Technical Data Sheet

BMC 1412A MAT-30 Spec ASTM D5948

Engineered Composites

Product Description
Glass Fiber reinforced Polyester BMC suitable for circuit breakers, power tool housings, standoff insulators and appliance parts. UL listed as 1412#@. # denotes may be followed by an additional suffix letters indicating color. @ denotes may be followed by suffix "X" indicating the product is produced in extruded form. ***This product was tested specifically to ASTM D 5948 MAT-30.***

General			
Material Status	• Commercial: Active		
Availability	• North America • Asia Pacific	• Europe • South America	
Filler / Reinforcement	• Glass Fiber and Mineral Filler		
Features	• Low Shrink • UL94-V0 @ 1.5 mm	• High physical properties • Meets or exceeds MAT-30	• UL Recognized – File E69414
Processing Method	• This BMC product is generally intended to be compression, injection or transfer molded in matched metal 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		

Physical	Typical	Unit	Test Method
Density	1.75 – 1.80	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	0.395	%	**ASTM D5948**
Hardness, Barcol	40-50	Barcol Units	ASTM D2583
Poisson's Ratio	0.36		ASTM D638
Mechanical (As molded)	**Typical**	**Unit**	**Test Method**
Tensile Modulus	1.8 E+6 (12.4)	psi (GPa)	ASTM D638
Tensile Strength	6,000 – 7,000 (41 – 48)	psi (MPa)	ASTM D638
Flexural Modulus (RT)	1.79 E+6 (12.4)	psi (GPa)	**ASTM D5948**
Flexural Strength	18,750 (129)	psi (Mpa)	**ASTM D5948**
Compressive Strength	24,000 – 26,000 (165 – 179)	psi (Mpa)	ASTM D695
Impact	**Typical**	**Unit**	**Test Method**
Izod Notched Impact Strength	(419)	ft-lb/in (J/m)	**ASTM D5948**
Thermal	**Typical**	**Unit**	**Test Method**
Heat Deflection Temperature, 264 PSI	>500 (>260)	°F (°C)	ASTM D648
UL RTI, Electrical	160	°C	UL 746B
UL RTI, Mechanical with Impact	160	°C	UL 746B
UL RTI, Mechanical without Impact	160	°C	UL 746B
Flammability	**Typical**	**Unit**	**Test Method**
Flammability	Pass 0.06 (1.5)	in (mm)	UL94 V-0
Electrical	**Typical**	**Unit**	**Test Method**
Dielectric Strength	(25.6)	Volts/mil (kV/mm)	**ASTM D5948**
Arc Track Resistance	198+	seconds	**ASTM D5948**
CTI	600+	Volts	**ASTM D5948**

Notes

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Company Information

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