

TECHNICAL DATA SHEET

AMC® 8595, 126-76-75 Engineered Structural Composite® (ESC®) Molding Compound

AMC® 8595 is a unidirectional carbon fiber reinforced ESC® molding compound. It is easily moldable and provides parts that are high strength, fatigue resistant, with high heat resistance and a low density. The carbon fiber is standard modulus PAN based 60K tow.

TYPICAL PROPERTIES | UNCURED

Form and Color	Rolled Sheet, Black or Natural	Fiber Length	Continuous
Carbon Fiber Content	Nominal-55% w/w	Shelf Life: @ 75°F	2 months
Resin Content	Nominal-45% w/w		

TYPICAL PROPERTIES | CURED | “Machined” Specimen

<u>Test</u>	<u>Procedure</u>	<u>Value</u>
Specific Gravity, g/cc	ASTM D-792	1.45
Flexural Strength 0°, psi (MPa) ¹	ASTM D-790	190,000 (1310)
Flexural Modulus 0°, psi (GPa) ¹	ASTM D-790	11.3 x10 ⁶ (77.9)
Tensile Strength 0°, psi (MPa) ¹	ASTM D-3039	144,000 (993)
Tensile Modulus 0°, psi (GPa) ¹	ASTM D-3039	13.7 x10 ⁶ (94.5)
Short Beam Shear, psi (MPa) ¹	ASTM D-2344	10,000 (68.9)
Glass Transition Temp. °F (°C) TanDelta	ASTM D-7028	288 (142)

¹ Machined Properties are determined using specimen machined from molded 12”x12” panels with 80% mold coverage.

Molding Suggestions – AMC® 8595 can be molded at temperatures in the range of 260-310°F, with 280°F suggested as a starting point. Cure times will be dependent on molding temperature and part thickness and will typically be 5-10 minutes. Detailed molding suggestions are available on request. Cool molded parts at ambient temperature. A cooling fixture may be needed depending on part thickness and geometry.

Precautions – AMC® 8595 contains carbon fibers and should be handled carefully in order to minimize skin contact. Molding areas should be well ventilated to minimize exposure to fumes. Presses must be provided with local exhaust to remove vapors from work areas. If adequate ventilation is not available, a respirator approved for removing organic vapor must be used. Care must be taken to prevent contact of carbon fibers with electrical equipment.

Typical Uncured and Cured Properties tested each lot of – AMC® 8595:

- Fiber Content/Resin Content
- Specific Gravity
- Mat Weight, (Areal Density)

NO WARRANTY – The above information is offered for your consideration, investigation, and verification. No warranty, expressed or implied, is given as to the materials described on this Technical Data Sheet. Quantum Composites, Inc. specifically disclaims any warranty of merchantability or fitness for any particular purpose. Final determination of the suitability of this material is the sole responsibility of the buyer. Contact our sales representative for assistance in developing procedures to fit individual requirements.

This ESC® product is generally intended to be compression molded in matched-metal die molds. Strength values may be affected by the molding process. **The values presented in this data sheet are typical values and are not to be interpreted as product specifications.**