Current Industrial Composites

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

MATERIAL DATA SHEET

Material: Grade G-5 Glass Melamine Laminate Sheet

Description: G-5 glass/melamine laminated sheet is most frequently preferred for applications that require high mechanical strength, exceptional arc resistance and self-extinguishing properties.

Standards: NEMA LI-1 Grade G-5

MIL-I-24768 / 8 Type GMG

Physical Properties	Test Condition		ASTM	Typical Values
For Thickness				.125"
Specific Gravity			D792	1.90
Rockwell Hardness (M Scale)			D785	120
Water Absorption (maximum)			D229	2.0%
Flexural Strength	Condition A:	Lengthwise	D229	44,000 psi
		Crosswise		38,000 psi
Tensile Strength	Condition A:	Lengthwise		37,000 psi
		Crosswise		30,000 psi
Compressive Strength	Condition A:	Flatwise	D695	70,000 psi
		Edgewise		25,000 psi
Izod Impact Strength (.500" thick)	E48/40:	Lengthwise	D229	7.0 ft-lb/in.(notch)
		Crosswise		5.5 ft-lb/in.(notch)
Bond Strength (.500" thick)	Condition A		D229	1,570 lbs
	D 48/50			1,400 lbs

Thermal & Electrical Properties	Test Condition	ASTM	Typical Values
Temperature Index Electrical / Mechanical			140° C
Volume resistivity			$6x10^7$ megohms-cm
Surface resistivity			$6x10^6$ megohms
Dielectric Breakdown Voltage (step x step)	Condition A / D 48/50	D229	23.0 kV / 5.0 kV
Maximum Permittivity @ 1 MHz	Condition A / D 24/23	D229	8
Maximum Dissipation @ 1 MHz	Condition A / D 24/23 / D48 / 50	D229	0.020
Dielectric Strength (short time)	Condition A	D229	260 Vpm
Arc Resistance	Condition A	D 495	185 seconds