



# THE GUND COMPANY

Manufacturers & fabricators of engineered material solutions

Item:	Grade C-109: Semi-Conductive Glass Reinforced Laminate		
Description:	C-109 is a semi-conductive glass reinforced laminate that is typically utilized as middle or bottom filler insulation in the stator slots of large rotating apparatus. As a semi-conductive material, C-109 provides a pathway to dissipate partial discharge, static charges and flashovers to prevent the damaging effects of corona discharge.		
Availability:		English Units (in)	SI Units (mm)
	Thickness:	0.020 to 0.5	0.5 to 9.52
	Sheet Size:	36 x 72	914 x 1828
	Fabricated Parts:	The Gund Company custom fabricates insulation material to the exact specifications and drawings of our customers	

Key Characteristics	Test Method	Units - English (SI)	Typical Values
			C-109
Standard Color	--	--	Black
Density	--	lb/in <sup>3</sup> (g/cc)	0.054 (1.6)
Water Absorption (0.125")	ASTM D-570	%	0.5
Tensile Strength	ASTM D-638	psi (MPa)	16,500 (114)
Compressive Strength	ASTM D-695	psi (MPa)	42,000 (290)
Flexural Strength	ASTM D-790	psi (MPa)	Length-Wise 30,000 (207)
			Cross-Wise 33,000 (228)
Shear Strength	ASTM D-732	psi (MPa)	17,000 (117)
Relative Temperature Index <sup>1</sup>	UL 746B	°C	180
IZOD Impact Strength, Notched	ASTM D-256	ft-lbs/in	14
Bond Strength	ASTM D-229	lb (kg)	850 (386)
Surface Resistivity	ASTM D-257	Ohms/Square	500-50,000

<sup>1</sup> Flexural Strength tested for determining mechanical RTI



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Item:	Grade C-209: Semi-Conductive Glass Reinforced Laminate		
Description:	C-209 is a semi-conductive glass reinforced laminate that is utilized as side-pack, side insulation in the stator slots of large rotating apparatus. As a semi-conductive material, C-209 provides a pathway to dissipate partial discharge, static charges and flashovers to prevent the damaging effects of corona discharge.		
Availability:		English Units (in)	SI Units (mm)
	Thickness:	0.008 to 0.787	0.2 to 20
	Sheet Size:	42x84, 48x84, 48x110	1070x2140, 1240x2140, 1240x2800
	Fabricated Parts:	The Gund Company custom fabricates insulation material to the exact specifications and drawings of our customers	

Key Characteristics		Test Method	Units - English (SI)	Typical Values C-209
Standard Color		--	--	Black
Density		--	lb/in <sup>3</sup> (g/cc)	0.065 (1.8)
Water Absorption (0.125")		ASTM D-570	%	0.58
Tensile Strength		ASTM D-638	psi (MPa)	35,000 (214)
Compressive Strength		ASTM D-695	psi (MPa)	58,000 (400)
Flexural Strength	Length-Wise	ASTM D-790	psi (MPa)	57,000 (393)
	Cross-Wise			80,000 (550)
Shear Strength		ASTM D-732	psi (MPa)	21,000 (144)
Relative Temperature Index <sup>1</sup>		UL 746B	°C	180
IZOD Impact Strength, Notched		ASTM D-256	ft-lbs/in	LW: 13 CW: 8.5
Bond Strength		ASTM D-229	lb (kg)	920 (417)
Surface Resistivity		ASTM D-257	Ohms/Square	500-50,000

<sup>1</sup> Flexural Strength tested for determining mechanical RTI