

Durez® 23570 (Compression)

Phenolic

Sumitomo Bakelite North America, Inc.

Message:

Durez 23570 Black Phenolic is a glass and mineral filled two-stage, special purpose molding material. It is designed for high strength, good dimensional stability, and electrical properties even after long term exposure to elevated temperatures. It is designed to meet the requirements of Mil-M-14G, Type MFH. Typical uses are connectors, automotive transmission components, computer parts and brush holders.

General Information	
Filler / Reinforcement	Glass fiber reinforced material Mineral filler
Features	Good dimensional stability High strength Good electrical performance
Uses	Computer components Connector Application in Automobile Field
Agency Ratings	MIL 810 A/E-5272 MIL I-631D MIL M-14G, Type MFH
Appearance	Black
Forms	Particles
Processing Method	Resin transfer molding Compression molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.77	g/cm ³	ASTM D792
Apparent Density	0.80	g/cm ³	ASTM D1895
Molding Shrinkage - Flow	0.30	%	ASTM D6289
Water Absorption (Saturation)	0.050	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	17200	MPa	ASTM D638
Tensile Strength	90.0	MPa	ASTM D638
Flexural Strength	124	MPa	ASTM D790
Compressive Strength	248	MPa	ASTM D695
Shear Strength			
-- ¹	62.7	MPa	

--	84.8	MPa	
Poisson's Ratio	0.32		
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	27	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	204	°C	ASTM D648
CLTE - Flow (23 to 60°C)	2.1E-5	cm/cm/°C	
Specific Heat	1170	J/kg/°C	
Thermal Conductivity	0.45	W/m/K	
RTI Elec (3.00 mm)	180	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+12	ohms·cm	ASTM D257
Dielectric Strength			ASTM D149
-- ²	17	kV/mm	ASTM D149
-- ³	15	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	5.50		ASTM D2520
Dissipation Factor (1 MHz)	0.010		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
	V-0		
1.50 mm	5VA		UL 94
3.00 mm	V-0		UL 94
Thermoset	Nominal Value	Unit	Test Method
Shelf Life	52	wk	
Additional Information	Nominal Value	Unit	Test Method
Dimensional Stability	0.110		MIL M-14
Test Specimens Molded at 340-350°F Typical transfer-molded shrinkage is 0.004 in/in Durez 23570 is fungus resistant per Mil-I-631D and Mil-810 A/E-5272.			
NOTE			
1.	after 16 hrs at 300°F		
2.	Method A (short time)		
3.	Method B (step by step)		

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