QUANTUM
COMPOSITES

1310 South Valley Center Drive Bay City, MI 48706-9798 USA
989-922-3863 Fax 989-922-3915 www.quantumcomposites.com

Preliminary Product Data Sheet
AMC® 8593 (XP126-76-113)
Engineered Structural Composite (ESC) Molding Compound

AMC 8593 (XP126-76-113) is a chopped 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 3K tow.

TYPICAL PROPERTIES – UNCURED

Form and Color	.Sheet, Black	Fiber Length	1.0 inch
Carbon Fiber Content	53%	Shelf Life: @ 75°F	2 months

TYPICAL PROPERTIES -- CURED

Test	Procedure	Value
Specific Gravity	ASTM D-792	1.47
Molding Shrinkage, inch/inch (mm/mm)	ASTM D-955	<0.000 (<0.000)
Flexural Strength, psi (MPa)[1]	ASTM D-790	115,000 (792)
Flexural Modulus, psi (GPa)[1]	ASTM D-790	6.5×10^6 (44.70)
Tensile Strength, psi (MPa)[1]	ASTM D-638	61,000 (421)
Izod Impact (notched), ft.lb./in. (J/M)	ASTM D-256	33 (1762)
Heat Deflection Temp. °F (°C)	ASTM D-648	>550 (287)
Glass Transition Temp. °F (°C)		245 (118)

Molding Suggestions -- AMC 8593 (XP126-76-113) 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.

Precautions – AMC 8593 (XP126-76-113) 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.

[1] Tensile and Flexural Properties are determined using net shape molded specimens. Values obtained on cut specimens will typically be lower.