

Bakelite® PF 51

Phenolic

Hexion Inc.

Message:

Product Description

Phenolic moulding compound, organically filled, reinforced with cotton fibres, increased notched impact strength.

Application Areas

Contact support power switch, switch covers, magnetic switches, pulleys, tension/deflection pulleys, covers, handwheels

General Information			
Filler / Reinforcement	Cotton		
	Organic		
Uses	Pulleys		
	Switches		
Processing Method	Compression Molding		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.42	g/cm ³	ISO 1183
Apparent Density	0.60	g/cm ³	ISO 60
Molding Shrinkage			ISO 2577
-- ¹	0.45	%	
-- ²	0.80	%	
Water Absorption - 24h/23C	85.0	mg	ISO 62
Post Shrinkage			ISO 2577
-- ³	0.50	%	
-- ⁴	0.55	%	
Compression Molding Molding Pressure	> 15.0	MPa	
Compression Molding Temperature	160 to 190	°C	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 961/30)	280	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	8000	MPa	ISO 178
Flexural Stress ⁵	90.0	MPa	ISO 178
Compressive Stress	250	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	2.7	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	7.0	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method

Heat Deflection Temperature (8.0 MPa, Unannealed)	120	°C	ISO 75-2/C
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+10	ohms	IEC 60093
Volume Resistivity	1.0E+11	ohms·cm	IEC 60093
Electric Strength ⁶ (1.00 mm)	9.5	kV/mm	IEC 60243-1
Relative Permittivity (100 Hz)	16.5		IEC 60250
Dissipation Factor (100 Hz)	0.25		IEC 60250
Comparative Tracking Index (Solution A)	125	V	IEC 60112
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.	Compression		
2.	Injection		
3.	Injection		
4.	Compression		
5.	2.0 mm/min		
6.	short term, electrode layout P25mm/P25mm in transformer oil equivalent to IEC 60296		

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