



MANUFACTURERS OF
ELECTRICAL INSULATION MATERIALS
 INSULATING COMPONENTS FOR
POWER SYSTEMS EQUIPMENT

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MATERIAL DATA SHEET

Item: Grade SG-50 Ceramic Fiber Board

Description: SG-50 is a non-asbestos ceramic refractory reinforced with continuous fibers to increase the toughness, reliability, and overall performance of the ceramic composite. SG-50 can withstand extreme thermal shock, is chemically inert, unaffected by moisture, and non-wetting to non-ferrous metals.

Thermally and electrically insulating, SG-50 is an excellent material choice for virtually any structural application. It is widely used in concrete with or as a replacement for dense asbestos products, silicate/mica/phosphate based materials, vacuum-formed shapes and monolithic ceramics, where superior structural performance is required.

Availability:	Laminate Sheets:	Thickness:	English units 0.032"–1"	SI Units 0.8mm–25mm
		Sheet Sizes:	48"x48"	122cmx122cm
	Fabricated Parts:	TheGundCompany custom fabricates insulation materials to the exact specifications and drawings of our customers.		

Key Characteristics:	Test Method	Units - English (SI)	Typical Values
Composition			Non-asbestos ceramic fiber
Al ₂ O ₃			55%
SiO ₂			35%
Other Metal Oxides			10%
Density		lbs/in ³ (g/cc)	0.075(2.1)
Maximum Operating Temperature		°F(°C)	2,000(1,093)
Structural Use Temperature		°F(°C)	1,320(745)
Compressive Strength	ASTM D-695	psi(MPa)	15,500(107)
Flexural Strength	ASTM D-790	psi(MPa)	9,500(66)
Porosity		%	30
Volume Resistivity	ASTM D-257	Ohm x cm	74 x 10 ¹⁰
Dielectric Strength (flatwise)	ASTM D-149	V/mil(kV/mm)	100(3.9)
Dielectric Constant	ASTM D-150		4.5
Thermal Conductivity (1,200 °F)	ASTM C-177	BTU/in/hr/ft ² °F	4.83

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