

### HIGH TEMPERATURE LOW LOSS MATERIAL



Eccostock HT0003 is a rigid, low loss, high temperature, inert material. It is based on a thermosetting hydrocarbon resin and is filled with polytetrafluoroethylene giving it many of the desirable features of Teflon®. These include low loss, low friction surface, chemical resistance, etc. Eccostock HT0003 will not flow at high temperatures, but the surface may darken with no effect on the bulk properties of the material.

### FEATURES AND BENEFITS

- Low loss
- Chemical Resistance

### MARKETS

- Commercial Telecom
- Security and Defense

### SPECIFICATIONS

TYPICAL PROPERTIES	ECCOSTOCK HT0003
Service Temperature °C (°F)	<149 (<300)
Density g/cc	1.50
Dielectric Constant, 100 Hz to 10 GHz	2.2
Dielectric Strength, volts/mil (kv/mm)	500 (19.5)
Dissipation Factor	<0.0003
Insulation Resistance, ohm-cm	10 <sup>16</sup>
Flexural Strength, kg/cm <sup>2</sup> (psi)	157.5 (2,250)
Coefficient of Linear Expansion, cm/cm/°C	90x10 <sup>-6</sup>
Water absorption (%gain in 24h at 25°C)	0.02
Tensile Strength/Yield Strength, psi	1,400
Modulus of Elasticity, psi	20,450
<b>Outgassing</b> <b>(%TML) (%CVCM)*</b>	2.44/0.241

*Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.*

*\* Outgassing data per ASTM E595-07; criteria for acceptability is 1.00% TML and 0.10% CVCM.*

### APPLICATIONS

- Eccostock HT0003 is used for a variety of electrical insulating applications, stand-offs, dielectric windows, cavity tuning probes, patch antennas, and support pieces.

## AVAILABILITY

- Eccostock HT0003 is available in the following standard sizes:
- Sheets 12" x 12" (30.5cm x 30.5cm) in thicknesses of 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 1.0, 1.5, 2.0, 2.5 & 3.0" (0.32, 0.64, 0.95, 1.27, 1.59, 1.91, 2.54, 3.81, 5.08, 6.35 & 7.62 cm)
- Rods 12" long (30.5cm) in diameters of 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 1.0, 1.5, 2.0, 2.5 & 3.0" (0.32, 0.64, 0.95, 1.27, 1.59, 1.91, 2.54, 3.81, 5.08, 6.35 & 7.62 cm)
- Other sizes, shapes, thicknesses, and configurations are available on special order.

## INSTRUCTIONS FOR USE

- Eccostock HT0003 is easy to machine and a smooth low friction surface is readily obtainable. It will not gum on machining which can be done with standard cutting and grinding tools
- It can be bonded without etching.