

PEEK iPEEK® i550G

Test Item	Test Method	Conditions	Units	Test Data
Mechanical Data				
Tensile Strength	ISO 527	Break, 23°C	MPa	100
Tensile Elongation	ISO 527	Yield, 23°C	%	40
Flexural Strength	ISO 178	Break, 23°C	MPa	170
Flexural Modulus	ISO 178	23°C	GPa	4.2
Compressive Strength	ISO 604	23°C	MPa	125
Charpy Impact Strength	ISO 179/1eA	Notched	kJ m^{-2}	6
	ISO 179/1U	Unnotched	kJ m^{-2}	-
Izod Impact Strength	ISO 180/A	Notched	kJ m^{-2}	6.5
	ISO 180/U	Unnotched	kJ m^{-2}	-
Mould Shrinkage	ISO 294-4	Along Flow	%	1
		Across Flow	%	1.3
Thermal Data				
Melting Point	ISO 11357	-	°C	343
Glass Transition (Tg)	ISO 11357	Onset	°C	143
Special Heat Capacity	DSC	23°C	$\text{kJ kg}^{-1} \text{°C}^{-1}$	2.2
Coefficient of Thermal Expansion	ISO 11359	Along flow below Tg	ppm K^{-1}	45
		Along flow above Tg	ppm K^{-1}	120
Heat Deflection Temperature	ISO 75	1.8 Mpa	°C	152
Thermal Conductivity	ISO 22007-4	23°C	$\text{W m}^{-1} \text{K}^{-1}$	0.29
Flow				
Melt Index	ISO 1133	380°C, 5kg	g 10min^{-1}	20
Miscellaneous				
Density	ISO 1183	Crystalline	g cm^{-3}	1.3
		Amorphous	g cm^{-3}	1.26
Shore D Hardness	ISO 868	23°C		85
Water Absorption (3.2mm thick Tensile Bar) (by immersion)	ISO 62	24h, 23°C	%	0.07
		Equilibrium, 23°C	%	0.4

Electrical Data

Dielectric Strength	IEC 60243-1	2mm	kV mm ⁻¹	23
Comparative Tracking Index	IEC 60112	-	V	150
Dielectric Constant	IEC 60250	23°C, 1kHz	-	3.2
		23°C, 50Hz	-	4.5
Loss Tangent	IEC 60250	23°C, 1MHz	-	0.003
Volume Resistivity	IEC 60093	23°C, 1V	Ω cm	10 ¹⁶ *
		275°C	Ω cm	10 ⁹ *

*Result based on similar products