

BMC 400

Bulk Molding Compound

PRODUCT DESCRIPTION

Glass fiber reinforced Polyester BMC suitable for circuit breakers, electric motor housings and end bells, HVAC drain pans, power tool housings, and structural parts.

GENERAL

Material Status	• Commercial: Active		
Availability	• North America • Asia Pacific	• Europe • South America	
Filler/Reinforcement	• Glass Fiber and mineral filler		
Features	• Outstanding flow • UL Recognized—File E69414	• Low shrink • UL94-V0 @ 1.5 mm	• Excellent electrical properties
Processing Method	• This BMC product is generally intended to be compression, injection or transfer 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. Can be supplied in bulk or extruded form.		
Resin	• Unsaturated Polyester Composite		

PHYSICAL	Typical	Unit	Test Method
Density	1.8	g/cm ³	ASTM D792
Mold Shrinkage (RT mold/RT part)	0.001-0.003	in/in	ASTM D955
Water Absorption, 24 hrs, 23°C	<0.24	%	ASTM D570
Hardness, Barcol	35-45	Barcol Units	ASTM D2583
Poisson's Ratio	0.36		ASTM D638

MECHANICAL (As molded)	Typical	Unit	Test Method
Tensile Modulus	1.9 x 10 ⁶ (13.1)	psi (GPa)	ASTM D638
Tensile Strength	7,000 (48)	psi (MPa)	ASTM D638
Flexural Modulus (RT)	1.8 x 10 ⁶ (12.4)	psi (GPa)	ASTM D790
Flexural Strength	18,500 (127)	psi (MPa)	ASTM D790
Compressive Strength	21,000 (145)	psi (MPa)	ASTM D695

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IMPACT	Typical	Unit	Test Method
Izod Notched Impact Strength	7 (370)	ft-lb/in (J/m)	ASTM D256

THERMAL	Typical	Unit	Test Method
Heat Deflection Temperature	>500 (>260)	°F (°C)	ASTM D648
UL RTI, Electrical	266 (130)	°F (°C)	UL 746B
UL RTI, Mechanical with Impact	266 (130)	°F (°C)	UL 746B
UL RTI, Mechanical without Impact	266 (130)	°F (°C)	UL 746B

FLAMMABILITY	Typical	Unit	Test Method
Flammability	Pass 0.060 (1.5)	in mm	UL94 V-0

ELECTRICAL	Typical	Unit	Test Method
Dielectric Strength	500 (20)	Volts/mil (kV/mm)	ASTM D149
Arc Track Resistance	180+	seconds	ASTM D495
Comparative Tracking Index	500-600	volts	ASTM D2303
Hot Wire Ignition, HWI	60 - 119	sec	ASTM D3874
High Amp Arc Ignition, HAI	>120	arcs	UL746A
High Voltage Arc Tracking Rate, HVTR	<10	mm/min	UL746A

UL File Number E69414



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