



C-STOCK LOW K

RoHS
Compliant

TECHNICAL BULLETIN 210-2

LOW LOSS PLASTIC STOCK WITH ADJUSTED DIELECTRIC CONSTANT

C-STOCK LOW K is a series of sheet stock materials with dielectric constants less than 2.0. These materials also exhibit low loss tangents and have densities well below conventional dielectrics.

C-STOCK LOW K is a rigid, low density, very fine-textured syntactic foam with excellent physical properties, and can be easily machined. Suggested uses include antenna, waveguide and coaxial support applications. High-Q RF coils using these materials display improved performance.

C-STOCK LOW K is available in sheets 12in x 12in. in a variety of thicknesses ranging from 0.25 to 1.5in. Parts can be readily machined with conventional machine tools. Assemblies can be built up using compatible C-Bond adhesives.

PHYSICAL PROPERTIES

	<u>Low K-39</u>	<u>Low K-34</u>
Service Temp., °C:	-70 to +150	
Density, lb/ft ³ :	39	34
Specific Gravity:	0.63	0.54
Thermal Conductivity, BTU-in/hr-ft ² °F:	0.70	0.60
Cal-cm/sec-cm ² °C:	2.4x10 ⁻⁴	2.1x10 ⁻⁴
Coefficient of Linear Expansion, per °C:	50x10 ⁻⁶	50x10 ⁻⁶
Water absorption, % gain in 24 hr @ 30°C:	<0.1	<0.1

ELECTRICAL PROPERTIES

	<u>Low K-39</u>	<u>Low K-34</u>
Dielectric Constant:	1.9	1.7
Dissipation Factor:	<0.004	<0.004
Volume Resistivity, ohm-cm:	10x10 ¹⁴	10x10 ¹⁴
Dielectric Strength, volts/mil:	300	260

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Document Control Number: N-13-000-0078-D
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