

BMC 501F

Bulk Molding Compound

PRODUCT DESCRIPTION

Glass fiber reinforced Polyester BMC suitable for excellent performance at elevated temperatures.

GENERAL

| | | | |
|-----------------------------|---|---|--|
| Material Status | • Commercial: Active | | |
| Availability | • North America • Asia Pacific | • Europe • South America | |
| Filler/Reinforcement | • Glass Fiber and mineral filler | | |
| Features | • Outstanding flow • UL Recognized—File E69414 | • Excellent property retention in hot environments • UL94-V0 @1.5 mm White/Black/Natural (all colors 3.0 mm) | |
| Processing Method | • This BMC product is generally intended to be compression, transfer, or stuffer injection 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. Extrusions when available | | |
| Resin | • Unsaturated Polyester Composite | | |

| PHYSICAL | Typical | Unit | Test Method |
|----------------------------------|---------------|-------------------|-------------|
| Density | 1.60-1.75 | g/cm ³ | ASTM D792 |
| Mold Shrinkage (RT mold/RT part) | 0.0005-0.0025 | in/in | ASTM D955 |
| Hardness, Barcol | 20-30 | Barcol Units | ASTM D2583 |
| CLTE, X-Y plane | 35 | ppm/°C | ASTM E831 |
| Poisson's Ratio | 0.32 | | ASTM D638 |

| MECHANICAL (As molded) | Typical | Unit | Test Method |
|------------------------|---------------------------------------|-----------|-------------|
| Tensile Modulus | 13-14.5 x 10 ⁶ (9-10) | psi (GPa) | ASTM D638 |
| Tensile Strength | 3,900-5,900(27-41) | psi (MPa) | ASTM D638 |
| Flexural Modulus (RT) | 12.3-13.8 x 10 ⁶ (8.5-9.5) | psi (GPa) | ASTM D790 |
| Flexural Strength | 9,850-11,900(68-82) | psi (MPa) | ASTM D790 |
| Compressive Strength | 10,850-14,900(75-103) | psi (MPa) | ASTM D695 |

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| IMPACT | Typical | Unit | Test Method |
|------------------------------|-------------------|---|--------------------|
| Izod Notched Impact Strength | 9.9 – 17.1(21-36) | ft-lbs/in ² (KJ/m ²) | ASTM D256 |

| THERMAL | Typical | Unit | Test Method |
|-----------------------------------|----------------|-------------|--------------------|
| Heat Deflection Temperature | 392 (>200) | °F (°C) | ASTM D648 |
| UL RTI, Electrical | 130 | °C | UL 746B |
| UL RTI, Mechanical with Impact | 130 | °C | UL 746B |
| UL RTI, Mechanical without Impact | 130 | °C | UL 746B |

| FLAMMABILITY | Typical | Unit | Test Method |
|---------------------------|----------------|-------------|--------------------|
| Flammability (WT/NC/BK) | 0.06 (1.5) | in (mm) | UL94 V-0 |
| Flammability (all colors) | 0.12 (3.0) | in (mm) | UL94 V-0 |

| ELECTRICAL | Typical | Unit | Test Method |
|----------------------------|----------------|-------------------|--------------------|
| Dielectric Strength | 300 (12) | Volts/mil (kV/mm) | ASTM D149 |
| Arc Track Resistance | 180 | seconds | ASTM D495 |
| Comparative Tracking Index | 500+ | volts | ASTM D2303 |

UL File Number E69414



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