

# SUMIMARK®

## SM3-60 High Temperature Fluoroelastomer



### Product Overview:

SumiMark® SM3-60 heat shrink tubing is a markable product, manufactured to the highest quality standards. SumiMark® SM3-60 tubing meets requirements of SAE AMS-DTL-23053/13. This product also meets print adherence requirements of SAE-AS5942, when used in conjunction with SumiMark® Marking Systems and SumiMark® ribbons.

### Specifications:

SAE AMS-DTL-23053/13

### Recommended Printer & Ribbon:

SumiMark® Marking System Models III & IV  
Ribbon SumiMark® SM3

### Print Performance:

Adherence: SAE-AS5942  
MIL-STD-202G, Method 215J  
Store in original packaging

### Applications:

- Wire identification
- Wire protection
- Chemical Resistance
- Strain relief
- Abrasion protection
- Extreme temperature resistance

### Product Features:

- Fluid resistant, high temp, flame retarded fluoroelastomer
- Operating temperature range  $-40^{\circ}\text{C}$  to  $+200^{\circ}\text{C}$  and up to  $300^{\circ}\text{C}$  for short periods
- Meets outgassing requirements of NASA SP-R-0022A
- Shrink temperature of  $120^{\circ}\text{C}$  is considerably lower than other fluoroelastomer shrink tubings on the market
- 2:1 Shrink Ratio
- RoHS/RoHS2 compliant

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# SM3-60

## High Temperature Fluoroelastomer

### Technical Specifications:

Property	Test Method	Requirement
Tensile strength (psi)	ASTM D 638	1200 min.
Elongation (%)	ASTM D 638	250 min.
Tensile Stress @ 200% elongation (psi)	ASTM D 412	2000 max.
Low Temperature Flex (-40° C)	AMS-DTL-23053	no cracking
Heat shock (300° C, 4 hrs.)	AMS-DTL-23053	no cracking
Heat Resistance (250° C, 168 hrs)		
Elongation %	ASTM D 638	200 min.
Longitudinal change	AMS-DTL-23053	-20 max.
Electrical:		
Dielectric strength (volts/mil)	ASTM D 876	200 min.
Volume resistivity (ohm-cm)	ASTM D 876	1.0 X 10 <sup>11</sup> min.
Chemical:		
Copper mirror corrosion (175° C, 16 hrs)	AMS-DTL-23053	no corrosion
Water absorption (%)	ASTM D 570	0.5 max.
Fluid resistance (23° C, 24 hrs.)		
Tensile strength (psi)	AMS-DTL-23053	1200 min.
Elongation %	AMS-DTL-23053	250 min.
Flammability	AMS-DTL-23053	15 sec. max.
Vacuum Outgassing		
TML, %	ASTM E 595	1.0 max.
CVCM, %	ASTM E 595	0.1 max.
Shrink temperature, nominal		120° C

Specification references:

AMS-DTL-23053/13                      SAE-AS5942                      NASA SP-R0022A

### Standard Sizes:

Size	ID Min (As Supplied)		ID Max (After Recovery)		Wall Thickness Nom (After Recovery)	
	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
3/4	.750	19.1	.375	9.5	.042	1.10
7/8	.875	22.2	.437	11.1	.049	1.20
1	1.00	25.4	.500	12.7	.049	1.20
1 1/4	1.250	31.8	.625	15.9	.055	1.40
1 1/2	1.50	38.1	.750	19.1	.055	1.40

**Standard Colors:** White and Black

**Standard Package:** Spooled

<b>How to Order:</b>	Type of Material	Size	Color	Packaging
Example:	SM3-60	1/4	Black	Spooled

