

# **MT-3000**

# **PVDF Heat Shrink Tubing**

# **Applications**

- Abrasion protection for surgical and in-vivo instruments
- Strain relief applications



#### PROFILE

- Shrink ratio ≤ 3:1
- Full recovery at 150°C (302°F) minimum
- · Supports sterilization environments: gamma, ethylene oxide (ETO), steam, dry heat and autoclave
- Manufactured to ISO 10993 standards
- Registered with the FDA: MAF-472
- · Custom sizing, colors, finishing and value-add options available
- Radiopacity can be customized

### **ABOUT**

- MT-3000 is a crosslinked polyvinylidene fluoride (PVDF) heat shrink tubing. PVDF offers excellent chemical and abrasion resistance, high dielectric strength and superior tensile strength. Its homogeneous structure (properties evenly distributed) contributes to its consistency and high performance, making our MT-3000 essentially free from flaws, defects, pinholes, seams, cracks or inclusions.
- MT-3000 is semi-lubricious and more flexible than our other PVDF heat shrink tubing. MT-3000 offers abrasion protection for surgical and in-vivo instruments.

## **TABLE 1: DIMENSIONS**

	As Sup	plied		F	Recove	red				
Standard Sizes	Inside Diameter Minimum (D)		Inside Diameter Maximum (d)		Wall Thickness (in., mm.) (W)					
Size	in.	mm.	in.	mm.	Minimum		Maximum		Nominal	
3/64	.046	1.17	.023	0.58	.008	0.20	0.12	0.31	.010	0.25
1/16	.063	1.60	.031	0.79	.008	0.20	0.12	0.31	.010	0.25
3/32	.093	2.36	.046	1.17	.008	0.20	0.12	0.31	.010	0.25
1/8	.125	3.18	.062	1.58	.008	0.20	0.12	0.31	.010	0.25
3/16	.187	4.75	.093	2.36	.008	0.20	0.12	0.31	.010	0.25
1/4	.250	6.35	.125	3.18	.009	0.28	0.15	0.38	.012	0.33
3/8	.375	9.53	.187	4.75	.009	0.28	0.15	0.38	.012	0.33
1/2	.500	12.70	.250	6.35	.009	0.28	0.15	0.38	.012	0.33

### **TABLE 2: PROPERTIES**

Property	Unit	Requirement	<b>Test Method</b>	
Physical				
Dimensions*	inches (mm)	In accordance with Table 1		
Longitudinal change*	percent	+0, -10 maximum	ASTM D 2671	
Concentricity as supplied*	percent	70 minimum	ASTM D 2671	
Tensile strength*	psi (MPa)	4000 minimum <i>(27.6)</i>	ASTM D 2671,	
Ultimate elongation*	percent	300 minimum	20"/minute	
Secant modulus* (expanded)	psi (MPa)	50,000 maximum <i>(345)</i>	ASTM D 2671	
Heat resistance  168 hours at 250 ± 5°C (482°F)  Followed by test for:  Ultimate elongation	percent	250 minimum	ASTM D 2671, 20"/minute	
Electrical				
Dielectric strength	volts/mil (volts/mm)	500 minimum <i>(19.680)</i>	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 <i>(15.760)</i>		
Tensile strength	psi (MPa)	3500 minimum <i>(24.1)</i>	ASTM D 2671	
Heavy metals analysis Cadmium Mercury Lead Bismuth Antimony	ppm	1 maximum (total of all metals)	USP XXII Physiochemica tests-plastic (Note 1)	

<sup>\*</sup>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.