



## Thorndike Corporation

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**Bulletin No.: 111-2000**

**Material: TC2000**

### MATERIAL CHARACTERISTICS

<b>Test Frequency:</b>	10.0 GHz
<b>Attenuation:</b>	>16.0 dB / cm at 10 GHz >2.0 dB / cm at 3 GHz
<b>Relative Permeability:</b>	2.62
<b>Relative Permittivity:</b>	12.3 with a 5% tolerance
<b>Loss Factor dB/inch:</b>	40.7
<b>Resistivity:</b>	>10E12 ohm cm
<b>Thermal Expansion:</b>	30 x 10E-6 per degrees C.
<b>Outgassing Characteristics:</b>	See note 1 below
<b>Color:</b>	Brown to Black
<b>Dielectric Strength:</b>	>380 kv/in
<b>Operating Temperature Range:</b>	to 350 degrees F.
<b>Tensile Strength:</b>	>7500 psi
<b>Water Absorption:</b>	<0.05% (20 days @ 25 deg. C.)
<b>Machinability:</b>	Excellent

#### Note 1:

#### **NASA CRITERIA FOR SPACE MATERIAL ACCEPTANCE**

- TML less than or equal to 1.0%
- CVCM less than or equal to 0.10%

#### **Outgassing characteristics:**

- 24 hr period at 125 deg. C. Vacuum of 10E-6 torr total weight loss, .238%
- Volatile condensable materials 0.008% on sample 1-3/16 x .060 in. thick

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