

Technical Data Sheet

**Bmc 610 Special**

Thermoset Polyester
LyondellBasell Industries
Engineering Plastics

Product Description

BMC 610 molding compound is a mineral filled, glass-fiber-reinforced polyester compound suitable for compression, transfer and stuffer injection molding. It is set a part form other medium impact electrical grade materials by its very high arc resistance and outstanding flame resistance in thin sections. Typical applications include transformer bobbins, terminal boards, arc chutes and contactors. BMC 610 molding compound is produced in extruded form in a range on industrial colors. It is available in logs up to 12 inches in length or as precut slugs, of specific weight, in diameters 1" to 2 1/2". Within this range, smaller diameters are supplied as multiple extrusion and weight tolerances are plus or minus 5 %, up to a maximum of plus or minus 15 grams.

General

Material Status	• Commercial: Active
Availability	• North America
Filler / Reinforcement	• Glass Fiber/Mineral
Features	• Arc Resistant • Good Electrical Properties • Flame Retardant • Medium Impact Resistance
Uses	• Electrical/Electronic Applications
Appearance	• Colors Available
Forms	• BMC - Bulk Molding Compound
Processing Method	• Compression Molding • Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.90	1.90 g/cm ³	ASTM D792
Water Absorption (24 hr, 73°F (23°C))	0.10 %	0.10 %	ASTM D570
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength (Yield)	7000 psi	48.3 MPa	ASTM D638
Flexural Strength	16000 psi	110 MPa	ASTM D790
Compressive Strength	26000 psi	179 MPa	ASTM D695
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact	3.0 ft-lb/in	160 J/m	ASTM D256
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Barcol Hardness	35	35	ASTM D2583
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed	500 °F	260 °C	ASTM D648
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Dielectric Strength (Method A (Short-Time))	360 V/mil	14 kV/mm	ASTM D149
Dielectric Constant (60 Hz)	5.50	5.50	ASTM D150
Dissipation Factor (60 Hz)	0.015	0.015	ASTM D150
Arc Resistance	210 sec	210 sec	ASTM D495
Comparative Tracking Index (CTI)	600 V	600 V	UL 746A
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			UL 94
0.04 in (1.1 mm)	V-0	V-0	
0.06 in (1.5 mm)	V-0	V-0	
0.12 in (3.0 mm)	V-0	V-0	
0.07 in (1.7 mm)	5VA	5VA	

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Injection	Nominal Value (English)	Nominal Value (SI)
Mold Temperature	280 to 330 °F	138 to 166 °C

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.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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