Current Industrial Composites

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

MATERIAL DATA SHEET

Material: Grade G-3 Glass/Phenolic Sheet

Description: G3 glass/phenolic laminated sheet is most frequently preferred for application that require high flexural and impact strengths and good electrical properties under low relative humidity conditions.

Standards: NEMA LI-1 Grade G-3

MIL-I-24768 / 18 Type GPG

Physical Properties	Test Condition		ASTM	Typical Values
For Thickness				.062"
Specific Gravity			D792	1.85
Rockwell Hardness (M Scale)			D785	100
Water Absorption (maximum)			D229	2%
Flexural Strength	Condition A:	Lengthwise Crosswise	D229	55,000 psi 50,000 psi
Tensile Strength	Condition A:	Lengthwise Crosswise		42,000 psi
Compressive Strength	Condition A:	Flatwise Edgewise	D695	76,000 psi 34,000 psi
Izod Impact Strength (.500" thick)	E48/40:	Lengthwise Crosswise	D229	6.5 ft-lb/in.(notch) 5.5 ft-lb/in.(notch)
Bond Strength (.500" thick)	Condition A D 48/50		D229	850 lbs. 700 lbs.

Thermal & Electrical Properties	Test Condition	ASTM	Typical Values
Temperature Index Electrical / Mechanical			170° C
Volume resistivity			$1.3x10^4$ megohms-cm
Surface resistivity			$4.6x10^4$ megohms
Dielectric Breakdown Voltage (step x step)	Condition A / D 48/50	D229	N/A
Maximum Permittivity @ 1 MHz	Condition A / D 24/23	D229	7.3
Maximum Dissipation @ 1 MHz	Condition A / D 24/23 / D48 / 50	D229	0.023
Dielectric Strength (short time)	Condition A	D229	600 Vpm
Arc Resistance	Condition A	D 495	N/A