



Composites For Today's Challenges

Franklin Fibre - Lamitex Corp.

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Lamitex® EK50

Lamitex® EK50 is a Kevlar®aramid fabric with a high temperature phenolic bond. It possesses excellent moisture and chemical resistance while maintaining dependable dimensional stability in continuous high temperature environments. EK50 is custom formulated for use as rotor vane material in compressors and vacuum pumps for industrial processing and liquefied gas transfer. It is also an exceptional material for high temperature bearings, wear strips and other high temperature and high load bearing applications.

Test

<u>Physical Properties</u>	<u>Condition</u>		<u>ASTM</u>	<u>EK-50</u>
Specific Gravity			D792	1.42
Rockwell Hardness (M scale)			D785	100
Moisture Absorption (.125")	D ₁ -24/23		D570	0.23%
Flexural Strength (.125")	Condition A	LW	D790	41,300 psi / 284.8 MPa
		CW		19,100 psi / 131.7 MPa
	E-1/1500 T150	LW	D790	33,700 psi / 232.4 MPa
		CW		16,100 psi / 111.0 MPa
Flexural Modulus (.125")	Condition A	LW	D790	1,800 kpsi / 12.4 GPa
		CW		1,700 kpsi / 11.7 GPa
Tensile Strength (.125")	Condition A	LW	D638	26,200 psi / 180.6 MPa 9,100 psi / 62.7 MPa
Izod Impact Strength (.500")	Condition A	LW	D256	13.0 ft-lb/in / 6.94 J/cm
		CW		9.0 ft-lb/in / 4.80 J/cm
Compressive Strength (.500")	Condition A	Flatwise	D695	27,600 psi / 190.3 MPa
Bond Strength	Condition A		D229	2,500 lbs. / 1,134.0 kg
Shear Strength	Condition A	Perpendicular	D732	17,000 psi / 117.2 MPa
Young's Modulus	Condition A	LW		5.4 million psi / 37,230 MPA
		CW		3.3 million psi / 23,442 MPA
				steel = 29 million psi
Poisson's Ratio				0.3/0.40
<u>Thermal Properties</u>				
Temperature Index (UL Bulletin 746b)	Mechanical			130°C
Glass Transition (Tg)				162°C
Coefficient of Linear Thermal Expansion	X Axis / Y Axis		E831	44.4" / " / °C x 10 ⁻⁶
	Y Axis			26.0" / " / °C x 10-6

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Composite Tubes • Bearings • Molded Shapes • Rotary Vanes • Fabricated Parts • Vulcanized Fibre • High Temp Insulation

All information and suggestions pertaining to the properties and uses of the materials described herein are based upon tests and data believed to be accurate; however, the final determination regarding the suitability of any material for such use is the sole responsibility of the user. No warranty is expressed or implied, including, without limitation, warrant of merchantability or fitness for a particular purpose. Under no circumstances shall Franklin Fibre - Lamitex Corp be liable for incidental or consequential loss or damage.