

## Technical Data Sheet

### Bmc 501E

Thermoset Polyester  
LyondellBasell Industries  
Engineering Plastics

#### Product Description

BMC 501E molding compound is a mineral filled, glass-fiber-reinforced polyester compound suitable for compression and transfer molding. It is a product with good overall electrical properties, flame resistance, and low water absorption. Distinguished from other materials by its very soft flow, it is an excellent compound for encapsulating delicate components. Typical applications include coil and solenoid Encapsulation. BMC 501E molding compound is produced in extruded form in a range on industrial colors. Because of the soft consistency of this product, it is only available in logs from 3 inches to 12 inches in length and from 1" to 2 ½" in diameter. Within this range, smaller diameters are supplied as multiple extrusions.

#### General

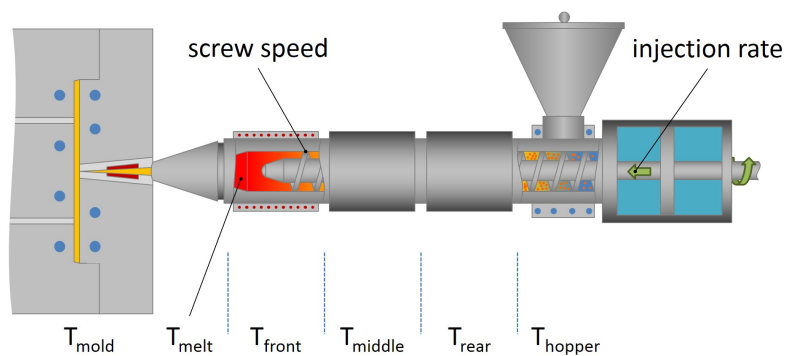
|                        |                               |                              |                              |
|------------------------|-------------------------------|------------------------------|------------------------------|
| Filler / Reinforcement | • Glass\Mineral               |                              |                              |
| Features               | • Flame Retardant             | • Good Electrical Properties | • Low to No Water Absorption |
| Uses                   | • Coating Applications        |                              |                              |
| Appearance             | • Colors Available            |                              |                              |
| Forms                  | • BMC - Bulk Molding Compound |                              |                              |
| Processing Method      | • Compression Molding         |                              |                              |

| Physical  | Nominal Value (English) | Nominal Value (SI)     | Test Method |
|---|-------------------------|------------------------|-------------|
| Density / Specific Gravity  | 1.77                    | 1.77 g/cm <sup>3</sup> | 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, Compression Molded)  | 5000 psi                | 34.5 MPa               | ASTM D638   |
| Flexural Strength (Compression Molded)  | 11000 psi               | 75.8 MPa               | ASTM D790   |
| Compressive Strength  | 13000 psi               | 89.6 MPa               | ASTM D695   |
| Impact  | Nominal Value (English) | Nominal Value (SI)     | Test Method |
| Notched Izod Impact (Compression Molded)  | 2.3 ft-lb/in            | 120 J/m                | ASTM D256   |
| Hardness  | Nominal Value (English) | Nominal Value (SI)     | Test Method |
| Barcol Hardness   | 5.0                     | 5.0                    | ASTM D2583  |
| Thermal   | Nominal Value (English) | Nominal Value (SI)     | Test Method |
| Deflection Temperature Under Load<br>264 Psi (1.8 Mpa), Unannealed, Compression<br>Molded | 400 °F                  | 204 °C                 | ASTM D648   |
| Electrical  | Nominal Value (English) | Nominal Value (SI)     | Test Method |
| Dielectric Strength (Method A (short-time))   | 300 V/mil               | 12 kV/mm               | ASTM D149   |
| Dielectric Constant (60 Hz)   | 4.90                    | 4.90                   | ASTM D150   |
| Dissipation Factor (60 Hz)  | 7.0E-3                  | 7.0E-3                 | ASTM D150   |
| Arc Resistance  | 180 sec                 | 180 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.