Sciengy

PEEK-SGC301F80
Polyetheretherketone (PEEK)

TECHNICAL DATA SHEET

Description

Sciengy® PEEK-SGC301F80 is a 30% carbon fiber reinforced PEEK compound, easy flow, developed to provide higher strength, wear resistance, low coefficient of friction and chemical resistant.

CF30%, Easy flow, Standard carbon fiber

Series	Carbon fiber reinforced
ISO Designation	>PEEK-CF30<
Process Method	Injection molding

Properties

Physical	**Value**	**Units**	**Test Standard**
Density	1.40	g/cm³	ISO 1183
Mold Shrinkage (Machine Direction)	0.1	%	GB/T 15585
Mold Shrinkage (Transverse Direction)	0.5	%	GB/T 15585
Water Absorption (23°C-sat)	0.3	%	ISO 62
Flammability(1.6 mm)	V-0		IEC60695
Mechanical	**Value**	**Units**	**Test Standard**
Tensile Stress at Break (5 mm/min)	255	MPa	ISO 527
Elongation at Break (23℃)	1.7	%	ISO 527
Flexural Modulus at Break (23℃)	25.0	GPa	ISO 178
Flexural Strength at Break	370	MPa	ISO178
Charpy Impact Strength @23℃ (V-notched)	9.0	kJ/m²	IS0 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	5.0	ppm/℃	ISO 11359
Thermal expansion coefficient (T>Tg) along flow	40	ppm/℃	ISO 11359
Thermal expansion coefficient (T<Tg) across flow	6.0	ppm/℃	ISO 11359

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Thermal expansion coefficient (T>Tg) across flow	100	ppm/℃	ISO 11359
Thermal conductivity (23℃)	2.0	W/mk	ISO 22007-4
Electrical Properties	**Value**	**Units**	**Test Standard**
Relative Permittivity (100Hz&1MHz)	3.2	/	IEC 60250
Dissipation Factor (100Hz&1MHz)	0.005	/	IEC 60250
Volume Resistivity	10^16	Ω·cm	IEC 60093
Surface Resistivity	10^16	Ω	IEC 60093
CTI	150	V	IEC 60112
Typical Processing Conditions	**Value**	**Units**	**Test Standard**
Drying Temp. / Time	150℃&3h or 120℃&5h(residual moisture<0.02%)		
Injection Molding Melt Temp.	180℃~210℃	℃	
Temperature Settings	375/385/390/395/395℃(Nozzle)		
Hopper Temperature	Not greater than 100℃		
Gate	>2mm or 0.5*part thickness		