

Product Data Sheet  
**LYTEX<sup>®</sup> 4084**  
Engineered Structural Composite (ESC) Molding Compound

LYTEX 4084 is an epoxy high performance ESC molding compound designed for military and aerospace structural applications requiring excellent mechanical properties, retention of properties at elevated temperatures, good chemical resistance and excellent electrical properties. It is the 1-inch fiber version of LYTEX 9063.

TYPICAL PROPERTIES -- UNCURED

Form ..... Sheet      Glass Content ..... 63%  
Colors ..... Black      Glass Length ..... 1 inch  
Shelf Life: @ 0°F ..... 6 months      Spiral Flow: @325°F ..... 12 in.

TYPICAL PROPERTIES -- CURED

<u>Test</u>	<u>Procedure</u>	<u>Value</u>
Specific Gravity	ASTM D-792	1.85
Water Absorption, %	ASTM D-570	0.08%
Shrinkage, inch/inch (mm/mm)	ASTM D-955	0.0005 (0.0005)
Flexural Strength, psi (MPa) <sup>1</sup>	ASTM D-790	69,000 (475)
Flexural Modulus, psi (GPa) <sup>1</sup>	ASTM D-790	2.8x10 <sup>6</sup> (193)
Tensile Strength, psi (MPa) <sup>1</sup>	ASTM D-638	39,000 (268)
Izod Impact, notched, ft.lb./in. (J/M)	ASTM D-256	44 (2350)
Dielectric Strength, vpm	ASTM D-149	500
Volume Resistivity, ohm-cm	ASTM D-257	3x10 <sup>14</sup>
Dissipation Factor, 100Hz	ASTM D-150	0.008
Dielectric Constant, 100 Hz	ASTM D-150	4.3
Heat Deflection Temperature, °F (°C)	ASTM D-648	575 (300)
Cont. Use Temperature, °F (°C)		350 (175)

Variations -- LYTEX 4084 is also available with glass lengths of 1/2 inch (9063) and 2 inches (4004). Other variations, including colors and flame retardancy, can be made to special order.

Handling Suggestions -- LYTEX 4084 which is uncured should have minimum exposure to moisture. Dielectric preheating is recommended as an aid in proper shaping and placing of the mold charge. Mold temperatures in the range of 250-330°F can be utilized, with 280°F suggested as a starting point. Cure times will be dependent on temperature and part thickness and will typically be 5-10 minutes.

Precautions -- LYTEX 4084 contains glass fibers and should be handled carefully in order to minimize skin contact. Molding areas should be well-ventilated to minimize exposure to fumes. Presses and preheaters 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.

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.

®LYTEX is a registered trademark of Quantum Composites, Inc.

<sup>1</sup>Tensile and Flexural Properties are determined using net shape molded specimens. Values obtained on cut specimens will typically be lower.