Current Industrial Composites

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

MATERIAL DATA SHEET

Material: Grade X Paper /Phenolic Laminate Sheet

Description: X paper/phenolic laminated sheet is primarily intended for mechanical application it has high relative mechanical properties but low electrical properties when compared to XX and XXX materials, precaution must be taken to prevent cracking, if the material is to be machined parallel to the lamination, it uses to make washer and spacer, panel.

Standards: NEMA LI-1 Grade X

MIL-I-24768 / 12 Type PBM

Physical Properties	Test Condition		ASTM	Typical Values
For Thickness				.125"
Specific Gravity			D792	1.36
Rockwell Hardness (M Scale)			D785	110
Water Absorption (maximum)			D229	3.30%
Flexural Strength	Condition A:	Lengthwise Crosswise	D229	25,000 psi 22,000 psi
Tensile Strength	Condition A:	Lengthwise Crosswise		20,000 psi 16,000 psi
Compressive Strength	Condition A:	Flatwise Edgewise	D695	36,000 psi 19,000 psi
Izod Impact Strength (.500" thick)	E48/40:	Lengthwise Crosswise	D229	.55 .50
Bond Strength (.500" thick)	Condition A D 48/50		D229	700 400

Thermal & Electrical Properties	Test Condition	ASTM	Typical Values
Temperature Index Electrical / Mechanical			130° C
Volume resistivity			N/A
Surface resistivity			N/A
Dielectric Breakdown Voltage (step x step)	Condition A / D 48/50	D229	23 KV
Maximum Permittivity @ 1 MHz	Condition A / D 24/23	D229	6
Maximum Dissipation @ 1 MHz	Condition A / D 24/23 / D48 / 50	D229	0.050
Dielectric Strength (short time)	Condition A	D229	500 VPM
Arc Resistance	Condition A	D 495	N/A