

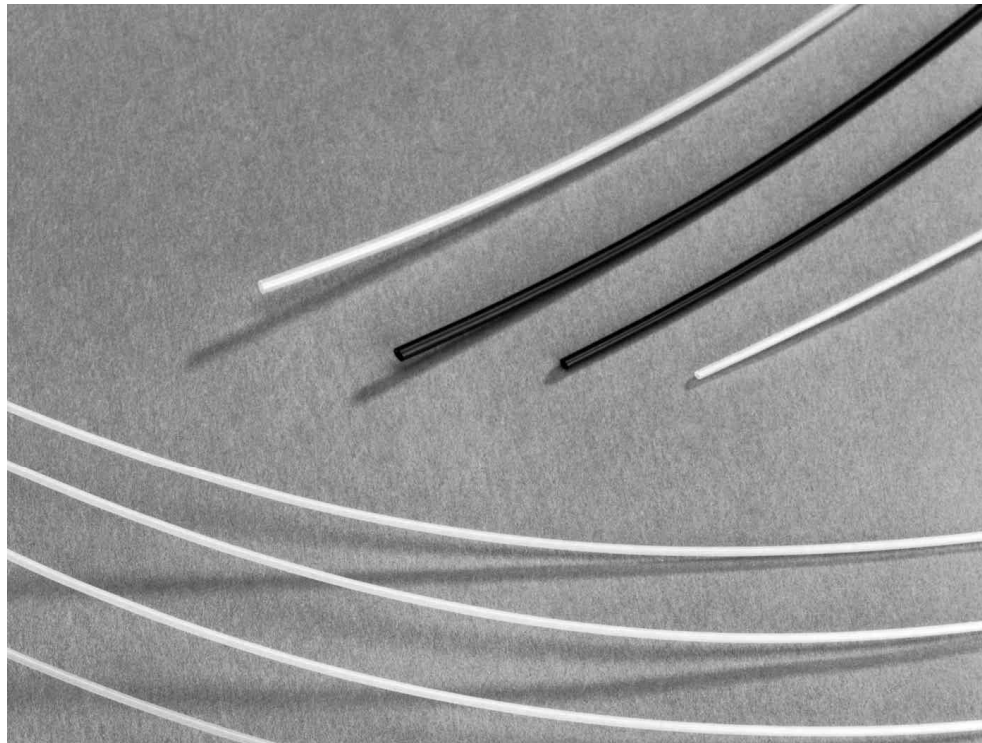
Altera Medical-Grade,
USP Class VI,
High-Temperature,
Semirigid,
Fluoropolymer Tubing

Product Facts

- 2:1 shrink ratio
- Tough, semirigid, very-thin-wall insulation
- Excellent resistance to a variety of fluids
- Optional inner adhesive lining in sizes 1/8" and larger (MT1000A)
- USP Class VI material, no heavy metals
- Double-bagged packaging
- Compatibility with gamma, ETO, steam, and dry-heat sterilization



MT1000



Applications

Ideal for electrical insulation and strain relief of components that are exposed to high temperatures - either during operation or during sterilization.

Thin-wall construction is well suited for applications with clearance constraints.

Installation

Minimum shrink temperature: 155°C [311°F]
Minimum full recovery temperature: 175°C [347°F]

Operating Temperature Range

-55°C to 175°C
[-67°F to 347°F]

Specifications/Approvals

Series	Material	Master File Number	Raychem
MT1000	USPClass VI	MAF-444	MT1000 SCD
MT1000A	USPClass VI	MAF-798	MT1000ASCD

Available in:	Americas	Europe	Asia Pacific
	■	■	■

Product Dimensions

MT1000 (Continued)

