

# SBMC-843

Bulk Molding Compound



POLYMER-TO-CERAMIC™ TECHNOLOGY

## Technical Data Sheet

SBMC-843 Bulk Molding Compound (BMC) is a discontinuous carbon fiber reinforced molding compound containing carbon fiber, a Starfire proprietary polysiloxane resin, and refractory particulate. SBMC-843 contains a Polyramic® thermosetting resin which cures at temperatures between 200-310°C, and functions as a high temperature carbon fiber reinforced structure with a silicon oxycarbide ceramic matrix. Compression mold curing produces a green fiber reinforced polymer matrix composite (PMC) material. Further processing to 850°C minimum in inert environment results in an amorphous silicon oxycarbide ceramic matrix composite (CMC) to be used with different infiltration polymers or materials. Ideal infiltration polymers include Polyramic® SPR-212, SPR-212 based slurries (SL-227, SL-480), and other Starfire® polysiloxane products.

## Product Highlights

- Easily moldable using high pressure compression mold tooling.
- Especially designed for high temperature and oxidizing environments.
- Medium modulus chopped carbon fiber reinforced.
- Performs well with other STARFIRE® resin systems.
- High temperature stability.
- No solvent removal necessary.
- Tailorable thermal and mechanical properties.
- Suitable for a variety of structural, thermal, suitable for low, medium temperature applications and friction uses.

## Physical Properties of SBMC-843 BMC

Density (as molded)	1.57 +/- 0.05 g/cm <sup>3</sup>
Density (as received)	0.75 +/- 0.05 g/cm <sup>3</sup>
Bulk Factor	2:1
Appearance	Gray-green, non-tacky, soft
Odor	Odorless

Product	Product Description	Flexural Properties			
		Flexural Strength		Flexural Modulus	
SBMC-843*	Carbon Fiber Reinforced Bulk Molding Compound; Comprised of a distribution of fibers; 2" and 1/2"	KSI	MPa	MSI	GPa
		18-24	124 -165	7.0 -10.8	48 - 74

### 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.