

Medical Tubing Solutions

MT-FEP (Fluorinated Ethylene Propylene)
Altera Heat-Shrinkable Tubing



Altera FEP Heat-Shrinkable Tubing



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Key Features

Up to 1.6:1 shrink ratios

Tight control of longitudinal change, standard $\pm 5\%$

Custom ratios, sizes, and longitudinal change available

High temperature, low friction, non-reactive material

Excellent electrical insulation, mechanical protection, and chemical resistance

Transparent and resistant to UV damage

USP Class VI materials, no heavy metals

RoHS compliant

Compatible with autoclave, ethylene oxide, steam, and dry-heat sterilizations

DESCRIPTION

Useful as a process aid in the manufacturing of catheter shafts and bonding of joints as well as an electrical insulation, mechanical protection, and chemical resistance tube. Heat-shrinkable tubing designed specifically to meet the demanding needs of the catheter and medical device industry.

INSTALLATION TEMPERATURE

Minimum Full Recovery Temperature: 210°C [410°F]

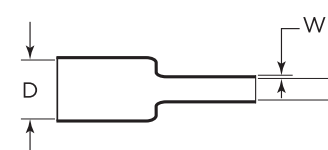
SPECIFICATIONS & APPROVALS

U.S. Pharmacopeia Class VI Plastics

ASTM D 2671

ISO 10993

PRODUCT DIMENSIONS



Size	As Supplied		Recovered							
	Inside Diameter Minimum (D)		Inside Diameter Maximum (d)		Wall Thickness (W)				Nominal	
	in.	mm.	in.	mm.	Minimum in.	mm.	Maximum 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	2.7	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

ELECTRICAL

Dielectric strength: 500 V/mil (19.7 kV/mm) minimum

Dielectric Withstand 3000V, 60 Hz: 60 sec. minimum

MECHANICAL

Longitudinal change: $\pm 5\%$

Tensile strength: 2000 psi minimum (13.8 MPa)

Ultimate elongation: 200% minimum

ORDERING INFORMATION

Color	Clear (-X) standard, custom colors available
Size selection	Always order the largest size that will recover snugly over the substrate. Special order sizes are available upon request.
Standard packaging	In 4-foot (1.2-meter) lengths (-STK), double-bagged
Ordering description	Specify product name and size (for example, MT-FEP-093-056-X-STK) Non-standard sizes are available upon request. Please contact us with your MT-FEP sizing needs.

ALTERA TUBING LINE

	MT 1000	MT 2000	MT 3000	MT 5000	MT 5500	MT 6000	MT-PBX (D*)	MT-PBX (D*/D*)	MT-FEP	MT-LWA
Shrink Ratio	2:1	2.5:1	2:1	2:1	2:1	4:1	2:1	2:1	Up to 1.6:1	2:1 or 3:1
Material	Fluoropolymer	Polyolefin	Fluoropolymer	Polyolefin	Polyolefin	Polyolefin	PEBA	PEBA	Fluoropolymer	Polyolefin
Flexibility	Semi-Rigid	Semi-Rigid	Flexible	Flexible	Very Flexible	Flexible	Flex-Rigid*	Flex-Rigid*	Semi-Rigid	Flexible
Temperature (Full Rec)	175°C	110°C	150°C	105°C	100°C	125°C	190°C*	190°C*	210°C	121°C
Adhesive Layer	Optional	Optional	Optional	Optional	Optional	Optional	Optional	No	No	No

* = Shore D Durometer dependent