23℃	kJ kg ⁻¹ °C ⁻¹	1.7
Coefficient of Thermal Expansion	ISO 11359	Along flow below Tg	ppm K ⁻¹	18
		Along flow above Tg	ppm K ⁻¹	18
Heat Deflection Temperature	ISO 75	1.8 Mpa	℃	328
Thermal Conductivity	ISO 22007-4	23℃	W m ⁻¹ K ⁻¹	0.3
Flow				
Melt Index	ISO 1133	380℃,5kg	g 10min ⁻¹	4.5
Miscellaneous				
Density	ISO 1183	Crystalline	gcm ⁻³	1.51
		Amorphous	gcm ⁻³	-
Shore D Hardness	ISO 868	23℃		88
Water Absorption (3.2mm thick Tensile Bar) (by immersion)	ISO 62	24h, 23℃	%	0.04
		Equilibrium, 23℃	%	0.3

Electrical Data

Dielectric Strength	IEC 60243-1	2mm	kV mm ⁻¹	25
Comparative Tracking Index	IEC 60112	-	V	150
Dielectric Constant	IEC 60250	23°C, 1kHz	-	3.2
		23°C, 50Hz	-	-
Loss Tangent	IEC 60250	23°C, 1MHz	-	0.005
Volume Resistivity	IEC 60093	23°C, 1V	Ω cm	10 ¹⁶
		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