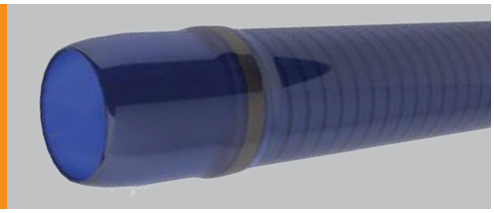
MT-FEP
FEP Heat Shrink Tubing

Applications

- Process aid for reflowing catheter shafts
- Process aid for joint bonding



PROFILE

- Shrink ratio ≤ 1.6:1
- Full recovery at 210°C (410°F) minimum
- Tight longitudinal change control as low as ± 2%
- Manufactured to ISO 10993 standards
- Custom sizing, finishing options available
- Translucent for high optical clarity
- Color blending option available

ABOUT

- MT-FEP is a fluorinated ethylene propylene (FEP) heat shrink tubing. FEP offers excellent consistency, high dielectric strength and is chemically inert. MT-FEP is lubricious and semi-rigid with shrink ratios up to 2:1*. FEP is the industry gold standard for reflowing catheter shafts and bonding joints.
- For our MT-FEP, we can control longitudinal growth ± 2% ensuring consistency on lot-to-lot, reducing waste and cost.

**Upper limit on select applications. Optimal shrink ratio is 1.6:1*

TABLE 1: DIMENSIONS

Size	As Supplied		Recovered							
	Inside Diameter Minimum (D)		Inside Diameter Maximum (d)		Wall Thickness (W) Minimum				Wall Thickness (W) Nominal	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.
1/32	0.035	0.9	0.025	0.6	0.006	0.15	0.010	0.25	0.008	0.20
3/64	0.045	1.1	0.032	0.8	0.006	0.15	0.010	0.25	0.008	0.20
1/16	0.063	1.6	0.040	1.0	0.006	0.15	0.010	0.25	0.008	0.20
3/32	0.093	2.4	0.056	1.4	0.006	0.15	0.010	0.25	0.008	0.20
1/8	0.125	3.2	0.075	1.9	0.007	0.18	0.013	0.33	0.010	0.25
3/16	0.188	4.8	0.115	2.9	0.007	0.18	0.013	0.33	0.010	0.25
1/4	0.250	6.4	0.150	3.8	0.007	0.18	0.013	0.33	0.010	0.25
3/8	0.375	9.5	0.225	5.7	0.009	0.23	0.015	0.38	0.012	0.30
1/2	0.500	12.7	0.300	7.6	0.011	0.28	0.019	0.48	0.015	0.38

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)*	2000 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	volts/mil *(volts/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	volts/mil *(volts/mm)*	400 minimum *(15.7)*	
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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