

PEEK-SGC401F90

Polyetheretherketone (PEEK)

TECHNICAL DATA SHEET

Description

Sciengy® PEEK-SGC401F90 is a 40% high performance carbon fiber reinforced PEEK compound, easy flow, developed to provide higher strength, wear resistance, low coefficient of friction and chemical resistant.

CF40%, High strength, High modulus, High performance carbon fiber

Series	Carbon fiber reinforced
ISO Designation	>PEEK-CF40<
Process Method	Injection molding

Properties

Physical	Value	Units	Test Standard
Density	1.44	g/cm ³	ISO 1183
Mold Shrinkage (Machine Direction)	0.10	%	GB/T 15585
Mold Shrinkage (Transverse Direction)	0.50	%	GB/T 15585
Water Absorption (23°C-sat)	0.30	%	ISO 62
Flammability(1.6 mm)	V-0		IEC60695
Mechanical	Value	Units	Test Standard
Tensile Stress at Break (5 mm/min)	265	MPa	ISO 527
Elongation at Break (23°C)	1.5	%	ISO 527
Flexural Modulus at Break (23°C)	30.0	GPa	ISO 178
Flexural Strength at Break	385	MPa	ISO178
Charpy Impact Strength @23°C (V-notched)	10.0	kJ/m ²	ISO 179
Thermal	Value	Units	Test Standard
Melting Temperature (10°C/min)	343	°C	ISO 11357
Heat Deflection Temp. High Load (1.8 MPa)	330	°C	ISO 75
Glass Transition (Tg)	150	°C	ISO 11357
Thermal expansion coefficient (T<Tg) along flow	5	ppm/°C	ISO 11359
Thermal expansion coefficient (T>Tg) along flow	8	ppm/°C	ISO 11359
Thermal expansion coefficient (T<Tg) across flow	35	ppm/°C	ISO 11359

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Thermal expansion coefficient (T>Tg) across flow	90	ppm/°C	ISO 11359
Thermal conductivity (23°C)	2.0	W/mk	ISO 22007-4
Electrical Properties	Value	Units	Test Standard
Typical Processing Conditions	Value	Units	Test Standard
Drying Temp. / Time	150°C&3h or 120°C&5h(residual moisture<0.02%)		
Injection Molding Melt Temp.	180°C~210°C	°C	
Temperature Settings	375/385/390/395/395°C(Nozzle)		
Hopper Temperature	Not greater than 100°C		
Gate	>2mm or 0.5*part thickness		