



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.

	As Supplied Inside Diameter Minimum (D)		Recovered							
Size			Inside Diameter Maximum (d)		Wall Thickness(Inches, <i>Millimeters)</i> (W)					
	mm.	in.	mm.	in.	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

## Table 1: Dimensions

				Specifica	tion Control Drawing		
	TE Connectivity 300 Constitutional Dr Menlo Park, CA 9402		naychem	Title: Altera <sup>™</sup> MT2000 Modified, Medical Grade, Polyolefin, Heat - Shrinkable Tubing			
	rves the right to amend t evaluate the suitability of		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 (mm)	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 (MPa)	3000 minimum (20.7)	ASTM D 2671,	
Ultimate Elongation	Percent			
Secant Modulus	PSI (MPa)	5.0 x 10 <sup>4</sup> minimum <i>(344)</i>	ASTM D 2671	
Heat Resistance 168 hours at 125℃ (257 年) Followed by test for:			ASTM D 2671,	
Ultimate Elongation	Percent	200 minimum	2"/minute	
ELECTRICAL Dielectric Strength	Volts/mil (volts/mm)	1000 minimum <i>(39.36)</i>	ASTM D 2671	
Dielectric Withstand				
3000V, 60 Hz	sec	60 minimum	ASTM D 2671	
CHEMICAL				
Fluid Resistance			ASTM D 2671	
24 hours at 23 ± 3℃ (77 ± 5年) Isopropyl Alcohol 5% Saline Solution Cidex**				
Followed by tests for:				
Dielectric Strength	Volts/mil (volts/mm)	1000 minimum <i>(39.36)</i>	ASTM D 2671	
Tensile Strength	PSI (MPa)	3000 minimum <i>(20.7)</i>	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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