



MT-LWA

MODIFIED POLYOLEFIN HEAT SHRINK TUBING

PROFILE

- Shrink ratio \leq 4:1
- Full recovery at 110oC (230°F) minimum
- Manufactured to ISO 10993 standards
- PFAS-free
- Custom sizing, finishing options available
- Radiopacity can be customized
- Adhesive-layer option available
- Translucent for high optical clarity

ABOUT

- MT-LWA is a crosslinked modified polyolefin heat shrink tubing designed for use as a process aid in minimally invasive applications
- Its homogeneous structure (properties evenly distributed) contributes to its consistency and high performance, making our MT-LWA essentially free from flaws, defects, pinholes, seams, cracks or inclusions
- MT-LWA offers customizable compressions strengths, shrink ratios \leq 4:1, is peelable with axial tear propagation and you can remove it while its warm, making it an excellent choice for reflowing catheter shafts when FEP isn't suitable

HEAT SHRINK TUBING — MT-LWA

TABLE 1: 2:1 EXPANSION RATIO DIMENSIONS (±)

| Standard Sizes | As Supplied | | Recovered | | | |
|----------------|-----------------------------|--------------|-----------------------------|-------------|--------------------|-------------|
| | Inside Diameter Minimum (D) | | Inside Diameter Maximum (d) | | Wall Thickness (W) | |
| Size | in. | mm. | in. | mm. | in. | mm. |
| 1/32 | 0.040 ± 0.005 | 1.02 ± 0.13 | 0.013 ± 0.002 | 0.33 ± 0.05 | 0.010 ± 0.002 | 0.25 ± 0.05 |
| 3/64 | 0.055 ± 0.005 | 1.40 ± 0.13 | 0.020 ± 0.003 | 0.51 ± 0.08 | 0.016 ± 0.003 | 0.41 ± 0.08 |
| 1/16 | 0.072 ± 0.005 | 1.83 ± 0.13 | 0.027 ± 0.004 | 0.69 ± 0.10 | 0.017 ± 0.003 | 0.43 ± 0.08 |
| 3/32 | 0.107 ± 0.008 | 2.72 ± 0.20 | 0.042 ± 0.004 | 1.07 ± 0.10 | 0.020 ± 0.003 | 0.51 ± 0.08 |
| 1/8 | 0.140 ± 0.010 | 3.56 ± 0.25 | 0.057 ± 0.005 | 1.45 ± 0.13 | 0.020 ± 0.003 | 0.51 ± 0.08 |
| 3/16 | 0.205 ± 0.010 | 5.21 ± 0.25 | 0.086 ± 0.007 | 2.18 ± 0.18 | 0.020 ± 0.003 | 0.51 ± 0.08 |
| 1/4 | 0.275 ± 0.015 | 6.99 ± 0.38 | 0.117 ± 0.008 | 2.97 ± 0.20 | 0.025 ± 0.003 | 0.64 ± 0.08 |
| 3/8 | 0.415 ± 0.020 | 10.54 ± 0.51 | 0.171 ± 0.016 | 4.34 ± 0.41 | 0.025 ± 0.003 | 0.64 ± 0.08 |

TABLE 2: 3:1 EXPANSION RATIO DIMENSIONS (MIN./MAX)

| Standard Sizes | As Supplied | | Recovered | | | |
|----------------|-----------------------------|------|-----------------------------|------|--------------------|-------------|
| | Inside Diameter Minimum (D) | | Inside Diameter Maximum (d) | | Wall Thickness (W) | |
| Size | in. | mm. | in. | mm. | in. | mm. |
| .032 | 0.032 | 0.81 | 0.011 | 0.28 | 0.010 ± 0.002 | 0.25 ± 0.05 |
| .047 | 0.047 | 1.19 | 0.013 | 0.33 | 0.012 ± 0.002 | 0.31 ± 0.05 |
| .063 | 0.063 | 1.60 | 0.021 | 0.53 | 0.016 ± 0.002 | 0.41 ± 0.05 |
| .078 | 0.078 | 1.98 | 0.025 | 0.64 | 0.016 ± 0.002 | 0.41 ± 0.05 |
| .094 | 0.094 | 2.39 | 0.031 | 0.79 | 0.020 ± 0.003 | 0.51 ± 0.08 |
| .110 | 0.110 | 2.79 | 0.034 | 0.86 | 0.020 ± 0.003 | 0.51 ± 0.08 |
| .125 | 0.125 | 3.18 | 0.042 | 1.07 | 0.020 ± 0.003 | 0.51 ± 0.08 |
| .188 | 0.188 | 4.78 | 0.063 | 1.60 | 0.020 ± 0.003 | 0.51 ± 0.08 |
| .250 | 0.250 | 6.35 | 0.083 | 2.11 | 0.025 ± 0.003 | 0.64 ± 0.08 |
| .375 | 0.375 | 9.53 | 0.125 | 3.18 | 0.025 ± 0.003 | 0.64 ± 0.08 |

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TABLE 3: PROPERTIES

| Property | Unit | Requirement | Test Method |
|--|-------------|--|---|
| Physical | | | |
| Dimensions* | inches (mm) | In accordance with Table 1 | |
| Longitudinal change* | percent | +0, -10 maximum | ASTM D 2671 |
| Concentricity as supplied* | percent | 70 minimum (2:1 Exp. ratio) 60 minimum (3:1 Exp. ratio) | ASTM D 2671 |
| Tensile strength* | psi (MPa) | 1500 minimum (10:3) | ASTM D 2671, 20"/minute |
| Ultimate elongation* | percent | 200 minimum | |
| Secant modulus* (expanded) | psi (MPa) | 2.5 x 10 ⁴ maximum (172) | ASTM D 2671 |
| Heat resistance 168 hours at 175°C (347°F) Followed by test for: Ultimate elongation | percent | 100 minimum | ASTM D 2671, 20"/minute |
| Electrical | | | |
| Dielectric strength | kV/mm | 500 minimum (19.7) | ASTM D 2671 |
| Dielectric | | | |
| withstand 3000V, 60Hz | sec | 60 minimum | ASTM D 2671 |
| Chemical | | | |
| Fluid resistance 24 hours at 23 ± 3°C (77 ± 5°F) Isopropyl alcohol 5% saline solution Disinfectant | | | ASTM D 2671 |
| Followed by tests for: Dielectric strength | kV/mm | 400 minimum (15.7) | ASTM D 2671 |
| Tensile strength | psi (MPa) | 1000 minimum (6.9) | ASTM D 2671 |
| Heavy metals analysis Cadmium, Mercury, Lead, Bismuth, Antimony | ppm | 1 maximum (total of all metals) | USP XXII Physiochemical tests-plastic (Note 1) |

*Denotes lot acceptance test

Note 1: Sample preparation and extraction is per USP XXII. Metals analysis may be colorimetric as described in USP XXII or by equivalent quantitative analytical method.

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