

BMC 310

Bulk Molding Compound

PRODUCT DESCRIPTION

Glass fiber reinforced Polyester BMC suitable for oven handles, oven vent trim and oven control panels, as well as other large and small appliance components.

GENERAL

Material Status	• Commercial: Active		
Availability	• North America • Asia Pacific	• Europe • South America	
Filler/Reinforcement	• Glass Fiber and mineral filler		
Features	• Superior stain resistance • UL Recognized—File E69414	• Excellent thermal resistance • UL94-V0/5VA @ 1.8 mm	
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 logs, slugs or bulk.		
Resin	• Unsaturated Polyester Composite		

PHYSICAL	Typical	Unit	Test Method
Density	1.80-2.00	g/cm ³	ASTM D792
Mold Shrinkage (RT mold/RT part)	0.0015-0.0040	in/in	ASTM D955
Water Absorption, 24 hrs, 23°C	0.1-0.2	%	ASTM D570
Hardness, Barcol	40-55	Barcol Units	ASTM D2583
CLTE, X-Y plane	30-40	ppm/°C	ASTM E831
Poisson's Ratio	0.36		ASTM D638

MECHANICAL (As molded)	Typical	Unit	Test Method
Tensile Modulus	1.8-2.2 x 10 ⁶ (12.4-15.1)	psi (GPa)	ASTM D638
Tensile Strength	5,000-8,000 (34-55)	psi (MPa)	ASTM D638
Flexural Modulus (RT)	1.6-2.0 x 10 ⁶ (11-13.7)	psi (GPa)	ASTM D790
Flexural Strength	10,000-18,000 (69-124)	psi (MPa)	ASTM D790
Compressive Strength	18,000-22,000 (124-151)	psi (MPa)	ASTM D695

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IMPACT	Typical	Unit	Test Method
Izod Notched Impact Strength	2-6 (107-320)	ft-lb/in (J/m)	ASTM D256
THERMAL			
Heat Deflection Temperature	425-500+ (218-260+)	°F (°C)	ASTM D648
Glass Transition T _g	347 (175)	°F (°C)	ASTM D4065
Thermal Conductivity, 25°C	0.46-0.52	W/m-°K	ASTM E1461
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			
Flammability	Pass 0.07 (1.8)	in (mm)	UL94 V-0, 5VA
ELECTRICAL			
Dielectric Strength	350-400 (13.8-15.8)	Volts/mil (kV/mm)	ASTM D149
Arc Track Resistance	180+	seconds	ASTM D495
Comparative Tracking Index	600+	volts	ASTM D2303
Hot Wire Ignition, HWI	>120	sec	ASTM D3874
High Amp Arc Ignition, HAI	>120	arcs	UL746A
High Voltage Arc Tracking Rate, HVTR	<0.4	in/min	UL746A
UL File Number	E69414		



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