

## FLEXIBLE FLUOROELASTOMER 2 : 1 Shrink Ratio

### MILITARY SPECIFICATION



RoHS Compliant

### TYPICAL FEATURES

- |   |  |
|---|--|
| <p>1) SUMITUBE FE3 is a rubber-like, highly fluid resistant, flame retarded fluoroelastomer heat-shrinkable tubing which meets all of the material and functional requirements of military specification AMS-DTL-23053/13B.</p> <p>2) Shrink temperature is 120° C. This is significantly lower than any other fluoroelastomer shrink tubing on the market. Sumimark FE3 also meets the stringent outgassing requirements of NASA SP-R-0022A.</p> | <p>3) Operating temperature range is -40°C to +200°C and up to 300° C for short periods.</p> <p>4) SUMITUBE FE3 is recommended for applications where resistance to aggressive solvents and high temperatures is required. Bundling, harnessing and environmental protection within engine compartments is one such application.</p> |
|---|--|

### 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)
	1/8	.125	3.2	.062	1.6	.031
3/16	.187	4.8	.093	2.4	.035	0.90
1/4	.250	6.4	.125	3.2	.035	0.90
3/8	.375	9.5	.187	4.8	.035	0.90
1/2	.500	12.7	.250	6.4	.035	0.90
5/8	.625	15.9	.312	7.9	.042	1.10
3/4	.750	19.1	.375	9.5	.042	1.10
7/8	.875	22.2	.437	11.1	.049	1.20
1	1.000	25.4	.500	12.7	.049	1.20
1¼	1.250	31.8	.625	15.9	.055	1.40
1½	1.500	38.1	.750	19.1	.055	1.40
2	2.000	50.8	1.000	25.4	.065	1.70

**Standard Colors:** Black. Other colors available subject to factory acceptance and quote.  
**Standard Package:** Spooled (S)  
**How to Order:** (Type of material) (Size) (Color) (Packaging)  
**Example:** FE3 1/4 Black S

# FE3 SPECIFICATION VALUES

PROPERTY (UNITS)	TEST METHOD	REQUIREMENT
<b>Physical:</b> Tensile strength (psi) Elongation (%) Tensile stress @ 200% elongation (psi) Cold impact (-40° C) Heat shock (300° C, 4 hrs.) Heat resistance (250° C, 168 hrs.) Elongation (%) Tensile strength (psi) Longitudinal change (%)	ASTM D 638 ASTM D 638 ASTM D 412 ASTM D 746 AMS-DTL-23053  ASTM D 638 ASTM D 638 AMS-DTL-23053	1200 min. 250 min. 2000 max. no cracking no cracking  200 min. 1200 min. -20 max.
<b>Electrical:</b> Dielectric withstand (volts/mil) Volume resistivity (ohm-cm)	ASTM D 876 ASTM D 876	200 min. 1.0 X 10 <sup>11</sup> min.
<b>Chemical:</b> Copper mirror corrosion (175° C, 16 hrs.) Water absorption (%) Fluid resistance (23° C, 24 hrs.) Tensile strength (psi) Elongation (%) Flammability Shrink temperature, nominal	AMS-DTL-23053 ASTM D 570  AMS-DTL-23053 AMS-DTL-23053 AMS-DTL-23053	no corrosion 0.5 max.  1200 min. 250 min. 15 sec. max.. 120° C

**Specification references:** AMS-DTL-23053/13B  
 MIL-R-46846, Type III, Class 1  
 NASA SP-R-0022A



915 Armorlite Drive  
 San Marcos, CA 92069

Telephone: (800) 758-3515  
 FAX: (800) 758-3517

Rev. 7/5/05