

**Product Data Sheet
LYTEX® 4129
Engineered Structural Composite (ESC) Molding Compound**

LYTEX 4129 is an epoxy high performance, glass fiber reinforced 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.

LYTEX 4129 has a longer out-time than LYTEX 9063. It can be stored for several weeks at room temperature, although long-term storage is still recommended at 0°F. LYTEX 4129 has a softer sheet with longer flow. Overall handling and resultant physical properties are similar to those of LYTEX 9063.

TYPICAL PROPERTIES -- UNCURED

Form, Color Sheet, Black Glass Length 0.5 inches
Shelf Life: @ 0°F 6 months Glass Content 63%
Spiral Flow: @325°F (Mesa, 4000 psi) 20 inches

TYPICAL PROPERTIES -- CURED

Test	Procedure	Value
Specific Gravity	ASTM D-792	1.82
Water Absorption, %	ASTM D-570	0.07%
Shrinkage, inch/inch (mm/mm)	ASTM D-955	0.001 (0.001)
Flexural Strength, psi (MPa) ¹	ASTM D-790	64,000 (440)
Flexural Modulus, psi (GPa) ¹	ASTM D-790	2.4x10 ⁶ (16.5)
Tensile Strength, psi (MPa) ¹	ASTM D-638	38,000 (262)
Izod Impact, notched, ft.lb./in. (J/M)	ASTM D-256	35 (1869)
Dielectric Strength, vpm	ASTM D-149	500
Volume Resistivity, ohm-cm	ASTM D-257	3x10 ¹⁴
Dissipation Factor, 100 Hz	ASTM D-150	0.008
Dielectric Constant, 100 Hz	ASTM D-150	4.3
Heat Deflection Temperature, °F (°C)	ASTM D-648	>575 (300)

Variations -- LYTEX 4129 is also available with glass lengths of 1 inch and 2 inches. Other variations, including colors and flame retardancy, can be made to special order.

Handling Suggestions -- LYTEX 4129 that is uncured should have minimum exposure to moisture. Dielectric preheating to 140-160°F is recommended as an aid in proper shaping and placing of the mold charge. Mold temperatures in the range of 270-330°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. Detailed molding suggestions are available on request.

Precautions-- LYTEX 4129 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.

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