

BMC 605

Bulk Molding Compound

PRODUCT DESCRIPTION

Glass fiber reinforced Polyester BMC suitable for circuit breakers, transformer bobbins, brush holders, and motor end bells.

GENERAL

Material Status	• Commercial: Active		
Availability	• North America • Asia Pacific	• Europe • South America	
Filler/Reinforcement	• Glass Fiber and mineral filler		
Features	• Excellent electrical properties • UL Recognized—File E69414	• Excellent flame resistance • UL94-V0 @1.8 mm	
Processing Method	• This BMC product is generally intended to be injection, transfer, or compression molded in matched metal die molds, typically at 300°F (150°C) and 500 to 1,000 psi (35-65 BAR) molding pressure. Strength values may be affected by the molding process. Extrusions available.		
Resin	• Unsaturated Polyester Composite		

PHYSICAL	Typical	Unit	Test Method
Density	1.93-1.99	g/cm ³	ASTM D792
Mold Shrinkage (RT mold/RT part)	0.0025-0.0042	in/in	ASTM D955
Water Absorption, 24 hrs, 23°C	0.14	%	ASTM D570
Hardness, Barcol	35-45	Barcol Units	ASTM D2583
CLTE, X-Y plane	25	ppm/°C	ASTM E831
CLTE, Z plane	30	ppm/°C	ASTM E831
Poisson's Ratio	0.36		ASTM D638

MECHANICAL (As molded)	Typical	Unit	Test Method
Tensile Modulus	1.8-2.1 x 10 ⁶ (12.4-14.5)	psi (GPa)	ASTM D638
Tensile Strength	5,000-7,000 (35-45)	psi (MPa)	ASTM D638
Flexural Modulus (RT)	1.6-1.8 x 10 ⁶ (11.0-12.4)	psi (GPa)	ASTM D790
Flexural Strength	14,000-17,000 (95-115)	psi (MPa)	ASTM D790
Compressive Strength	22,000-26,000 (150-180)	psi (MPa)	ASTM D695

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IMPACT	Typical	Unit	Test Method
Izod Notched Impact Strength	2.0-4.0 (105-210)	ft-lb/in (J/m)	ASTM D256
THERMAL	Typical	Unit	Test Method
Heat Deflection Temperature	500+ (260+)	°F (°C)	ASTM D648
Glass Transition T _g	320-338 (160-170)	°F (°C)	ASTM D4065
Thermal Conductivity, 25°C	0.87	W/m-°K	ASTM E1461
UL RTI, Electrical	130	°C	UL 746B
UL RTI, Mechanical with Impact	130	°C	UL 746B
UL RTI, Mechanical without Impact	130	°C	UL 746B
Specific Heat Capacity	797	J/kg-K	ASTM E1461
FLAMMABILITY	Typical	Unit	Test Method
Flammability	1.8	mm	UL94 V-0
ELECTRICAL	Typical	Unit	Test Method
Dielectric Strength	350-375 (13.75-14.75)	Volts/mil (kV/mm)	ASTM D149
Arc Track Resistance	190	seconds	ASTM D495
Comparative Tracking Index	600+	volts	ASTM D2303

UL File Number E69414



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