

Canvas Phenolic

Machining and Electrical Grade Composites

Description and Overview

Canvas “C” grade phenolic is composed of a cotton canvas fabric base and a binding phenolic resin. It is known for its high strength, stability, and ease of machinability. When used to replace metal parts, it produces less overall noise during operation. C grade phenolic does not spark when struck and can be safely used in explosion-proof environments.

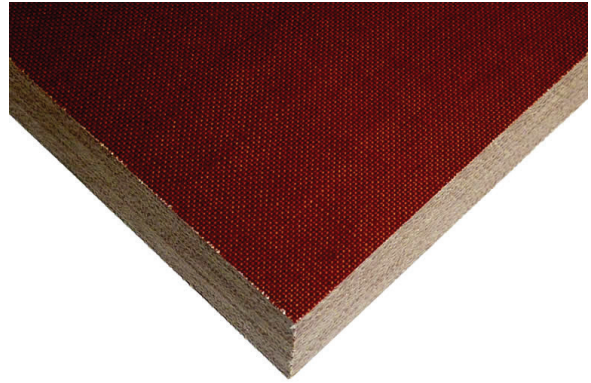
“CE” is the electrical grade version of canvas phenolic. It shares most of the same characteristics as C grade phenolic, but has stronger electrical properties. C and CE canvas phenolic are also known by the trade name Micarta.

Applications and Uses

Canvas C and CE grade phenolic share the same high strength and stability and are utilized for mechanical parts that do not need finer machined characteristics. CE grade phenolic is used for more specialized applications where insulation is required.

Canvas C grade phenolic complies with Mil-I-24768/16, Type FBM specifications. Canvas CE phenolic complies with Mil-I-24768/14, Type FBG specifications.

- Pulleys
- Gears
- Insulators
- Sheaves
- Bushings
- Washers
- Rollers



Max sheet size (canvas C): 48" x 96" (.125" to 5" thickness)

Rod (canvas CE): all 4 ft. long, .125" to 6" diameter

	CANVAS PHENOLIC C	CANVAS PHENOLIC CE
Military / Fed Spec	Mil-I-24768/16 Type FBM	Mil-I-24768/14 Type FBG
SPECIFIC GRAVITY	1.35	1.37
TENSILE STRENGTH (psi)	11,200	10,000
COMP. STRENGTH (psi)	37,000	36,000
FLEXURAL STRENGTH (psi)	22,000	17,000
HARDNESS, M SCALE	103	100
BOND STRENGTH (psi)	2,000	1,900
SHEAR STRENGTH (psi)	14,000	14,000
DISSIPATION FACTOR 10 ⁶ cycles, Cond A	-	0.048
DIELECTRIC CONSTANT 10 ⁶ cycles, Cond A	-	5.50
ELECTRIC STRENGTH V/MIL Cond A	-	550
FLAMMABILITY RATING	94HB	94HB
MAX OPER. TEMP°C/F	125/257	125/257
COEFF. THERMAL EXP. IN/IN°C X 10-5	1.10	2.00
WATER ABSORPTION % - 24 hrs	1.60	2.00
Izod Impact Strength (ft/lb/in) @49°C	1.95	1.70

