

# Reinforced Polyimide Tubing

Polyimide (PI) And High Lubricity PI Glide™

## Overview-

For challenging applications that require enhanced torque, flexibility, kink resistance, improved pushability, or increased strength, reinforced polyimide tubing is an ideal choice. These features of reinforced polyimide tubing help device engineers optimize their designs and fine-tune key performance characteristics, paving the way for improved procedural outcomes and increased patient safety.

Reinforced PI tubing can be produced with full-load and half-load braid patterns, as well as clockwise and counter-clockwise coiling, with various PPI (pick per inch) and WPI (wraps per inch) to meet your design requirements. As an added bonus, Zeus PI tubing products help you adhere to REACH and EU MDR guidelines regarding SVHC/CMR restricted substances.\* When enhanced lubricity is required, PI Glide™, a PI/PTFE composite, provides up to 25% lower coefficient of friction over standard PI.

*\*Our thorough analytical test results indicate that no SVHC/CMR restricted substances are intentionally included in Zeus-supplied polyimide products at levels above the 0.1% threshold outlined by REACH and EU MDR.*



BIOCOMPATIBLE



CHEMICAL RESISTANCE



TEMPERATURE RESISTANCE



*Zeus offers an extensive range of reinforced polyimide and PI Glide™ tubing which are customizable in size, color, and level of lubriciousness.*

## APPLICATIONS

- Catheter delivery systems
- Vascular closure devices
- Lumen for guidewires
- Stone retrieval devices
- Imaging catheters
- Puncture tools
- High temperature insulation
- Electrical & mechanical insulation

## CAPABILITIES AND SIZING

- ID's 0.010" – 0.070" (0.254 mm – 1.778 mm)
- Total wall thickness from 0.002" to 0.006" (0.051 to 0.1524mm)
- Cut lengths up to 78" (1.98 m)
- Full-load and half-load braid patterns
- Clockwise and counter-clockwise coiling
- Stainless Steel and Nitinol
- Flat and Round Wire
- 30 to 150 PPI/WPI
- Colors: Available in natural amber, green, red, and black

## KEY PROPERTIES

- Enhanced torque transmission
- Increased flexibility and kink resistance
- High burst pressure and column strength
- Thermal stability



# Reinforced Polyimide Tubing

Zeus reinforced polyimide tubing is produced based on customer specifications and the charts below are a general capability guide.

| POLYIMIDE TUBING      |                                            |
|-----------------------|--------------------------------------------|
| Process               | Film-Cast                                  |
| Materials             | Polyimide, PI Glide™                       |
| Inside Diameter (ID)  | 0.010" to 0.070"<br>0.254 mm to 1.778 mm   |
| ID Tolerance +/-      | 0.0002" to 0.001"<br>0.0051 mm to 0.025 mm |
| Total Wall Thickness  | 0.002" - 0.006"<br>0.051 mm to 0.152 mm    |
| Wall Tolerance +/-    | ± 25%                                      |
| Cut Length            | Up to 78" Max<br>Up to 1980.0 mm           |
| Surface Treatments    | Tie Layer Pebax®, Vestamid®                |
| Reinforcement         | 304V Stainless Steel, Nitinol              |
| Colors                | Natural, Amber, Green, Red, Black          |
| Sterilization Methods | EtO, Gamma**, e-beam**                     |

\*\* Gamma and e-beam sterilization methods are not available with PI Glide™

| BRAID CAPABILITIES   |       |                                                                                            |                                                                      |           |
|----------------------|-------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------|
| WIRE TYPE            | SHAPE | SIZES                                                                                      | BRAID PATTERN                                                        | PPI       |
| 304V Stainless Steel | Flat  | 0.0005" x 0.0025" to<br>0.001" x 0.005"<br>0.0127 mm x 0.064 mm to<br>0.0254 mm x 0.127 mm | Full Load (1 under 2, over 2)<br>or<br>Half Load (1 under 1, over 1) | 30 to 150 |
|                      | Round | 0.001"<br>0.0254 mm                                                                        |                                                                      |           |
| Nitinol              | Flat  | 0.0005" x 0.0025" to<br>0.001" x 0.005"<br>0.0127 mm x 0.064 mm to<br>0.0254 mm x 0.127 mm | Full Load (1 under 2, over 2)<br>or<br>Half Load (1 under 1, over 1) | 30 to 150 |
|                      | Round | 0.001"<br>0.0254 mm                                                                        |                                                                      |           |