Size	Inside Diameter		Recovered Wall Thickness** After Heating
	Minimum Expanded as Supplied	Maximum Recovered After Heating	
1/16	1.6 [0.063]	0.8 [0.031]	0.25 ± 0.05 [0.010 ± 0.002]
3/32	2.4 [0.093]	1.2 [0.046]	0.25 ± 0.05 [0.010 ± 0.002]
1/8	3.2 [0.125]	1.6 [0.062]	0.25 ± 0.05 [0.010 ± 0.002]
3/16	4.7 [0.187]	2.4 [0.093]	0.25 ± 0.05 [0.010 ± 0.002]
1/4	6.4 [0.250]	3.2 [0.125]	0.33 ± 0.05 [0.013 ± 0.002]
3/8	9.5 [0.375]	4.7 [0.187]	0.33 ± 0.05 [0.013 ± 0.002]
1/2	12.7 [0.500]	6.4 [0.250]	0.33 ± 0.05 [0.013 ± 0.002]
3/4**	19.1 [0.750]	9.5 [0.375]	0.43 ± 0.08 [0.017 ± 0.003]
1**	25.4 [1.000]	12.7 [0.500]	0.48 ± 0.08 [0.019 ± 0.003]

*Wall thickness will be less if tubing recovery is restricted during shrinkage.

**Nonstandard size; available by special order only.

Ordering Information

Color	Standard	Translucent (-X)
	Nonstandard	Black (-0)
Size selection	Always order the largest size that will shrink snugly over the component to be covered. Special order sizes are available upon request.	
Standard packaging	In 1.2-meter (4-foot) lengths, double bagged.	
Ordering description	Specify product name, size and color (for example, MT1000-1/8-X). Specify MT1000A for adhesive-lined constructions (special order).	

Altera Medical-Grade, USP Class VI, Lubricious, Thin-Wall, Polyolefin Tubing

Product Facts

- 2.5:1 shrink ratio
- Lubricity comparable to FEP
- Excellent electrical insulation properties
- Can be manufactured with a very thin wall
- Optional inner adhesive lining in sizes 3.0 and larger (MT2000A)
- USP Class VI material, no heavy metals
- Plastic spools and double-bagged packaging
- Compatibility with gamma and ETO sterilization

MT2000



Applications

Especially suitable for medical applications requiring lubricity, flexibility, and excellent electrical insulation performance. A cost-effective alternative to FEP (fluorinated ethylene-propylene) while maintaining performance after gamma sterilization.

Installation

Minimum shrink temperature: 110°C [230°F]
 Minimum full recovery temperature: 140°C [284°F]

Operating Temperature Range

-40°C to 105°C
 [-40°F to 221°F]

Specifications/Approvals

Series	Material	Master File Number	Raychem
MT2000	USPClass VI	MAF-727	MT2000 SCD
MT2000A	USPClass VI	MAF-799	MT2000ASCD

Available in:	Americas	Europe	Asia Pacific
	■	■	■

Product Dimensions

MT2000 (Continued)

Size	Inside Diameter		Wall Thickness	
	Minimum Expanded as Supplied	Maximum Recovered After Heating	As Supplied (Nominal)	Recovered* After Heating
1.0	1.0 [0.040]	0.45 [0.018]	0.12 [0.005]	0.25 ± 0.05 [0.010 ± 0.002]
2.0	2.0 [0.080]	0.80 [0.032]	0.12 [0.005]	0.25 ± 0.05 [0.010 ± 0.002]
3.0	3.0 [0.120]	1.20 [0.048]	0.12 [0.005]	0.25 ± 0.05 [0.010 ± 0.002]
6.0	6.0 [0.240]	2.40 [0.096]	0.12 [0.005]	0.25 ± 0.05 [0.010 ± 0.002]
10.0	10.0 [0.400]	4.00 [0.160]	0.15 [0.006]	0.36 ± 0.05 [0.014 ± 0.002]

*Wall thickness will be less if tubing recovery is restricted during shrinkage.

