FRANKLIN

Composites for Today's Challenges

Franklin Fibre - Lamitex Corp
903 E. 13th St., Wilmington, DE 19802

P : (302) 652-3621
F : (302) 571-9754
info@franklinfibre.com

Lamitex® G-10 CR Glass/Epoxy Sheet

Lamitex® G-10CR epoxy laminated sheet exhibits high mechanical strengths and electrical insulating qualitites under dry, humid and extreme temperature conditions. It is formulated for use in cryogenic applications, including liquid nitrogen which under normal atmospheric pressure can exist as a liquid between 63° and 77.2° K (-346°F & 320.4°F. Lamitex G-10CR meets or exceeds NEMA G10 and Mil-I-24768/2 specifications and has excellent resistance to most chemicals.

Physical Properties	Test Condition		ASTM	Values
Thickness				.125"
Specific Gravity			D792	1.80
Rockwell Hardness (.250")			D785	100 (M Scale)
Moisture Absorption (.062")	D_1-24/23		D229	< 0.1%
Flexural Strength (.062")	Condition A:	Lengthwise	D229	75,000 psi
		Crosswise		65,000 psi
Flexural Modulus (.062")	Condition A:	Lengthwise	D229	2,700 kpsi
		Crosswise		2,400 kpsi
Tensile Strength	Condition A:	Lengthwise		45,000 psi
		Crosswise		38,000 psi
Compressive Strength (.500")	Condition A:	Flatwise	D695	65,000 psi
Izod Impact Strength (.500" thick)	E-48/50:	Lengthwise	D229	14.0 ft-lb/in.(notch)
		Crosswise		12.0 ft-lb/in.(notch)
Bond Strength (.500" thick)	Condition A		D229	2,200 lbs
Shear Strength	Condition A	Perpendicular		22,000 psi
Thermal & Electrical Properties				
Temperature Index		Electrical		130° C
		Mechanical		140° C
Coefficient of Thermal Expansion		x-axis / y-axis		10.0 / 13.0 cm/cm/°C/ x 10^{-6}
U.L.® 94 Flammability Rating				94HB
Glass Transition (Tg)				115° C
Thermal Endurance (0.125")				135° C
Dissipation Factor (.062")	D_1-24/23 48/50			0.025
Permittivity (.062")	D_1-24/23 48/50			4.8
Dielectric Breakdown Voltage (.062")	Condition A		D229	60.0 kV
	D 48/50		D229	50.0 kV
Dielectric Strength (.062)	Condition A		D229	670 Vpm
	D 48/50		D229	660 Vpm
Arc Resistance (0.125")	Condition A		D-498	100 sec
Comparative Tracking Index (0.125")	Condition A		D-3638	150V

Actual testing on glass/epoxy laminates at cryogenic temperatures poses a significant problem with conventional tes apparatus and fixtures in this environment. Lamitex G10/CR has performed in such cryogenic applications with no to date failures. This data is provided as information only and no warranty is expressed or implied, including, without limitaion, 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.