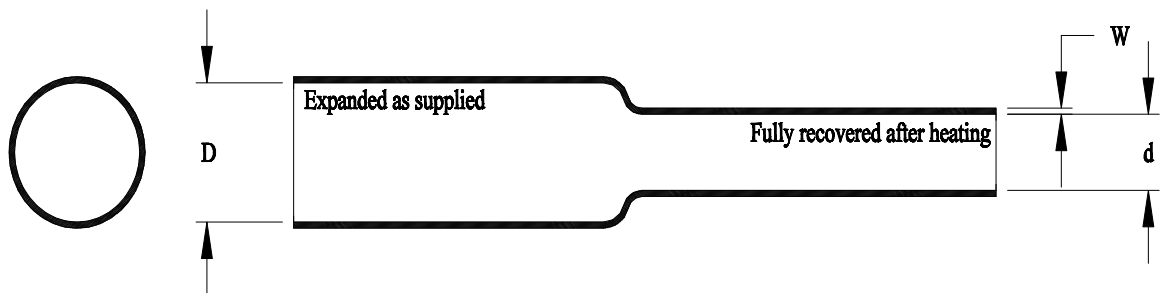


**Altera™
MT2000**
**Modified, Medical Grade, Polyolefin,
Heat - Shrinkable Tubing**



This specification covers the requirements for one type of single wall, electrical insulating, extruded tubing whose diameter will reduce to a predetermined size upon application of heat in excess of 140°C (284°F).

The tubing is fabricated from modified polyolefin crosslinked by irradiation. It shall be homogenous and essentially free from flaws, defects, pinholes, seams, cracks or inclusions.

The tubing is fabricated from materials which meet the requirements of U.S. Pharmacopeia Class VI Plastics. Color shall be black or clear unless otherwise specified.

Table 1: Dimensions

Size	As Supplied		Recovered							
	Inside Diameter Minimum (D)		Inside Diameter Maximum (d)		Wall Thickness(Inches, <i>Millimeters</i>) (W)					
	<i>mm.</i>	<i>in.</i>	<i>mm.</i>	<i>in.</i>	Minimum		Maximum		Nominal	
1mm	1.0	.040	0.45	.018	.008	0.20	.012	0.30	.010	.25
2mm	2.0	.080	0.80	.032	.008	0.20	.012	0.30	.010	.25
3mm	3.0	.120	1.20	.048	.008	0.20	.012	0.30	.010	.25
6mm	6.0	.240	2.4	.096	.008	0.20	.012	0.30	.010	.25
10mm	10.0	.400	4.0	.160	.012	0.30	.016	0.41	.014	.36

Specification Control Drawing

 TE Connectivity 300 Constitutional Drive Menlo Park, CA 94025 USA		Raychem	Title: Altera™ MT2000 Modified, Medical Grade, Polyolefin, Heat - Shrinkable Tubing		
TE Connectivity reserves the right to amend this drawing at any time. Users should evaluate the suitability of the product for their application			Document No : MT2000		
Cage Code: 06090	Scale: None	Size: A	Rev. Date: 11MAY11	Rev.: B1	Sheet: 1 of 2

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Table 2: Properties

Property	Unit	Requirement	Test Method
PHYSICAL			
* Dimensions	Inches (<i>mm</i>)	In accordance with Table 1	
* Longitudinal Change	Percent	0, -10	ASTM D 2671
* Concentricity as supplied	Percent	60 minimum	ASTM D 2671
Tensile Strength	PSI (<i>MPa</i>)	3000 minimum (20.7)	ASTM D 2671,
Ultimate Elongation	Percent	200 minimum	2"/minute
Secant Modulus	PSI (<i>MPa</i>)	5.0 x 10 ⁴ minimum (344)	ASTM D 2671
Heat Resistance 168 hours at 125°C (257 °F) Followed by test for: Ultimate Elongation			ASTM D 2671,
	Percent	200 minimum	2"/minute
ELECTRICAL			
Dielectric Strength	Volts/mil (<i>volts/mm</i>)	1000 minimum (39.36)	ASTM D 2671
Dielectric Withstand 3000V, 60 Hz	sec	60 minimum	ASTM D 2671
CHEMICAL			
Fluid Resistance 24 hours at 23 ± 3°C (77 ± 5°F) Isopropyl Alcohol 5% Saline Solution Cidex** Followed by tests for: Dielectric Strength			ASTM D 2671
	Volts/mil (<i>volts/mm</i>)	1000 minimum (39.36)	ASTM D 2671
Tensile Strength	PSI (<i>MPa</i>)	3000 minimum (20.7)	ASTM D 2671
Heavy Metals Analysis Cadmium Mercury Lead Bismuth Antimony	ppm	1 maximum (total of all metals)	USP XXII Physicochemical Tests-Plastics (Note 1)

* Denotes lot acceptance test

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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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