

G-9 Glass/Melamine

G-9 is a woven glass fabric, melamine resin laminate. It is a very hard, flame resistant, machining grade phenolic with excellent electrical properties in high humidity conditions. It has high physical strength and excellent arc resistance. It is flame retardant, meeting UL94 flammability classification of V-0. It is designated by MIL-I-24768/1 Type GME and the NEMA grade is G-9.

Property	Units	G-9 Glass/Melamine
Physical		
Specific Gravity	-	1.85
Moisture Absorption (.062")	%	0.60
Mechanical		
Rockwell Hardness (.062")	M Scale	115
Flexural Strength (.062") LW	psi	61,000
CW	psi	51,100
Flexural Modulus (.062") LW	psi	2,000,000
CW	psi	1,700,000
Tensile Strength (.125") LW	psi	44,000
CW	psi	34,000
Izod Impact Strength E-48/50 (.500") LW	ft-lb/in	12.5
CW	ft-lb/in	8.5
Compressive Strength flatwise (.500")	psi	70,000
Bond Strength (.500")	lbs	1,900
Shear Strength (perpendicular) (.062")	psi	18,000
Thermal		
Maximum Operating Temperature	°F	284
Coefficient of Thermal Expansion (.062") X-axis	in/in/°F	8.3×10^{-6}
Y-axis	in/in/°F	10×10^{-6}
Flammability Rating - U. L. 94		V-0
Electrical		
Permittivity (.062") Condition D-24/23	-	7.03
Dissipation Factor (.062") Condition D-24/23	-	.015
Breakdown Voltage Condition - A (.062") D-48/50	V	65,000
Electric Strength Condition - A (.062") D-48/50	V/mil	450
Arc Resistance (.125") D-495	sec	185
Comparative Tracking Index (.125") D3638	-	600+

LW – Length Wise of the sheet, direction of manufacturing

CW – Cross Wise, perpendicular to Length Wise

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.