Current Industrial Composites

Sheeting · Tubes · Rods · Fabricated Parts · Epoxy · Phenolic

MATERIAL DATA SHEET

Material: Grade CE Cotton/Phenolic Laminate Sheet

Description: CE cotton/phenolic sheets are intended for use in electrical applications requiring good moisture resistance and good mechanical strength. It has lower mechanical strength than materials with glass substrates but has superior impact resistance when compared to paper-based laminates. CE possesses good dielectric properties and medium dielectric loss.

Standards: NEMA LI-1 Grade CE

MIL-I-24768 / 14 Type FBG

Physical Properties	Test Condition		ASTM	Typical Values
For Thickness				.125"
Specific Gravity			D792	1.33
Rockwell Hardness (M Scale)			D785	105
Water Absorption (maximum)			D229	1.60%
Flexural Strength	Condition A:	Lengthwise Crosswise	D229	16,500 psi 14,000 psi
Tensile Strength	Condition A:	Lengthwise Crosswise		11,000 psi 9,000 psi
Compressive Strength	Condition A:	Flatwise Edgewise	D695	39,000 psi 24,500 psi
Izod Impact Strength (.500" thick)	E48/40:	Lengthwise Crosswise	D229	1.6 ft-lb/in.(notch) 1.4 ft-lb/in.(notch)
Bond Strength (.500" thick)	Condition A D 48/50		D229	1,800 lbs

Thermal & Electrical Properties	Test Condition	ASTM	Typical Values
Temperature Index Electrical / Mechanical			125° C
Volume resistivity			N/A
Surface resistivity			N/A
Dielectric Breakdown Voltage (step x step)	Condition A / D 48/50	D229	35 kV
Maximum Permittivity @ 1 MHz	Condition A / D 24/23	D229	5.5
Maximum Dissipation @ 1 MHz	Condition A / D 24/23 / D48 / 50	D229	.048
Dielectric Strength (short time)	Condition A	D229	360 Vpm
Arc Resistance	Condition A	D 495	N/A