

Bakelite® PF 1110

Phenolic

Hexion Inc.

Message:

Product Description

Phenolic moulding compound, inorganically filled, glass fibre reinforced, high heat resistance, very low coefficient of thermal expansion, highest resistance to pressure, high dimensional stability

Application Areas

Motor vehicle engine attachments, insulating flanges, brake pistons, sensors, grinding disc centers, bearing parts, impellers, pulleys and pump parts

General Information			
Filler / Reinforcement	Glass Fiber		
	Inorganic		
Features	Good Dimensional Stability		
	High Heat Resistance		
	Low Shrinkage		
Uses	Automotive Applications		
	Bearings		
	Pulleys		
	Pump Parts		
Processing Method	Compression Molding		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	2.05	g/cm ³	ISO 1183
Apparent Density	0.80	g/cm ³	ISO 60
Molding Shrinkage ¹	0.15	%	ISO 2577
Water Absorption - 24h/23C	7.0	mg	ISO 62
Post Shrinkage ²	0.030	%	ISO 2577
Compression Molding Molding Pressure	> 15.0	MPa	
Compression Molding Temperature	160 to 190	°C	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	26000	MPa	ISO 527-2/1
Tensile Stress	120	MPa	ISO 527-2/5
Flexural Modulus	25000	MPa	ISO 178
Flexural Stress ³	240	MPa	ISO 178
Compressive Stress	275	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method

Charpy Notched Impact Strength (23°C)	4.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	14	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (8.0 MPa, Unannealed)	195	°C	ISO 75-2/C
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+11	ohms	IEC 60093
Volume Resistivity	1.0E+12	ohms·cm	IEC 60093
Electric Strength ⁴ (1.00 mm)	28	kV/mm	IEC 60243-1
Relative Permittivity (100 Hz)	6.50		IEC 60250
Dissipation Factor (100 Hz)	0.050		IEC 60250
Comparative Tracking Index (Solution A)	225	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.800 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Rear Temperature	60.0 to 75.0	°C	
Nozzle Temperature	80.0 to 100	°C	
Processing (Melt) Temp	80.0 to 100	°C	
Mold Temperature	160 to 190	°C	
Injection Pressure	> 15.0	MPa	
Back Pressure	0.500 to 2.00	MPa	
NOTE			
1.	Injection		
2.	Injection		
3.	2.0 mm/min		
4.	short term, electrode layout P25mm/P25mm in transformer oil equivalent to IEC 60296		

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