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ELECTRICAL INSULATION MATERIALS
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TECHNICAL DATA SHEET
NEMA G-10

Item:	**NEMA G-10 Glass Epoxy Laminate**			
Description:	NEMA Grade G-10 materials are 7628 fiberglass reinforced laminates,bonded with epoxy resin.With high mechanical and dielectric properties,good heat and wave resistance,also with good machinability;This product can meet the EU ROHS standard,it is widely export to southeast Aisa, European, India,etc.			
Standards:	NEMA LI-1 Grade G10 ● IEC60893:EPGC201(sheet) ● GB/T 1303.2.2009			
Application:	Suitable for application in high performance electric insulation requirements of products, such as FPC reinforcement plate, PCB drilling pad, fiberglass meson, glass fiber board potentiometer carbon film printing, precision tour stars gear grinding (chip), precision test plate, electrical (electrical) equipment insulation stay clapboard, insulating plate, transformer insulation board, motor insulation parts, grinding wheel, Electronic switch insulation board, etc			
Availability:	Laminate Sheets:		English Units(in)	SI unites(mm/cm)
		Thickness	0.008″-4.0″	0.2-101.6(mm)
		Sheet Size	40″ x 48″ 48″ x 80″ 48″ x 96″	102cm x 122cm 122cm x 204cm 122cm x 244cm
	Fabricated parts:	Xinxing Insulation custom fabricates insulation materials to the exact specifications and drawings of our customers		

TYPICAL PROPERTIES OF G10/EPGC201 SHEET

Key Characteristic	Units	IEC Requirement	Typical Values	Test Methods
PHYSICAL				
Standard color	--	--	Light green[1]	
Density	g/cm^3	1.8-2.0	1.8-2.0[2]	IEC60893-3-2
Water Absorption,24 hrs 3mm	mg	22 max	18	IEC60893-3-2
MECHANICAL				
Flexural strength perpendicular to laminations (MD)	MPa	340 min	521	IEC60893-3-2
Charpy impact strength parallel to laminations (Notched)	kJ/m^2	42 min	63.8	IEC60893-3-2
Tensile strength(MD)	MPa	300 min	412	IEC60893-3-2
Compressive strength	MPa	350 min	527	IEC60893-3-2
THERMAL				
Temperature Index	℃	130	130	-
Flammability	Class	HB	HB	UL-94

ELECTRICAL				
Electric strength perpendicular to laminations (at 90℃±2℃ in oil), 1mm in thickness	kV/mm	14.2 min	18.8	IEC60893-3-2
Breakdown voltage parallel to laminations(at 90℃±2℃ in oil)	kV	45 min	88.3	IEC60893-3-2
Insulation resistance(after 24h immersion in water)	MΩ	$5x10^4$ min	$2.3x10^6$	IEC60893-3-2
Relative Permittivity(50Hz)	--	5.5 max	5.13	IEC60893-3-2
Dielectric dissipation(50Hz)	--	0.04 max	0.032	IEC60893-3-2
Comparative tracking index	--	200 min	CTI 600[3]	IEC60893-3-2

[1]Custom colors available upon request

[2]The density of our pure epoxy fiberglass laminate sheet is about 1.9g/cm^3,Custom formula available upon request

[3]The higher the CTI value, the better the electrical insulation performance of the material and the stronger the ability to resist electrical corrosion. That means the material is less likely to catch fire when it encounters an electric spark. Because electric appliances in the operation process, the circuit control system is easy to encounter electrical sparks, if the use of high CTI material, you can effectively avoid the fire caused by electrical sparks. In the design and manufacture of electrical equipment, the CTI value is an important indicator that can be used to evaluate the safety and reliability of materials to ensure that the equipment will not present electrical faults or hazards when used.

The above values are for reference only and are taken from the average test results, and do not represent complete consistency with the actual performance of the material.