

STANDARD SUPERELASTIC NI-TI STENT TUBING

Melt composition

55.8 Wt % Ni REF, balance Ti

Transition temperature

Af = 0 ±10°C on the melt in annealed condition.

Mechanical properties at 37°C

The thermo-mechanical process can be adjusted to meet specific requirements, offering a choice of mechanical properties.

The following values are typical:

- Loading plateau at 4% strain: 413 Mpa min (60 000 psi)
- Ultimate tensile strength: 1137 Mpa min (165 000 psi)
- Permanent set after 8% strain: 0.5% max
- Elongation before rupture: 10% min

Sizes and tolerances

- OD ≤ 10 mm (.394")
Standard tolerance is ±0.75% of diameter
- Wall: 0.05 – 1.5 mm (.0002 - .060")
Tolerances: ±0.01 mm under 0.2 mm, ±5% above
- OD/wall ratio is 50 max, thinner walls are achievable by centerless grinding.

Surface finish

- Available with black oxide coating or oxide free OD and ID, for ID > 2 mm.
- OD finish: as drawn: Ra = 0.4 µm max (RMS 16)
centerless ground: Ra = 0.1 µm max (RMS 4)
- ID finish: ID mm: < 3 3-5 >5
Ra µm: 1.6 0.8 0.4
Ra RMS: 64 32 16

Stent tubing dimensions

Before being cut, the tubing can be sourced either at its constricted size as determined by the delivery device, or at the stent expanded dimensions. This latter choice offers more design possibilities, a better ID finish and avoids the costly expansion cycles necessary when starting from a small size tube. example with a 0.15 mm (.006") wall on a 10 mm (.39") OD.

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