

Bakelite® UP 804

Thermoset Polyester
Hexion Inc.

Message:

Product Description
Polyester moulding compound, inorganically filled, glass fibre reinforced, styrene free, high dimensional stability, very slight post shrinkage, good mechanical properties, nonflammable, very good electrical properties, high temperature stability, UL listed

Application Areas
Explosion proof switches, safety switch housings, telecommunications technology, electric motor clamp boards, wiring devices, housing parts, toaster panels, waffle iron covers, iron heat shield, oven strips, oven knobs and regulator knobs, neon tubes end parts and bases

General Information	
Filler / Reinforcement	Glass Fiber Inorganic
Features	Arc Resistant Flame Retardant Good Dimensional Stability Good Electrical Properties Good Surface Finish Good Thermal Stability Low Shrinkage
Uses	Appliance Components Housings Knobs Switches Telecommunications
Processing Method	Compression Molding Injection Molding

Physical	Nominal Value	Unit	Test Method
Density (23°C)	2.10	g/cm ³	ISO 1183
Apparent Density	0.92	g/cm ³	ISO 60
Molding Shrinkage ¹	0.13	%	ISO 2577
Water Absorption - 24h/23C	13.0	mg	ISO 62
Post Shrinkage ²	0.010	%	ISO 2577
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)	425	MPa	ISO 2039-1

Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	15000	MPa	ISO 178
Flexural Stress ³	105	MPa	ISO 178
Compressive Stress	250	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)	7.0	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (8.0 MPa, Unannealed)	205	°C	ISO 75-2/C
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+12	ohms	IEC 60093
Volume Resistivity	1.0E+13	ohms·cm	IEC 60093
Electric Strength ⁴ (1.00 mm)	28	kV/mm	IEC 60243-1
Relative Permittivity (100 Hz)	5.50		IEC 60250
Dissipation Factor (100 Hz)	0.010		IEC 60250
Comparative Tracking Index (Solution A)	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm, White	V-1		
1.40 mm, Black	V-0		
1.50 mm, Brown, Grey	V-0		
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.	Compression		
3.	2.0 mm/min		
4.	short term, electrode layout P25mm/P25mm in transformer oil equivalent to IEC 60296		

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