

# Quantum LYTEX™ SF 6090

## Sheet Molding Compound

### PRODUCT DESCRIPTION

Styrene-free carbon fiber reinforced epoxy molding compound

### GENERAL

<b>Material Status</b>	• Commercial: Development		
<b>Availability</b>	• North America	• Europe	• Asia Pacific
<b>Filler/Reinforcement</b>	• 12K PAN Carbon Fiber	• Nominal 50% w/w	• Combination 25mm and 50mm
<b>Features</b>	• Styrene-free • High stiffness • High strength	• Fatigue resistance • Black or Natural Color • Shelf Life 6 months @ 10°F or below	
<b>Processing Method</b>	• <b>LYTEX™ SF 6090</b> can be molded at temperatures in the range of 260-325°F, with 300°F suggested as a starting point. Cure times will be dependent on molding temperature and part thickness and will typically be 6-10 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. Matched metal die molds.		
<b>Resin ID (ISO 1043)</b>	• Epoxy Composite		

PHYSICAL	Typical	Unit	Test Method
Density	1.45	g/cm <sup>3</sup>	ASTM D792
Shrinkage	-0.001	in/in	cold mold to cold part
CLTE, X-Y plane	5	ppm/°C	ASTM E831
CLTE, Z plane	52	ppm/°C	ASTM E831
Poisson's Ratio	0.33	psi (MPa)	ASTM D638

MECHANICAL (Machined)	Typical	Unit	Test Method
Tensile Modulus	5.0E+6 (34,500)	psi (MPa)	ASTM D3039
Tensile Stress (Break)	26,000 (179)	psi (MPa)	ASTM D3039
Flexural Modulus	4.7E+6 (32,400)	psi (MPa)	ASTM D790
Flexural Stress (Break)	67,000 (462)	psi (MPa)	ASTM D790

Machined Properties are determined using specimen machined from molded 12"x12" panels with 80% mold coverage, 1000 psi pressure, 280-300°F mold temperature for 6-10 minutes

Page 1 of 2

The information and recommendations contained in this document are based upon data collected by A. Schulman and are believed to be reliable; however, because A. Schulman cannot anticipate or control the many different conditions under which this information and/or product may be used, no representation is made and no warranty is given of any kind, express or implied, for completeness, accuracy, availability, suitability, usefulness, commercial value, or non-violation of intellectual property rights of information, recommendation, and products and services directly or indirectly provided. A. Schulman assumes no responsibility for the results of the use of products and processes described herein and expressly disclaims the implied warranties of merchantability and fitness for a particular use

# Quantum LYTEX™ SF 6090

## Sheet Molding Compound

<b>MECHANICAL (Net Shape)</b>	<b>Typical</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Modulus	9.5E+6 (65,500)	psi (MPa)	ASTM D638
Tensile Stress (Break)	35,000 (241)	psi (MPa)	ASTM D638
Flexural Modulus	7.5E+6 (51,700)	psi (MPa)	ASTM D790
Flexural Stress (Break)	95,000 (655)	psi (MPa)	ASTM D790

Machined Properties are determined using specimen molded to net shape, 1000 psi pressure, 280-300°F mold temperature for 6-10 minutes

<b>THERMAL</b>	<b>Typical</b>	<b>Unit</b>	<b>Test Method</b>
Glass Transition $T_g$ , TanDelta	160	°C	ASTM D7028
Glass Transition $T_g$ , Storage Modulus	125	°C	ASTM D7028

For additional information, please contact:

**A. Schulman Inc., Engineered Composites**  
**Quantum Composites, Inc.**  
1310 South Valley Center Drive  
Bay City, MI 48604  
p: 989-922-3863  
f: 989-922-3915  
[www.aschulman.com](http://www.aschulman.com)

Page 2 of 2

Revision Date: January 12, 2017

The information and recommendations contained in this document are based upon data collected by A. Schulman and are believed to be reliable; however, because A. Schulman cannot anticipate or control the many different conditions under which this information and/or product may be used, no representation is made and no warranty is given of any kind, express or implied, for completeness, accuracy, availability, suitability, usefulness, commercial value, or non-violation of intellectual property rights of information, recommendation, and products and services directly or indirectly provided. A. Schulman assumes no responsibility for the results of the use of products and processes described herein and expressly disclaims the implied warranties of merchantability and fitness for a particular use.