

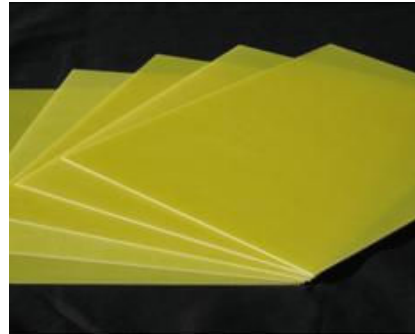
FR4 Unclad Epoxy TS-4000

TS-4000 is a woven glass fabric combined with epoxy resin comprised of flame retardant. This grade qualifies to meet UL-94 V0. Also TS-4000 offers high mechanical strength, good dielectric loss and electric strength under both dry and humid condition.

TS-4000 a RoHS compliant unclad epoxy is suitable for a variety application of structural with electrical insulation property and mechanical property.

TS-4000 has a superior property:-

- high mechanical strength
- machine ability in drill, cutting, milling etc.
- excellent electrical insulation
- low water / moisture absorption
- Flame retardant meet UL94V-0 rating
- RoSH compliant material



So TS-4000 is suitable and benefit of use in variety of application such as:-

- structural Jig & Fixture
- Test & Fixture
- Burn in test fixture/rack
- Hi-Voltage insulation



UL-Recognized FR4 File Number E174552

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Properties		unit	Typical Value	Condition
Density		g/cm ³	1.88	A
Water absorption		%	0.12	E-24/50 + D-24/23
Rockwell hardness		HRM	110	A
Surface roughness		µm	2.3	A
Flexural Strength	CW	MPa	550	A
	LW	MPa	580	A
Breakdown Voltage		kV	70	D-48/50
Dielectric Constant 1 MHz			5.4	C-40/23/50
Dissipation Factor 1 MHz			0.035	C-40/23/50
Arc Resistance		sec.	126	D-48/50
Tg		°C	135	E-2/105
Flamability Rating UL94			94V-0	C-24/23/50+E-24/125
Thickness Tolerance	Product Type			
	0.40-0.60 mm	Micron	30-40	Micrometer
	0.60-0.80 mm	Micron	40-50	Micrometer
	0.80-1.20 mm	Micron	50-60	Micrometer

A = as received with out condition, C = humidity condition, D = immersed in water at constant temperature, E = temperature condition

(All data and values of this technical information are provided for information purpose only.)

Available:

Standard Size: 500 mm × 500 mm., 600 mm. ×600 mm.