

Preliminary Product Data Sheet
AMC™ 8595, 126-76-75
Engineered Structural Composite (ESC) Molding Compound

AMC™ 8595 is a vinyl ester ESC molding compound reinforced with continuous, unidirectional carbon fibers. It is designed for compression molding of components requiring high structural strength, light weight, and stiffness. It can also be co-molded with other ESC molding compounds such as AMC™ 8590 to provide stiffening in selected areas of the component.

TYPICAL PROPERTIES -- UNCURED

Form	Rolled Sheet, standard 24" width	Carbon Fiber Content	Nominal 55%
Color	Natural and Black	Shelf Life @ 75°F	3 Months
Areal Weight.	1129 gms/m ²	Carbon Fiber Length	Continuous

TYPICAL PROPERTIES -- CURED

	<u>Test Procedure</u>	<u>Value</u>
Specific Gravity, g/cc	ASTM D-792	1.5
Shrinkage, inch/inch (max.) (in fiber direction)	ASTM D-955	0.000
Water Absorption, %	ASTM D-570	0.11
Tensile Strength, psi, (MPa) ¹	ASTM D-638	144,000 (993)
Tensile Modulus, psi, (GPa) ¹	ASTM D-638	1.37x10 ⁷ (94.5)
Flexural Strength, psi, (MPa) ¹	ASTM D-790	190,000 (1310)
Flexural Modulus, psi, (GPa) ¹	ASTM D-790	1.13x10 ⁷ (77.9)
Heat Deflection Temperature, °F (°C)	ASTM D-648	>550 (287)

Modifications – AMC™ 8595 Flame Retarded versions can also be made. Natural and Black are the only available colors.

Molding Suggestions – AMC™ 8595 can be molded over a range of temperatures and pressures. For part thickness of 0.5 inches or less, molding temperatures of 270°F to 300°F are suggested as a starting point, with molding pressure of 300 to 1000 psi. For molding thicker sections, the molding temperature should be reduced. Cure time will depend on molding temperature and part thickness. A 0.25 inch section will cure in 3 to 5 minutes at 280°F; parts will normally be slightly soft on ejection from the mold.

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.

WARRANTY -- The above information is offered for your consideration, investigation, and verification. No warranty, expressed or implied, is given, nor is freedom from any patents owned by Quantum Composites, Inc. or others implied. 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.**

¹ Tensile and Flexural Properties are from cut specimens from a compression molded plaque.