

# Sumitomo Phenolic FM 4005X4648

Phenolic

Sumitomo Bakelite North America, Inc.

Message:

FM 4005X4648 a fiberglass reinforced phenolic novolac molding compound formulated to increase thermal conductivity and electrical conductance. This material also exhibits low post mold shrinkage.

General Information	
Filler / Reinforcement	Glass Fiber
Features	Electrically Conductive
	Low Shrinkage
	Thermally Conductive
Appearance	Black
Forms	Granules
Processing Method	Compression Molding
	Injection Molding
	Resin Transfer Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.78	g/cm <sup>3</sup>	ASTM D792
Apparent Density	0.75	g/cm <sup>3</sup>	ASTM D1895
Molding Shrinkage - Flow	0.15 to 0.30	%	ASTM D955
Water Absorption (24 hr)	0.070	%	ASTM D570
Water Absorption - 48 hr	0.20	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	34.0	MPa	ASTM D638
Flexural Modulus	13800	MPa	ASTM D790
Flexural Strength	75.0	MPa	ASTM D790
Compressive Strength	137	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	26	J/m	ASTM D256A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	191	°C	
1.8 MPa, Annealed	> 282	°C	
Thermal Conductivity	1.2	W/m/K	ASTM C518
RTI Elec	150	°C	UL 746
RTI Imp	150	°C	UL 746
RTI Str	150	°C	UL 746

Flammability	Nominal Value	Test Method
Flame Rating (3.20 mm)	V-0	UL 94

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519  
Phone: +86 13424755533  
Email: sales@su-jiao.com  
No. 215, Lianhe North Road, Fengxian District, Shanghai, China

