

Generic PPS - Glass\Mineral

Polyphenylene Sulfide

Generic

Message:

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General Information			
Filler / Reinforcement	Glass \Mineral		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.79 - 2.00	g/cm ³	ASTM D792
23°C	1.81 - 2.00	g/cm ³	ISO 1183
Molding Shrinkage			
Flow: 23°C	0.15 - 0.31	%	ASTM D955
Transverse flow: 23°C	0.38 - 1.0	%	ASTM D955
23°C	0.14 - 0.70	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.020 - 0.025	%	ASTM D570
23°C, 24 hr	0.019 - 0.020	%	ISO 62
Saturated, 23°C	0.020	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			
23°C	99 - 122		ASTM D785
23°C	97 - 124		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	14200 - 19100	MPa	ASTM D638
23°C	10600 - 23000	MPa	ISO 527-2
Tensile Stress			
Yield, 23°C	129 - 173	MPa	ISO 527-2
Fracture, 23°C	110 - 165	MPa	ASTM D638
Fracture, 23°C	50.0 - 167	MPa	ISO 527-2
23°C	100 - 174	MPa	ASTM D638
23°C	113 - 172	MPa	ISO 527-2
Tensile Elongation			
Fracture, 23°C	0.50 - 2.1	%	ASTM D638
Fracture, 23°C	0.43 - 1.8	%	ISO 527-2
Flexural Modulus			
23°C	12800 - 20100	MPa	ASTM D790

23°C	10700 - 22100	MPa	ISO 178
Flexural Strength			
23°C	172 - 261	MPa	ASTM D790
23°C	126 - 262	MPa	ISO 178
Compressive Strength (23°C)	138 - 295	MPa	ASTM D695
Shear Strength (23°C)	60.0 - 65.6	MPa	ASTM D732
Poisson's Ratio (23°C)	0.34 - 0.36		ASTM E132
Coefficient of Friction	0.30 - 0.35		ASTM D1894
Taber Abrasion Resistance (23°C)	70.0 - 70.8	mg	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	3.9 - 9.1	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	5.3 - 31	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	38 - 100	J/m	ASTM D256
23°C	5.9 - 7.0	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	200 - 320	J/m	ASTM D256
23°C	20	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, not annealed	259 - 270	°C	ASTM D648
1.8 MPa, not annealed	259 - 276	°C	ISO 75-2/A
8.0 MPa, not annealed	215 - 220	°C	ISO 75-2/C
Melting Temperature	278 - 280	°C	ISO 11357-3
Linear thermal expansion coefficient			
Flow	4.0E-6 - 2.0E-5	cm/cm/°C	ASTM D696
Flow	1.0E-5 - 1.5E-5	cm/cm/°C	ASTM E831
Flow	9.6E-6 - 2.4E-5	cm/cm/°C	ISO 11359-2
Lateral	1.7E-5 - 4.8E-5	cm/cm/°C	ASTM D696
Lateral	3.0E-5 - 7.0E-5	cm/cm/°C	ASTM E831
Lateral	1.9E-5 - 3.3E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	3.0E+3 - 1.0E+16	ohms	ASTM D257
Volume Resistivity			
23°C	5.5E+2 - 2.5E+16	ohms · cm	ASTM D257
23°C	1.0E+2 - 1.3E+16	ohms · cm	IEC 60093
Dielectric Strength			
23°C	11 - 18	kV/mm	ASTM D149
23°C	13 - 26	kV/mm	IEC 60243-1
Dielectric Constant			
23°C	3.78 - 5.04		ASTM D150
23°C	3.97 - 5.85		IEC 60250

23°C	5.15		IEC 60250
Dissipation Factor			
23°C	8.0E-4 - 9.2E-3		ASTM D150
23°C	1.0E-3 - 2.1E-3		IEC 60250
Arc Resistance	180 - 186	sec	ASTM D495
Comparative Tracking Index	146 - 227	V	IEC 60112
Injection	Nominal Value	Unit	
Drying Temperature	119 - 143	°C	
Drying Time	3.0 - 4.1	hr	
Suggested Max Moisture	0.020 - 0.052	%	
Rear Temperature	280 - 321	°C	
Middle Temperature	310 - 330	°C	
Front Temperature	310 - 335	°C	
Nozzle Temperature	305 - 320	°C	
Processing (Melt) Temp	326 - 335	°C	
Mold Temperature	134 - 151	°C	
Injection Pressure	75.0 - 75.6	MPa	
Holding Pressure	49.9 - 50.0	MPa	
Back Pressure	0.345 - 1.61	MPa	
Screw Speed	50 - 125	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

