

Technical Data Sheet
Quantum Lytex 4149
 Engineered Composites



Product Description

Carbon fiber reinforced epoxy molding compound

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• 3K PAN Carbon Fiber	• Nominal 55% w/w	• Nominal 1" (25 mm) Length
Features	• Fatigue Resistance • High Strength	• High Stiffness • Black Color	• Shelf Life 6 months @ 10°F or below
Processing Method	• Lytex 4149 can be molded at temperatures in the range of 260-340°F, with 325°F suggested as a starting point. Cure times will be dependent on molding temperature and part thickness and will typically be 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 molds.		
Resin	• Epoxy		

Physical	Typical	Unit	Test Method
Density	1.48	g/cm ³	ASTM D792
Shrinkage	<0.001	in/in	ASTM D955
CLTE, X – Y plane	6	ppm/°C	ASTM E831
CLTE, Z plane	75	ppm/°C	ASTM E831
Poisson's Ratio	0.33		ASTM D638
Mechanical (Machined)	Typical	Unit	Test Method
Tensile Modulus	5.0 E+6 (34,500)	psi (MPa)	ASTM D3039
Tensile Strength	37,000 (255)	psi (MPa)	ASTM D3039
Flexural Modulus	4.6 E+6 (31,700)	psi (MPa)	ASTM D790
Flexural Strength	80,000 (552)	psi (MPa)	ASTM D790
Short Beam Shear	6,000 (41.4)	psi (MPa)	ASTM D2344
Mechanical (As Molded)	Typical	Unit	Test Method
Tensile Modulus	8.0 E+6 (55,100)	psi (MPa)	ASTM D638
Tensile Strength	42,000 (289)	psi (MPa)	ASTM D638
Flexural Modulus	5.0 E+6 (34,500)	psi (MPa)	ASTM D790
Flexural Strength	89,000 (613)	psi (MPa)	ASTM D790
Impact	Typical	Unit	Test Method
Izod Notched Impact Strength	18 (960)	ft-lb/in (J/m)	ASTM D256
Thermal	Typical	Unit	Test Method
Glass Transition T _g , TanDelta	329 (165)	°F (°C)	ASTM D7028
Glass Transition T _g , Storage Modulus	275 (135)	°F (°C)	ASTM D7028

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Notes

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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