

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# Medical Tubing Solutions

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

# Altera MT-FEP Heat Shrink Tubing



## Key Features

Up to 1.6:1 shrink ratios

Tight control of longitudinal change, as low as  $\pm 5\%$

Custom ratios, sizes, and colors available upon request

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

## 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 tests: ISO MEM Elution, Acute Systemic Toxicity, Intracutaneous Reactivity, GP Maximization Sensitization and Hemolysis (ASTM F756 Direct Contact)

## ELECTRICAL

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

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

## MECHANICAL

Longitudinal change: as low as  $\pm 5\%$

Tensile strength: 2000 psi minimum (13.8 MPa)

Ultimate elongation: 200% minimum

## Altera TUBING LINE

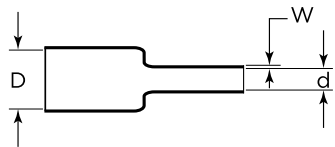
	MT 1000	MT 2000	MT 3000
Shrink Ratio	2:1	2.5:1	2:1
Material	Fluoropolymer	Polyolefin	Fluoropolymer
Flexibility	Semi-Rigid	Semi-Rigid	Flexible
Temperature (Full Rec)	175°C	140°C	150°C
Wall	Single Wall	Single Wall	Single Wall

\* = Shore D Durometer dependent

# Altera MT-FEP Heat Shrink Tubing



## PRODUCT DIMENSIONS



Size	As Supplied		Recovered		Recovered					
	Inside Diameter Minimum (D)		Inside Diameter Maximum (d)		Minimum		Maximum		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

## ORDERING INFORMATION

<b>Color</b>	Clear (-X) standard
<b>Size selection</b>	In general, it is advisable to order the largest size that will recover snugly over the substrate. Special order sizes are available upon request. Please contact your local TE Sales Representative for further assistance.
<b>Standard packaging</b>	In 4-foot (1.2-meter) lengths (-STK), double-bagged
<b>Ordering description</b>	Specify Expanded ID, Recovered ID and Recovered Wall (for example, MT-FEP-125-075-010-X-STK)  For non-standard sizes please contact your local TE Sales Representative.

MT 5000	MT 5500	MT 6000	MT-PBX (D*)	MT-PBX (D*/D*)	MT-FEP	MT-LWA
2:1	2:1	4:1	3:1	3:1	Up to 1.6:1	2:1 or 3:1
Polyolefin	Polyolefin	Polyolefin	PEBA	PEBA	Fluoropolymer	Polyolefin
Flexible	Very Flexible	Flexible	Flex-Rigid*	Flex-Rigid*	Semi-Rigid	Flexible
110°C	110°C	110°C	190°C	190°C	210°C	110°C
Single Wall	Single Wall	Single Wall	Single Wall	Dual Wall	Single Wall	Single Wall

[www.te.com/medical](http://www.te.com/medical)

USA	1-800-468-2023
Canada	1-905-470-4425
Mexico	1-800-733-8926
Central America	52 55 1106 0800
South America	54 11 4733 2200
United Kingdom/Ireland	49 896 089 184
Germany/Switzerland/Austria	49 6151 607 1999
Europe/Middle East/Africa	44 800 267 666
China	86 400 860 6670
Japan	81 44 844 8041
Korea	82 2 3415 4543
Singapore	65 659 05300

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