FRANKLIN
LAMITEX, LLC

Composites For Today's Challenges

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Lamitex G-7 Laminated Sheet

Lamitex® G7 glass/silicone laminated sheets are primarily used for mechanical, electrical and electronic applications where high mechanical strengths are required at temperatures up to 220° C. Lamitex G-7 meets or exceeds NEMA G-7 and Mil-I-24768/17 specifications, meets UL 94 class V0, has extremely good dielectric loss properties under dry conditions and good electrical properties under humid conditions. Lamitex G-7 is available in sheet and convoluted wound rolled tubes.

		Test Specimen		
Mechanical Properties	**Standard**	**Thickness**	**Values**	
Flexural Strength	ISO 178	≥1.6 mm	135 MPa / 19,580 psi	*1
Modulus of Elasticity	ISO 178	≥1.6 mm	13 GPa / 1,885.4 kpsi	*1
Compressive Strength	ISO 604	≥5.0 mm	330 MPa / 65,270 psi	*1
Izod Impact Strength Parallel	ISO 180/2A	≥5.0 mm	45 kJ/m^2 / 6.5 ft-lb/in.(notch)	*1
Shearing Strength	EN 60893-2	≥5.0 mm	15 MPa / 2,175 psi	*1
Coefficient of Thermal Expansion			10.0 cm/cm/°C/ x 10-6	
Bond Strength		12.7 mm	178.7 kg / 650 lbs	*1
Tensile	ISO 527	≥1.6 mm	160 MPa / 19,580 psi	*1
Electrical Properties				
Electric Strength in oil @ 90C:				
3 mm, Perpendicular to Laminations	IEC 243-1	3.0 mm	7 kV/mm - 177 V/mil	*2
25 mm, Parallel to Laminations	IEC 243-1	≥3.0 mm	50 kV/ 25 mm - 51 kV/in	*2
Permittivity: 50 MHz and 1 MHz	IEC 250	≥1.6 mm	4.0	*3
Dissipation Factor: 50 MHz and 1 MHz	IEC 250	≥1.6 mm	0.003	*3
Insulation resistance after immersion in water	IEC 167	All	100,000 M Ω	*4
Arc Resistance	ASTM D229		180 sec	*1
Comparative Tracking Index	IEC 112	≥3.0mm	400 CTI	*1
Physical and Thermal Properties				
Temperature index @ 20,000 hrs	IEC 216	≥3.0 mm	210°C Temp Index	
Fire class	IEC 60695-11-10	≥5.0 mm	V-0	
Density	IEC 1183-A	All	1.90 g/cm3	*1
Water Absorption	IEC 62-1	50x50x3 mm	20 mg	*4

IEC 212Conditioning: 1: 24h @ 23°C & 50%RH
2: 24h @ 23°C & 50%RH + 1hr in oil at 90°C
3: 96h @ 105°C + 1hr @ 23°C & 20%RH
4: 24h @ **50**°C + 24hr in water at 23°C