Polyimide Tubing

Properties

Tubing based on polyimide offer properties that far exceed those of conventional thermoplastics:

- Temperature resistance: permanent temperature 240 ° C, briefly up to 400 ° C.
- Resistant to radiation, solvents, acids, oil and low temperatures (cryogens).
- Possibility of lubricious coating inside and outside.
- Medical grade and industrial grade.
- Diameters up to 50.8 mm possible.

Polyimide tubing is manufactured using dip coating. The wall thickness is determined by the number of dives. Due to the process, no endless tubing can be manufactured, only piece lengths.

Technical Data

Dielectric Strength	134 kV/mm Minimum
Thermal Rating @ 20,000 h	240°C
Thermal Endurance	400°C Minimum
Tensile Strength	138 N/mm^2
Ultimate Tensile Strength @ 23°C	230 N/mm^2
Hoop Stress	76 N/mm^2 Minimum
Burst Strength	(Hoop Stress x Wall Thickness) / Outer Diameter
Chemical Resistance	Excellent, most solvents/solutions
Radiation Resistance	3.0 x 109 Gamma Dose Gy
Coefficient of Thermal Conductivity	35.0 x 10-5Cal/sec/cm2/°C/cm
Coefficient of Thermal Expansion	4.0 x 10^{-5}/°C
Elongation @ Break	50% nominal
Dielectric Constant	3.4
Melting Point	None
Density @ Room Temperature	1.42 g/cm^3

Dimensions

Small diameters:
• From 0.127 mm to 2.3 mm with thinnest wall thickness.
• Cutting in short lengths from 0.5 mm and tolerance of ± 0.025 mm.

Large diameters:
- Medical grade up to 6.35 mm
- Industrial grade up to 50.8 mm
- Lengths up to 1.3 m.
- Tight tolerances.
- Thin wall thicknesses from 0.0127 mm to 0.508 mm
- Low concentricity rates.

Colours

Natural (amber), black, dark red, purple, green.

Delivery Forms

• Pieces up to 1.32 m in length.
• Cut to length (for small diameters with a tolerance of ± 0.025 mm).