



PEN Tubing

Bulletin #S-16

- PEN tubing is produced by spirally winding strips of PEN (Polyethylene Napthalate) film using a compatible adhesive for bonding the laminations. Tubing made of this material provides reliable insulation and excellent performance characteristics where a thin wall, high dielectric strength, and continuous operating temperature of 180°C are necessary.
- PEN Films can be used in virtually any combination of plastic films, papers, or substrates, which we currently spirally wind. This allows us to meet your exact application needs when the properties of more than one material are required. PEN Tubing is available in the following sizes:
- Inside Diameters .045” to 2.000”, Tolerance +/- .003”
- Wall Thickness .002” to .008”, Tolerance +/- .001”
- Lengths Up to 36”, Tolerance +/- .250” Std. - +/- .010” cut lengths
(For more critical tolerance needs, consult factory)

General Properties of PEN Films

Properties	Data
Melting Point	262°C
Service Temperature	Film – 160°C mechanical - 180°C electrical
Service Temperature	Adhesive - 180°C and above
*Dielectric Strength	2500 volts/ mil
Flammability	Nonflammable, UL 94 – VTM-2 rating
Resistance to ordinary industrial solvents, varnishes and acids	Excellent
Tear and puncture resistance	Excellent
Shrinkage in tubular form	Less than 1%
Resistance to Freon	Excellent
Corrosive effect on Copper	Negligible
Oligomer Extraction	1 hr. 23°C (mg/m ²) 0.8
(Methanol)	15 hr. 23°C (mg/m ²)

**Dielectric strength will vary according to gauge thickness of PEN Film.*

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Note: This material property information is the best currently available on the subject. The data should be viewed as a general guide to tube and material properties, not a performance guarantee. The customer should examine the suitability of the finished product for individual applications.