Ordering Information

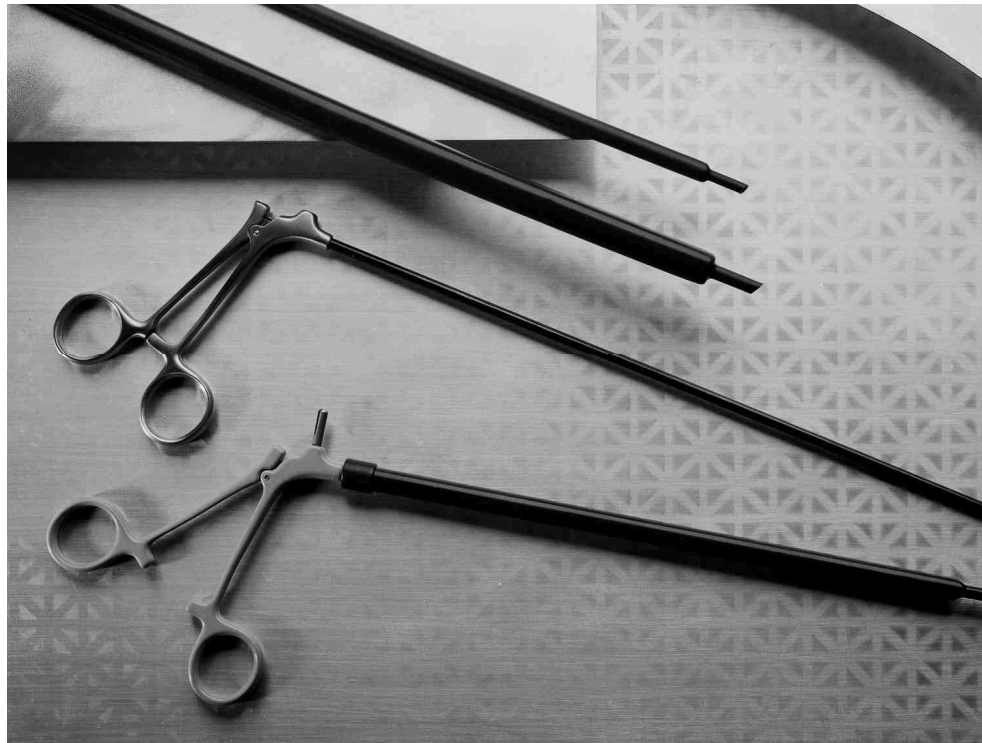
Color	Standard	Black (-0), clear (-X)
	Nonstandard	White (-9), red (-2), blue (-6), yellow (-4), orange (-3)
Size selection	Always order the largest size that will shrink snugly over the component to be covered. Special order sizes are available upon request.	
Standard packaging	On plastic spools, double-bagged.	
Ordering description	Specify product name, size and color (for example, MT2000-3.0-0). Specify MT2000A for adhesive-lined constructions (special order).	

Altera Medical-Grade,
USP Class VI,
High-Temperature,
Flexible, Fluoropolymer
Tubing

Product Facts

- 2:1 shrink ratio
- Tough, flexible, very-thin-wall insulation
- Excellent resistance to a variety of fluids
- USP Class VI material, no heavy metals
- Plastic spools and double-bagged packaging
- Compatibility with steam (limited cycles), gamma, ETO, and dry-heat sterilization

MT3000



Applications

Used for electrical insulation and strain relief of components that are exposed to high temperatures - either during operation or during sterilization. Exceptional flexibility and thin-wall construction are well-suited for applications where pliancy coupled with small overall bundle size is desired.

Installation

Minimum shrink temperature: 110°C [230°F]
Minimum full recovery temperature: 150°C [302°F]

Operating Temperature Range

-55°C to 150°C
[-67°F to 302°F]

Specifications/Approvals

Series	Material	Master File Number	Raychem
MT3000	USPClass VI	MAF-472	MT3000 SCD

Available in:	Americas	Europe	Asia Pacific
	■	■	■

Product Dimensions

MT3000 (Continued)

