

# Sumitomo Phenolic FM 4005

Phenolic

Sumitomo Bakelite North America, Inc.

Message:

FM 4005 is a fiberglass reinforced phenolic novolac molding compound, with excellent dimensional stability and good strength at elevated temperatures. This material is compliant with the specifications of ASTM D 5948, Type MFH.

General Information	
UL YellowCard	E123472-221428
Filler / Reinforcement	Glass Fiber
Features	Good Dimensional Stability
	High Temperature Strength
Agency Ratings	ASTM D 5948, Type MFH
Appearance	Black
	Green
Forms	Granules
Processing Method	Compression Molding
	Injection Molding
	Resin Transfer Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.77	g/cm <sup>3</sup>	ASTM D792
Apparent Density	0.80	g/cm <sup>3</sup>	ASTM D1895
Molding Shrinkage - Flow (Compression Molded)	0.25	%	ASTM D955
Water Absorption - 48 hr	0.23	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Compression Molded)	75.0	MPa	ASTM D638
Flexural Modulus (Compression Molded)	15000	MPa	ASTM D790
Flexural Strength (Compression Molded)	140	MPa	ASTM D790
Compressive Strength	255	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (Compression Molded)	30	J/m	ASTM D256A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, Compression Molded	190	°C	
1.8 MPa, Annealed, Compression Molded	> 282	°C	

CLTE - Flow	1.9E-5	cm/cm/°C	ASTM E831
RTI Elec	150	°C	UL 746
RTI Imp	150	°C	UL 746
RTI Str	150	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength <sup>1</sup>			ASTM D149
-- <sup>2</sup>	10	kV/mm	
-- <sup>3</sup>	8.0	kV/mm	
Arc Resistance	180	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating (3.20 mm)	V-0		UL 94
NOTE			
1.	Wet, 60 Hz		
2.	Method A (Short-Time)		
3.	Method B (Step-by-Step)		

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#### Recommended distributors for this material

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