

Durez® 22257 (Compression)

Phenolic

Sumitomo Bakelite North America, Inc.

Message:

Durez 22257 Black Phenolic is a two-stage, medium impact molding material. It is designed for appliance and electrical applications where additional mechanical strength is required. Typical applications include circuit breakers, small motor bases and housings, appliance panels, terminal blocks, barrier strips, etc.

General Information	
Features	Medium impact resistance
Uses	Electrical/Electronic Applications
	Home appliance components
	Shell
Appearance	Black
Forms	Particles
Processing Method	Resin transfer molding
	Compression molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.40	g/cm ³	ASTM D792
Apparent Density	0.57	g/cm ³	ASTM D1895
Molding Shrinkage - Flow	0.70	%	ASTM D6289
Water Absorption	0.60	%	ASTM D570

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	7600	MPa	ASTM D638
Tensile Strength	52.0	MPa	ASTM D638
Flexural Strength	69.0	MPa	ASTM D790
Compressive Strength	189	MPa	ASTM D695

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	25	J/m	ASTM D256

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	171	°C	ASTM D648
CLTE - Flow (23 to 60°C)	4.2E-5	cm/cm/°C	ASTM E831
Specific Heat	1420	J/kg/°C	ASTM C351
Thermal Conductivity	0.40	W/m/K	ASTM C177
RTI Elec (3.00 mm)	150	°C	UL 746

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+12	ohms · cm	ASTM D257
Dielectric Strength			ASTM D149

-- 1	15	kV/mm	ASTM D149
-- 2	13	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	4.50		ASTM D2520
Dissipation Factor (1 MHz)	0.040		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	HB		UL 94
3.00 mm	HB		UL 94
6.00 mm	V-0		UL 94
Thermoset	Nominal Value	Unit	
Shelf Life	52	wk	
Additional Information			
Test Specimens Molded at 340-350°F Typical transfer-molded shrinkage is 0.009 in/in Durez 22257 is fungus resistant per Mil-I-631D and Mil-810 A/E-5272.			
NOTE			
1.	Method A (short time)		
2.	Method B (step by step)		

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