Material Properties

Liquid Crystal Polymer (Vectra®)

High temperature Liquid Crystal Polymer (LCP) plastic exhibits excellent mechanical strength and dimensional stability, high dielectric strength and low coefficient of thermal expansion. Provided in a standard off-white color or black (referenced by a "-B" suffix in the part number), it can be used continuously at 280°C (536°F), has a melt point of 335°C (635°F), is inherently flame retardant and meets the flammability requirements of UL 94V-O.

Vectra® is a registered trademark of Hoechst Celanese Corporation.

**Mechanical Properties**
- Compressive Strength: 20,000 psi
- Flexural Strength: 32,000 psi
- Flexural Modulus: 2.1 x 10^6 psi
- Izod Impact Strength: 3.9 ft. Lb./in.
- Shear Strength: 17,800 psi
- Tensile Strength: 30,000 psi
- Elongation: 1.7%
- Heat Distortion: 536°F (280°C) @ 264 psi
- Coefficient of Linear Thermal Expansion: -50°C to 200°C, Flow direction: 1 cm/cm/°C x 10^{-6}
- Specific Gravity: 1.62
- Water Absorption, to equilibrium: 0.04%
- Flammability: UL94 V-0 @ 0.031 thick

**Electrical Properties**
- Arc Resistance: 130 sec.
- Dielectric Strength Short Term: 1050V/MIL (1/6 in.)
- Dielectric Constant: 3.7 @ 1MHz
- Dissipation Factor: 0.03 @ 1MHz
- Volume Resistance: 1014 (ohm/cm)