

Generic PPE+PS

Polyphenylene Ether + PS

Generic

Message:

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General Information			
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.05 - 1.11	g/cm³	ASTM D792
23°C	1.03 - 1.12	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	1.3 - 18	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (280°C/5.0 kg)	5.70 - 18.6	cm³/10min	ISO 1133
Molding Shrinkage			
Flow: 23°C	0.59 - 0.61	%	ASTM D955
Transverse flow: 23°C	0.56 - 0.60	%	ASTM D955
23°C	0.58 - 0.61	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.054 - 0.10	%	ASTM D570
23°C, 24 hr	0.059 - 0.10	%	ISO 62
Saturated, 23°C	0.060 - 0.25	%	ISO 62
Equilibrium, 23°C, 50% RH	0.045 - 0.067	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (23°C)	113 - 124		ASTM D785
Ball Indentation Hardness	70.0 - 114	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	2040 - 2890	MPa	ASTM D638
23°C	2170 - 2700	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	32.7 - 81.7	MPa	ASTM D638
Yield, 23°C	35.8 - 76.4	MPa	ISO 527-2
Fracture, 23°C	38.5 - 62.4	MPa	ASTM D638
Fracture, 23°C	35.0 - 80.9	MPa	ISO 527-2
23°C	39.6 - 70.0	MPa	ASTM D638
Tensile Elongation			
Yield, 23°C	2.0 - 5.3	%	ASTM D638
Yield, 23°C	1.7 - 5.1	%	ISO 527-2
Fracture, 23°C	1.7 - 83	%	ASTM D638

Fracture, 23°C	3.3 - 31	%	ISO 527-2
Nominal Tensile Strain at Break (23°C)	9.0 - 31	%	ISO 527-2
Flexural Modulus			
23°C	1920 - 2840	MPa	ASTM D790
23°C	1920 - 3050	MPa	ISO 178
Flexural Strength			
23°C	53.1 - 111	MPa	ASTM D790
23°C	57.5 - 113	MPa	ISO 178
Yield, 23°C	52.4 - 155	MPa	ASTM D790
Fracture, 23°C	47.6 - 136	MPa	ASTM D790
Coefficient of Friction	0.19 - 0.28		ASTM D1894
Taber Abrasion Resistance (23°C)	35.0 - 78.9	mg	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	5.3 - 21	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	17 - 150	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	31 - 380	J/m	ASTM D256
23°C	3.8 - 26	kJ/m ²	ISO 180
Notched Izod Impact (23°C)	7.00 - 18.0	kJ/m ²	ASTM D256
Unnotched Izod Impact			
23°C	160 - 2600	J/m	ASTM D256
23°C	17 - 180	kJ/m ²	ISO 180
Instrumented Dart Impact (23°C)	9.03 - 54.8	J	ASTM D3763
Dart Drop Impact (23°C)	13.6 - 17.2	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	87.6 - 161	°C	ASTM D648
0.45 MPa, not annealed	95.0 - 160	°C	ISO 75-2/B
1.8 MPa, not annealed	72.6 - 150	°C	ASTM D648
1.8 MPa, not annealed	70.0 - 148	°C	ISO 75-2/A
Vicat Softening Temperature			
--	94.4 - 168	°C	ASTM D1525
--	91.0 - 164	°C	ISO 306
Linear thermal expansion coefficient			
Flow	5.9E-5 - 9.5E-5	cm/cm/°C	ASTM E831
Flow	6.6E-5 - 9.4E-5	cm/cm/°C	ISO 11359-2
Lateral	5.5E-5 - 9.6E-5	cm/cm/°C	ASTM E831
Lateral	5.6E-5 - 9.5E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity (23°C)	0.18 - 0.27	W/m/K	ISO 8302
RTI Elec	50.0 - 112	°C	UL 746
RTI Imp	50.0 - 106	°C	UL 746
RTI	50.0 - 112	°C	UL 746

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	5.1E+3 - 3.1E+16	ohms	ASTM D257
--	2.0E+3 - 3.1E+16	ohms	IEC 60093
Volume Resistivity			
23°C	1.0E+3 - 3.8E+16	ohms·cm	ASTM D257
23°C	1.0E+15 - 3.9E+16	ohms·cm	IEC 60093
Dielectric Strength			
23°C	17 - 36	kV/mm	ASTM D149
23°C	15 - 35	kV/mm	IEC 60243-1
Dielectric Constant			
23°C	2.51 - 2.91		ASTM D150
23°C	2.80 - 2.90		IEC 60250
23°C	2.70		IEC 60250
Dissipation Factor			
23°C	4.0E-4 - 0.067		ASTM D150
23°C	4.0E-4 - 4.1E-3		IEC 60250
Comparative Tracking Index	211 - 286	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Glow Wire Flammability Index	952 - 960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	697 - 960	°C	IEC 60695-2-13
Oxygen Index			
--	22 - 39	%	ASTM D2863
--	20 - 34	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity	66.0 - 100	Pa·s	ASTM D3835
Injection	Nominal Value	Unit	
Drying Temperature	74.4 - 111	°C	
Drying Time	2.0 - 3.7	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.019 - 0.020	%	
Suggested Shot Size	50	%	
Hopper Temperature	70.0 - 90.0	°C	
Rear Temperature	209 - 292	°C	
Middle Temperature	248 - 295	°C	
Front Temperature	257 - 300	°C	
Nozzle Temperature	248 - 313	°C	
Processing (Melt) Temp	263 - 315	°C	
Mold Temperature	54.7 - 101	°C	
Injection Pressure	55.0 - 85.8	MPa	
Back Pressure	0.511 - 0.517	MPa	
Screw Speed	58 - 60	rpm	

Vent Depth	0.044 - 0.045	mm
Injection instructions		
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Extrusion	Nominal Value	Unit
Drying Temperature	76.7 - 110	°C
Drying Time	2.0 - 3.5	hr
Suggested Max Moisture	2.0E-4 - 0.050	%
Cylinder Zone 1 Temp.	202 - 260	°C
Cylinder Zone 2 Temp.	226 - 260	°C
Cylinder Zone 3 Temp.	188 - 280	°C
Cylinder Zone 4 Temp.	225 - 280	°C
Cylinder Zone 5 Temp.	254 - 260	°C
Adapter Temperature	248 - 280	°C
Melt Temperature	207 - 281	°C
Die Temperature	204 - 280	°C
Extrusion instructions		

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