

Generic PPS

Polyphenylene Sulfide

Generic

Message:

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General Information			
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.31 - 1.80	g/cm³	ASTM D792
23°C	1.35 - 1.36	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (315°C/5.0 kg)	75 - 200	g/10 min	ASTM D1238
Molding Shrinkage			
Flow: 23°C	0.030 - 1.4	%	ASTM D955
Transverse flow: 23°C	0.43 - 1.5	%	ASTM D955
23°C	0.18 - 2.3	%	ISO 294-4
Water Absorption (23°C, 24 hr)	0.020 - 0.031	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (23°C)	92 - 126		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	2240 - 28000	MPa	ASTM D638
23°C	3390 - 15100	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	50.0 - 160	MPa	ASTM D638
Fracture, 23°C	50.0 - 159	MPa	ASTM D638
Fracture, 23°C	62.7 - 92.4	MPa	ISO 527-2
23°C	40.5 - 174	MPa	ASTM D638
Tensile Elongation			
Yield, 23°C	0.91 - 1.6	%	ASTM D638
Fracture, 23°C	0.40 - 4.1	%	ASTM D638
Fracture, 23°C	0.60 - 25	%	ISO 527-2
Flexural Modulus			
23°C	2400 - 24400	MPa	ASTM D790
23°C	3600 - 4500	MPa	ISO 178
Flexural Strength			
23°C	57.5 - 254	MPa	ASTM D790
23°C	64.3 - 152	MPa	ISO 178
Coefficient of Friction	0.090 - 0.40		ASTM D1894

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	1.1 - 7.9	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	1.1 - 51	kJ/m ²	ISO 179
Notched Izod Impact (23°C)	25 - 83	J/m	ASTM D256
Unnotched Izod Impact (23°C)	53 - 2000	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	277 - 281	°C	ASTM D648
1.8 MPa, not annealed	101 - 267	°C	ASTM D648
1.8 MPa, not annealed	95.0 - 270	°C	ISO 75-2/A
Melting Temperature	278 - 280	°C	ISO 11357-3
Linear thermal expansion coefficient			
Flow	1.3E-5 - 5.3E-5	cm/cm/°C	ASTM D696
Flow	5.0E-6 - 6.3E-5	cm/cm/°C	ISO 11359-2
Lateral	5.1E-5 - 6.3E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity (23°C)	0.29 - 20	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	6.0 - 2.5E+15	ohms	ASTM D257
Volume Resistivity			
23°C	10 - 2.5E+16	ohms · cm	ASTM D257
23°C	1.0E+11 - 2.0E+16	ohms · cm	IEC 60093
Dielectric Strength			
23°C	16 - 18	kV/mm	ASTM D149
23°C	17 - 30	kV/mm	IEC 60243-1
Dielectric Constant (23°C)	3.00 - 3.05		ASTM D150
Dissipation Factor			
23°C	6.5E-4 - 5.0E-3		ASTM D150
23°C	1.0E-3 - 2.1E-3		IEC 60250
Arc Resistance	118 - 125	sec	ASTM D495
Comparative Tracking Index	100 - 151	V	IEC 60112
Injection	Nominal Value	Unit	
Drying Temperature	121 - 163	°C	
Drying Time	3.0 - 6.0	hr	
Suggested Max Moisture	0.015 - 0.020	%	
Rear Temperature	240 - 323	°C	
Middle Temperature	297 - 329	°C	
Front Temperature	307 - 323	°C	
Nozzle Temperature	305 - 325	°C	
Processing (Melt) Temp	313 - 335	°C	
Mold Temperature	144 - 158	°C	
Injection Pressure	60.0 - 114	MPa	
Holding Pressure	45.0 - 72.5	MPa	

Back Pressure	0.310 - 1.58	MPa
Screw Speed	55 - 128	rpm
Injection instructions		

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