

## Cytec Thornel® VCL Carbon Cloth Laminate with Mil R-9299 Resin

Category : Polymer , Thermoset , Carbon Fiber/Thermoset Composite , Epoxy , Epoxy/Carbon Fiber Composite , Filled/Reinforced Thermoset

### Material Notes:

Data provided by the manufacturer, Amoco Performance Products, Inc. Carbon and graphite cloths, consisting entirely of flexible filaments, are produced by pyrolysis of rayon cloth at high temperatures to yield products with a high degree of purity. The cloth flexibility results from the very small filament diameter. These are fair conductors of electricity. At room temperature the volume resistivity of graphite cloth is about 40 times that of "Nichrome" wire. Graphite cloth resistance decreases with temperature, reaching half of the room temperature value at 1315°C. Cloth carbon assay is 97%. Filament diameter is 8.9 µm. Thornel® products were sold by Amoco and are now owned by Cytec.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Cytec-Thornel-VCL-Carbon-Cloth-Laminate-with-Mil-R-9299-Resin.php](http://www.lookpolymers.com/polymer_Cytec-Thornel-VCL-Carbon-Cloth-Laminate-with-Mil-R-9299-Resin.php)

Physical Properties	Metric	English	Comments
Density	1.40 g/cc	0.0506 lb/in³	Cloth 1.75 g/cc per He measurement

Mechanical Properties	Metric	English	Comments
Hardness, Barcol	65	65	
Tensile Strength, Ultimate	110 MPa	16000 psi	
Tensile Modulus	15.0 GPa	2180 ksi	
Flexural Yield Strength	170 MPa	24700 psi	
Flexural Modulus	14.0 GPa	2030 ksi	
Compressive Yield Strength	165 MPa	23900 psi	
Compressive Modulus	11.0 GPa	1600 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	14.0 µm/m-°C	7.78 µin/in-°F	Warp
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Specific Heat Capacity	1.20 J/g-°C	0.287 BTU/lb-°F	
Thermal Conductivity	6.00 W/m-K	41.6 BTU-in/hr-ft²-°F	

## Contact Songhan Plastic Technology Co.,Ltd.

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