

PEEK-SG301F20

Polyetheretherketone (PEEK)

TECHNICAL DATA SHEET

Description

Sciengy® PEEK-SG301F20 is a 30% glass fiber reinforced PEEK compound, standard folw, developed to provide high toughness, high temperature resistance, excellent mechanical properties and chemical resistance.

GF30%, Standard

Series	Glass fiber reinforced
ISO Designation	>PEEK-GF30<
Process Method	Injection molding

Properties

Physical	Value	Units	Test Standard
Density	1.50	g/cm ³	ISO 1183
Mold Shrinkage (Machine Direction)	0.30	%	GB/T 15585
Mold Shrinkage (Transverse Direction)	0.90	%	GB/T 15585
Water Absorption (23°C-sat)	0.40	%	ISO 62
Flammability(1.6 mm)	V-0		IEC60695
Mechanical	Value	Units	Test Standard
Tensile Stress at Break (5 mm/min)	180	MPa	ISO 527
Elongation at Break (23°C)	2.7	%	ISO 527
Flexural Modulus at Break (23°C)	11.3	GPa	ISO 178
Flexural Strength at Break	270	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
Melt Flow Rate (380°C, 5kg)	6	g/10min	ISO 1133
Thermal expansion coefficient (T<Tg) along flow	18	ppm/°C	ISO 11359
Thermal expansion coefficient (T>Tg) along flow	45	ppm/°C	ISO 11359
Thermal expansion coefficient (T<Tg) across flow	18	ppm/°C	ISO 11359

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Thermal expansion coefficient (T>Tg) across flow	110	ppm/°C	ISO 11359
Thermal conductivity (23°C)	0.3	W/mk	ISO 22007-4
Electrical Properties	Value	Units	Test Standard
Dielectric Strength (60*60*1mm ³)	25	KV/mm	IEC 60243
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°C&3h or 120°C&5h(residual moisture<0.02%)		
Injection Molding Melt Temp.	170°C~200°C		
Temperature Settings	365/370/375/385/385°C(Nozzle)		
Hopper Temperature	Not greater than 100°C		
Gate	>2mm or 0.5*part thickness		