

## HIGH TEMPERATURE FLUROELASTOMER HEAT – SHRINKABLE MARKER SLEEVE 2 : 1 Shrink Ratio

### MILITARY SPECIFICATION



RoHS Compliant

### TYPICAL FEATURES

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| <p>1) SUMIMARK SM60 is a highly fluid resistant, flame retarded fluoroelastomer heat-shrinkable marker sleeve tubing that meets all of the material and functional requirements of military specification AMS-DTL-23053/13B.</p> <p>2) SUMIMARK SM60 is specially designed for use with the SUMIMARK marking system.</p> <p>3) Shrink temperature is 120° C, far lower than other fluoroelastomer shrink tubing available.</p> <p>4) SUMIMARK SM60 when used in conjunction with the SUMIMARK Marking System, provides marked</p> | <p>sleeves which meet or exceed the print permanence requirements of SAE-AS81531. Sumimark SM60 also meets the stringent outgassing requirements of NASA SP-R-0022A.</p> <p>5) Operating temperature range is -40° C to +200° C and up to 300° C for short periods.</p> <p>6) SUMIMARK SM60 is recommended for applications where resistance to aggressive solvents and high temperatures is required. SM60 is ideally suited for high temperature wire and cable markers and identification in applications such as aircraft engine environments.</p> |
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### STANDARD SIZES

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	(0.80)
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)
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

**Standard Colors:** White & black (other colors available upon request)

**Standard Package:** Spooled (S)

**How to Order:** (Type of material) (Size) (Color) (Packaging)

**Example:** SM60 1/4 Black S

# SM60 SPECIFICATION VALUES

PROPERTY (UNITS)	TEST METHOD	REQUIREMENT
<b>Physical:</b> Tensile strength (psi) Elongation (%) Tensile Stress @ 200% elongation (psi) Low temperature flex. (-40° C) Heat shock (300° C, 4 hrs.) Heat resistance (250° C, 168 hrs.) Elongation (%) Tensile strength (psi) Longitudinal change (%)	ASTM D638 ASTM D638 ASTM D412 AMS-DTL-23053 AMS-DTL-23053  ASTM D638 ASTM D638 AMS-DTL-23053	1200 min. 250 min. 2000 max. no cracking no cracking  200 min. 1200 min. -20 max.
<b>Electrical:</b> Dielectric strength (volts/mil) Volume resistivity (ohm-cm)	ASTM D876 ASTM D876	200 min. 1.0 X 10 <sup>11</sup> min.
<b>Mark Permanence:</b> Abrasion Fluid Resistance Isopropyl Alcohol/Mineral Spirits Terpene Defluxer H2O/PGME/Monoethanolamine	SAE-AS81531 MIL-STD-202F Method 215J	20 rubs  10 rubs (x3) 10 rubs (x3) 10 rubs (x3)
<b>Chemical:</b> Mark Permanence Copper mirror corrosion (175° C, 16 hrs.) Water absorption (%) Fluid resistance (23° C, 24 hrs.) Tensile strength (psi) Elongation (%) Flammability Shrink temperature, nominal Vacuum Outgassing TML, % CVCM, %	SAE-AS81531 AMS-DTL-23053 ASTM D570  AMS-DTL-23053 AMS-DTL-23053 AMS-DTL-23053  ASTM-E-595 ASTM-E-595	PASS no corrosion 0.5 max.  1200 min. 250 min. 15 sec. max. 120° C  1.0 max. 0.1 max.

Specification reference: SAE-AS81531  
 AMS-DTL-23053/13B  
 NASA SP-R-0022A



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