

MEDICAL GRADE FLEXIBLE POLYOLEFIN 2 : 1 Shrink Ratio

- RoHS / RoHS2 Compliant
 Heavy Metals Free
 Halogen Free

TYPICAL FEATURES	
1) SUMITUBE A4M is a USP Class VI certified, light weight, flexible, heat shrinkable polyolefin tubing with excellent electrical properties and chemical resistance.	5) Operating temperature range is -55°C to +105°C.
2) SUMITUBE A4M is resistant to gamma and gas sterilization protocols, as well as common chemical disinfectants.	6) SUMITUBE A4M is recommended for use covering, protecting, and insulating medical devices and their components in non-invasive or minimally invasive applications such as electrosurgical devices, probes, instruments, etc. It is not suitable for implantable uses.
3) SUMITUBE A4M is available in opaque glossy colors that are not affected by the color of the substrate.	<i>NOTE:</i> SEIP requires that all applications for medical grade tubing uses shall be reviewed and approved by SEIP prior to quotation.
4) Shrink temperature is 115°C.	

STANDARD SIZES						
NOMINAL SIZE	INSIDE DIAMETER AS SUPPLIED (MIN)		INSIDE DIAMETER AFTER RECOVERY (MAX)		WALL THICKNESS AFTER RECOVERY (NOM)	
	INCH	(MM)	INCH	(MM)	INCH	(MM)
3/64	.046	1.2	.023	0.6	.016	0.40
1/16	.063	1.6	.031	0.8	.017	0.43
3/32	.093	2.4	.046	1.2	.020	0.51
1/8	.125	3.2	.062	1.6	.020	0.51
3/16	.187	4.8	.093	2.4	.020	0.51
1/4	.250	6.4	.125	3.2	.025	0.64
3/8	.375	9.5	.187	4.8	.025	0.64
1/2	.500	12.7	.250	6.4	.025	0.64
3/4	.750	19.1	.375	9.5	.030	.076

Standard Colors: Black, White, Blue, Violet, and Clear. Other colors and sizes per factory quote and acceptance.
Standard Package: Spooled (S) on plastic spool and supplied in sealed plastic bag.
How to Order: (Type of material) (Size) (Color) (Packaging)
Example: A4M 1/4 Black S

A4M SPECIFICATION VALUES

PROPERTY (UNITS)	TEST METHOD	REQUIREMENT
Physical: Tensile strength (psi) Elongation (%) Specific gravity Low temperature flex. (-55° C) Heat resistance (136°C, 168 Hrs.) Elongation (%) Secant modulus (psi) Longitudinal change (%)	ASTM D638 ASTM D638 ASTM D792 AMS-DTL-23053 ASTM D638 ASTM D882 AMS-DTL-23053	1500 min. 200 min. 1.0 max. no cracking 100 min. 25000 max. +5, -15
Electrical: Dielectric strength (volts/mil) Volume resistivity (ohm-cm)	ASTM D876 ASTM D876	500 min. 1.0 X 10 ¹⁵ min.
Chemical: Heavy Metals Content (Cd,Hg,Pb, As,Sb) Water absorption, % (23°C, 24 hrs.) Fluid resistance (23°C, 24 Hrs.) Isopropyl alcohol 5% saline solution Ethylene glycol Followed by: Tensile strength (psi) Dielectric strength (volts/mil) Shrink temperature, nominal	ICP-MS ASTM D570 ASTM D 2671 ASTM D 2671 ----	<1 ppm total (all metals) 0.5 max. 1,500 min. 500 min. 115°C


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Rev. 4-20-16