

# SBMC-601

Bulk Molding Compound



POLYMER-TO-CERAMIC™ TECHNOLOGY

## Technical Data Sheet

SBMC-601 Bulk Molding Compound (BMC) is a discontinuous carbon fiber reinforced molding compound containing carbon fiber, a vinyl substituted polysiloxane resin, and refractory particulate. SBMC-601 cures at temperatures between 180-250°C and functions as a high temperature carbon fiber reinforced structure with a silicon oxycarbide ceramic. Curing produces a green fiber reinforced composite material. Further processing to 850°C (minimum) in inert gas results in an amorphous silicon oxycarbide matrix ceramic composite that can be used as a pre-form for use with different infiltration polymers or materials. Ideal infiltration polymers include Polyramic® SPR-688 or SPR-212 based slurries (SL-227, SL-480), and other Starfire® Systems polysiloxane products.

## Product Highlights

- Easily moldable using compression mold tooling.
- Performs well with other STARFIRE resin systems.
- No solvent removal necessary.
- Designed for high temperature applications but also suitable for low, medium temperature applications.
- Medium modulus carbon fiber reinforced.
- High temperature stability.
- Configurable thermal and mechanical properties.
- Suitable for a variety of structural, thermal, and friction uses.

## Physical Properties of SBMC-601 BMC

Density (as molded)	1.57 +/- 0.05 g/cm <sup>3</sup>
Density (as received)	0.5 +/- 0.05 g/cm <sup>3</sup>
Bulk Factor	3:1
Appearance	Dark gray colored grass clipping; non tacky; flexible
Odor	Odorless
Storage	Refrigerate

Product	Product Description	Flexural Properties			
		Flexural Strength		Flexural Modulus	
SBMC-601*	Carbon Fiber Reinforced Bulk Molding Compound; Comprised of a distribution of fibers	KSI	MPa	MSI	GPa
		19-30	131-207	6.3-9.0	43-62

### Warranty

No analysis of this product is permitted. The data provided relates only to the material identified above, as supplied by Starfire Systems®, Inc. (SSI). Because conditions and methods of use of our products are beyond our control, this information should not be used as a substitution for customer's tests to ensure that SSI's products are safe, effective, and fully satisfactory for the intended end use. SSI's sole warranty is that the product will meet sales specifications in effect at the time of shipment.