

Generic PESU - Glass Fiber

Polyethersulfone

Generic

Message:

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General Information			
Filler / Reinforcement	Glass fiber reinforced material		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.44 - 1.68	g/cm ³	ASTM D792
23°C	1.45 - 1.71	g/cm ³	ISO 1183
Molding Shrinkage			
Flow: 23°C	0.10 - 0.60	%	ASTM D955
Transverse flow: 23°C	0.40 - 0.71	%	ASTM D955
23°C	0.19 - 0.72	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.30 - 0.41	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.49 - 0.75	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (23°C)	120 - 134		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	4360 - 12500	MPa	ASTM D638
23°C	4420 - 11100	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	96.5 - 111	MPa	ASTM D638
Yield, 23°C	102 - 146	MPa	ISO 527-2
Fracture, 23°C	101 - 152	MPa	ASTM D638
Fracture, 23°C	87.0 - 146	MPa	ISO 527-2
23°C	95.0 - 161	MPa	ASTM D638
Tensile Elongation			
Yield, 23°C	1.9 - 4.1	%	ASTM D638
Yield, 23°C	1.2 - 4.3	%	ISO 527-2
Fracture, 23°C	1.4 - 3.8	%	ASTM D638
Fracture, 23°C	1.3 - 3.0	%	ISO 527-2
Flexural Modulus			
23°C	4130 - 11800	MPa	ASTM D790
23°C	3930 - 10900	MPa	ISO 178

Flexural Strength			
23°C	152 - 224	MPa	ASTM D790
23°C	137 - 222	MPa	ISO 178
Compressive Strength (23°C)	109 - 152	MPa	ASTM D695
Coefficient of Friction	0.15 - 0.46		ASTM D1894
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	5.9 - 10	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	25 - 48	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	48 - 98	J/m	ASTM D256
23°C	5.0 - 10	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	360 - 760	J/m	ASTM D256
23°C	29 - 73	kJ/m ²	ISO 180
Instrumented Dart Impact			
23°C	6.98 - 16.0	J	ASTM D3763
23°C	2.47 - 4.49	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	207 - 221	°C	ASTM D648
0.45 MPa, not annealed	214 - 224	°C	ISO 75-2/B
1.8 MPa, not annealed	204 - 216	°C	ASTM D648
1.8 MPa, not annealed	205 - 219	°C	ISO 75-2/A
Continuous Use Temperature	180	°C	ASTM D794
Vicat Softening Temperature	215 - 220	°C	ISO 306
Linear thermal expansion coefficient			
Flow	4.0E-6 - 4.4E-5	cm/cm/°C	ASTM D696
Flow	5.4E-6 - 4.0E-5	cm/cm/°C	ASTM E831
Flow	1.3E-5 - 3.7E-5	cm/cm/°C	ISO 11359-2
Lateral	3.9E-5 - 4.8E-5	cm/cm/°C	ASTM D696
Lateral	2.8E-5 - 5.5E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity (23°C)	0.29 - 0.32	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	8.0 - 1.0E+17	ohms	ASTM D257
Volume Resistivity (23°C)	2.0E+2 - 1.3E+16	ohms · cm	ASTM D257
Dielectric Strength (23°C)	15 - 18	kV/mm	ASTM D149
Dielectric Constant (23°C)	3.70 - 4.30		ASTM D150
Dissipation Factor (23°C)	6.8E-3 - 7.0E-3		ASTM D150
Arc Resistance	70.0 - 150	sec	ASTM D495
Injection	Nominal Value	Unit	
Drying Temperature	135 - 150	°C	
Drying Time	4.0 - 6.0	hr	

Suggested Max Moisture	0.040 - 0.050	%
Rear Temperature	348 - 371	°C
Middle Temperature	360 - 371	°C
Front Temperature	359 - 377	°C
Nozzle Temperature	350 - 360	°C
Processing (Melt) Temp	349 - 371	°C
Mold Temperature	134 - 160	°C
Injection Pressure	85.5 - 88.8	MPa
Back Pressure	0.500 - 0.671	MPa
Screw Speed	74 - 80	rpm

Injection instructions

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

