

BMC A50-XHS

Bulk Molding Compound

PRODUCT DESCRIPTION

Glass fiber reinforced Polyester BMC suitable for circuit breakers, lighting housings, and structural parts.

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 | • UL94-V0 @1.5 mm/5VA @ 2.5mm |
| Processing Method | • This BMC product is generally intended to be compression, injection or transfer molded in matched metal die molds, typically at 300°F (150°C) and 500to 1,000 psi (35-65 BAR) molding pressure. Strength values may be affected by the molding process. Available in bulk or extruded slugs. | | |
| Resin | • Unsaturated Polyester Composite | | |

PHYSICAL

| | Typical | Unit | Test Method |
|-----------------------------------------|---------------|-------------------|-------------|
| Density | 1.79-1.99 | g/cm ³ | ASTM D792 |
| Mold Shrinkage (RT mold/RT part) | 0.0015-0.0025 | in/in | ASTM D955 |
| Hardness, Barcol | 30-40 | Barcol Units | ASTM D2583 |
| Poisson's Ratio | 0.36 | | ASTM D638 |

MECHANICAL (As molded)

| | Typical | Unit | Test Method |
|------------------------------|---------------------------------------|-----------|-------------|
| Tensile Strength | 8,300-10,300 (57-71) | psi (MPa) | ASTM D638 |
| Flexural Modulus (RT) | 1.7-1.9 x 10 ⁶ (11.7-13.1) | psi (GPa) | ASTM D790 |
| Flexural Strength | 18,000-22,000 (124-152) | psi (MPa) | ASTM D790 |
| Compressive Strength | 16,800-20,800 (116-143) | psi (MPa) | ASTM D695 |

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| IMPACT | Typical | Unit | Test Method |
|------------------------------|-----------------|----------------|--------------------|
| Izod Notched Impact Strength | 10-12 (534-641) | ft-lb/in (J/m) | ASTM D256 |

| THERMAL | Typical | Unit | Test Method |
|-----------------------------------|----------------|-------------|--------------------|
| Heat Deflection Temperature | >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 1.5 | mm | UL94 V-0 |
| Flammability | Pass 2.5 | mm | UL94 5VA |

| ELECTRICAL | Typical | Unit | Test Method |
|----------------------------|---------------------|-------------------|--------------------|
| Dielectric Strength | 375-425 (14.8-16.7) | Volts/mil (kV/mm) | ASTM D149 |
| Arc Track Resistance | >180 | seconds | ASTM D495 |
| Comparative Tracking Index | 500+ | volts | ASTM D2303 |

UL File Number E69414



For additional information, please contact:

A. Schulman Inc., Engineered Composites
 1600 Powis Ct, West Chicago, IL 60185
 p: 630-377-1065
 f: 630-377-7395
 www.aschulman.com

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