

G-10 Laminates



G-10 Fiberglass Epoxy Laminate

Description:

G-10 fiberglass epoxy glass laminate sheet is made from fiberglass cloth and epoxy resin by hot pressing and drying into the plate-type insulating material.

G-10 is non-bromide products with UL grade 94HB, meet NEMA G-10, MIL-I-24768/2 GEE and IEC 60893 EP GC 201 specification, natural green color

Features:

- High mechanical properties under high temperature.
- Excellent Stability of dielectric properties under high moisture.
- Outstanding electrical properties under ordinary dry and humidity conditions.
- Complies with UL94 HB flame retardant standard.
- Excellent heat resistance, with an insulation class of B.
- MOT (max operation temperature) 130C.

Application:

- Bearings,
- Computer Electronics
- Carriers
- Electronic Boards
- Gaskets, Gears
- Industrial Electronics
- Machine Components
- Mechanical Lines
- PCB's fixture,
- Wave Soldering Pallet
- Surfboard fin
- Switches
- Terminal Boards
- Transformers
- Washers
- Wear Strip

Size Specification

Available thickness range: 0.1mm to 100mm

Available size: 915x1220mm 1020x1220mm 1220x2440mm

Size dimensions and thickness can be customized, max to 1220*3050mm

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Typical technical data

Test Item		Condition	Unit	Typical value
Dielectric withstanding Voltage	Z-axis	C-90/20/65 15	KV/mm	54
	X,Y-axis	0-0.5/90	KV	28
Isolated resistance	As received	C-90/20/65	MΩ	10 ⁶ -10 ⁸
	Boiled	C-90/20/65+D-2/100	MΩ	10 ⁴ -10 ⁶
Surface resistance		C-96/35/90	MΩ-cm	10 ⁷ -10 ⁹
Volume resistance		C-96/35/90	MΩ	10 ⁶ -10 ⁸
Relative Permittivity (1MHz)		Fluid cell		4.2-4.7
Dissipation Factor (1MHz)		Fluid cell		0.030-0.035
Arc Resistance		ASTM D495	Sec	120-140
Comparative Tracking Index		ASTM D3638	V	175-250
Flexural Strength	Y-axis	ASTM D790	MPa	400-500
	X-axis		Mpa	450-550
Compressive Strength	Y-axis	ASTM D695	MPa	340-440
	X-axis		MPa	290-390
Tensile Strength		ASM D882	MPa	250-350
Flexural Modulus		ASTM D790	MPa	21560-24500
Bonding strength		D-48/50	KN	8.0-10.0
Rockwell Hardness		ASTM D785	HR-R A	120-125
Izod Impact Strength	X-axis	ASTM D256	J/cm	5.4-6.4
Tg	DSC	IPC-TM-650 2.4.25	C	135
Moisture Absorption	1.0mm thickness	E-24/50+D-24/23	%	0.1-0.8
Specific Gravity		As received	g/cm ³	1.95
Coefficient of Thermal Expansion	X,Y-axis	RT~ 200C	PPM/C	11-14
	Z-axis	RT~ 125C	PPM/C	45-50
		125-200C	PPM/C	250-260
Flammability	UL94	Rating		HB
Thermal reliability		130C/2Hr		pass
		280C/30s		Pass
Relative Temperature Index (RTI,MOT)		UL 746E	C	130
Insolation level		IEC 60216-1	Class	B

Note: All test data provided are typical values and are not intended to be specification values.