

## Technical Data Sheet

### Bmc 620M

Thermoset Polyester  
LyondellBasell Industries  
Engineering Plastics

#### Product Description

BMC 620M molding compound is a mineral filled, glass-fiber-reinforced polyester compound suitable for compression, and stuffer injection molding. It is characterized by high impact strength, good moldability, excellent overall electrical properties and flame resistance. Typical applications include phase separators, circuit breaker housings, and applications requiring the properties of Military specification Mil-M-14G Type MAI-60. Although BMC 620M was designed to meet this specification, it has not been submitted for QPL recognition. BMC 620M molding compound is produced in a range of industrial colors, and is supplied in bulk form only.

| General                |                                                                                               |  |
|------------------------|-----------------------------------------------------------------------------------------------|--|
| Filler / Reinforcement | • Glass\Mineral                                                                               |  |
| Features               | • Flame Retardant • Good Moldability<br>• Good Electrical Properties • High Impact Resistance |  |
| Uses                   | • Electrical/Electronic Applications                                                          |  |
| Agency Ratings         | • MIL M-14G, Type MAI-60                                                                      |  |
| 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                                                             | 1.86                    | 1.86 g/cm <sup>3</sup> | ASTM D792   |
| Water Absorption (24 Hr, 73°F (23°C))                                                  | 0.13 %                  | 0.13 %                 | ASTM D570   |
| Mechanical                                                                             | Nominal Value (English) | Nominal Value (SI)     | Test Method |
| Tensile Strength (Yield, Compression Molded)                                           | 9000 psi                | 62.1 MPa               | ASTM D638   |
| Flexural Strength (Compression Molded)                                                 | 22000 psi               | 152 MPa                | ASTM D790   |
| Compressive Strength                                                                   | 26000 psi               | 179 MPa                | ASTM D695   |
| Impact                                                                                 | Nominal Value (English) | Nominal Value (SI)     | Test Method |
| Notched Izod Impact (Compression Molded)                                               | 10 ft·lb/in             | 530 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<br>264 Psi (1.8 Mpa), Unannealed, Compression Molded | 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)                                                            | 5.20                    | 5.20                   | ASTM D150   |
| Dissipation Factor (60 Hz)                                                             | 0.020                   | 0.020                  | ASTM D150   |
| Arc Resistance                                                                         | 185 sec                 | 185 sec                | ASTM D495   |
| Comparative Tracking Index (CTI)                                                       | 500 V                   | 500 V                  | UL 746A     |
| Flammability                                                                           | Nominal Value (English) | Nominal Value (SI)     | Test Method |
| Flame Rating                                                                           |                         |                        | UL 94       |
| 0.06 In (1.6 Mm)                                                                       | V-0                     | V-0                    |             |
| 0.13 In (3.2 Mm)                                                                       | V-0                     | V-0                    |             |
| 0.25 In (6.4 Mm)                                                                       | V-0                     | V-0                    |             |

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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.