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MANUFACTURERS & FABRICATORS OF
ELECTRICAL INSULATION MATERIALS
SINCE 1921

Composites for Today's Challenges

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MATERIAL DATA SHEET

Material: Lamitex® Grade EK-50 Aramid Epoxy Laminate Sheet

Description: Lamitex® EK-50 is an aramid fibre fabric composite bonded with a high temperature epoxy resin. It has exceptional mechanical strengths and low moisture absorption properties. EK-50 is well suited for lubricated air motor applications.

Standards:

Availability: EK-50 is also manufactured as fabricated custom parts.

Mechanical Properties	Test Condition		ASTM	Typical Values
Thickness				0.125 in.
Specific Gravity			D792	1.32
Rockwell Hardness (M Scale)			D785	105
Moisture Absorption (maximum)			D570	0.50%
Flexural Strength	Condition A:	Lengthwise	D229	48,000 psi
		Crosswise		20,000 psi
Hot Flexural Strength	E-1/150	Lengthwise	D790	12,000 psi
		Crosswise		6,000 psi
Flexural Modulus	Condition A:	Lengthwise		1.8 x 10 ⁶ psi
		Crosswise		1.7 x 10 ⁶ psi
Tensile Strength	Condition A:	Lengthwise	D638	29,000 psi
		Crosswise		26,000 psi
Compressive Strength	Condition A:	Flatwise	D695	32,000 psi
		Crosswise		- -
Izod Impact Strength (.500" thick)	E48/50:	Lengthwise	D256	15.0 ft-lb/in.(notch)
		Crosswise		4.0 ft-lb/in.(notch)
Bond Strength (.500" thick)	Condition A		D229	2,400 lbs

Thermal Properties

Coefficient of Thermal Expansion	x-axis	D24/23	40 in./in./°C x 10 ⁻⁶
	y-axis		20 in./in./°C x 10 ⁻⁶
Maximum Operating Temperature			347°F (175°C)

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