Size	Inside Diameter		Recovered Wall Thickness* After Heating
	Minimum Expanded as Supplied	Maximum Recovered After Heating	
1/16	1.6 [0.063]	0.8 [0.031]	0.25 ± 0.05 [0.010 ± 0.002]
3/32	2.4 [0.093]	1.2 [0.046]	0.25 ± 0.05 [0.010 ± 0.002]
1/8	3.2 [0.125]	1.6 [0.062]	0.25 ± 0.05 [0.010 ± 0.002]
3/16	4.7 [0.187]	2.4 [0.093]	0.25 ± 0.05 [0.010 ± 0.002]
1/4	6.4 [0.250]	3.2 [0.125]	0.30 ± 0.05 [0.012 ± 0.002]
3/8	9.5 [0.375]	4.7 [0.187]	0.30 ± 0.05 [0.012 ± 0.002]
1/2	12.7 [0.500]	6.4 [0.250]	0.30 ± 0.05 [0.012 ± 0.002]
3/4**	19.1 [0.750]	9.5 [0.375]	0.43 ± 0.08 [0.017 ± 0.003]
1**	25.4 [1.000]	12.7 [0.500]	0.48 ± 0.08 [0.019 ± 0.003]

*Wall thickness will be less if tubing recovery is restricted during shrinkage.

**Nonstandard size; available by special order only.

Ordering Information

Color	Standard	Black (-0)
	Nonstandard	White (-9)
Size selection	Always order the largest size that will shrink snugly over the component to be covered. Special order sizes are available upon request.	
Standard packaging	On plastic spools, double-bagged.	
Ordering description	Specify product name, size and color (for example, MT3000 1/4-0).	

Altera Medical-Grade,
USP Class VI, Flexible,
Polyolefin Tubing

Product Facts

- 2:1 shrink ratio
- Flexibility; variety of colors
- Excellent electrical insulation properties
- Inner adhesive lining optional in sizes 1/8" and larger (MT5000A)
- USP Class VI material, no heavy metals
- Plastic spools and double-bagged packaging
- Compatibility with gamma and ETO sterilization



MT5000



Applications

Especially suitable for applications requiring excellent electrical insulation performance and resistance to abrasion and harmful solvents such as electrosurgical instruments. Also used for strain relief, color coding, and identification of many medical components and devices.

Installation

Minimum shrink temperature: 90°C [194°F]
Minimum full recovery temperature: 110°C [230°F]

Operating Temperature Range

-70°C to 105°C
[-94°F to 221°F]

Specifications/Approvals

Series	Material	Master file number	Raychem
MT5000	USPClass VI	MAF-469	MT5000 SCD
MT5000A	USPClass VI	MAF-800	MT5000ASCD

Available in:	Americas	Europe	Asia Pacific
	■	■	■

Product Dimensions

MT5000 (Continued)

Size	Inside Diameter		Recovered Wall Thickness* After Heating
	Minimum Expanded as Supplied	Maximum Recovered After Heating	
1/16	1.6 [0.063]	0.8 [0.031]	0.43 ± 0.08 [0.017 ± 0.003]
3/32	2.4 [0.093]	1.2 [0.046]	0.51 ± 0.08 [0.020 ± 0.003]
1/8	3.2 [0.125]	1.6 [0.062]	0.51 ± 0.08 [0.020 ± 0.003]
3/16	4.8 [0.187]	2.4 [0.093]	0.51 ± 0.08 [0.020 ± 0.003]
1/4	6.4 [0.250]	3.2 [0.125]	0.64 ± 0.08 [0.025 ± 0.003]
3/8	9.5 [0.375]	4.8 [0.187]	0.64 ± 0.08 [0.025 ± 0.003]
1/2	12.7 [0.500]	6.4 [0.250]	0.64 ± 0.08 [0.025 ± 0.003]
3/4**	19.1 [0.750]	9.5 [0.375]	0.76 ± 0.08 [0.030 ± 0.003]
1**	25.4 [1.000]	12.7 [0.500]	0.89 ± 0.12 [0.035 ± 0.005]

*Wall thickness will be less if tubing recovery is restricted during shrinkage.

**Nonstandard size; available by special order only.

Ordering Information

Color	Standard	Black (-0), clear (-X)
	Nonstandard	White (-9), red (-2), blue (-6), yellow (-4)
Size selection	Always order the largest size that will shrink snugly over the component to be covered. Special order sizes are available upon request.	
Standard packaging	On plastic spools, double-bagged.	
Ordering description	Specify product name, size and color (for example, MT5000-1/4-0). Specify MT5000A for adhesive-lined constructions (special order).	