



Polyimide-based tubes offer outstanding properties that far exceed those of conventional thermoplastics. Polyimide tubes are manufactured using paste extrusion.

Polyimide tubing is manufactured using dip coating. The wall thickness is determined by the number of dips. Due to the nature of the process, it is not possible to manufacture continuous tubing, only lengths of tubing (random lengths).

Polyimide Tubing

Properties

- Temperature resistance: Continuous temperature 240°C, short-term up to 400°C.
- Resistant to radiation, solvents, acids, oil and ultra-low temperatures (cryogens).
- Possibility of lubricating coating inside and outside.
- Medical Grade and Industrial Grade.
- Diameter up to 50.8 mm possible

Technical data

Dielectric strength		134 kV/mm minimum
Temperature resistance at 20,000 h		240°C
Short term		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}
Compressive strength		(Hoop stress x wall thickness) / outer radius
Chemical resistance		Excellent against most solvents and solutions
Radiation resistance		3.0 x 10 ⁹ Gamma Dose Gy

Thermal conductivity coefficient		35.0 x 10 ⁻⁵ Cal/sec/cm ² /°C/cm
Coefficient of thermal expansion		4.0 x 10 ⁻⁵ /°C
Elongation at break		50% nominal
Dielectric constant		3.4
Melting point		None
Density at room temperature		1.42 g/cm ³

Further technical information

Small diameters:

- From 0.127 mm to 2.3 mm with the thinnest wall thicknesses.
- 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.

Colors

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

Delivery sizes

- Lengths up to 1.32 m long.
- Cut to lengths (for small diameters with a tolerance of ±0.025 mm).