

## SM3-31

# Modified Fluoropolymer 2:1 Shrink Ratio

### Applications:

- Wire identification
- Wire protection
- Solvent resistance
- Strain relief
- Extreme abrasion protection

### Product Features:

- 2:1 shrink ratio
- Operating temperature range -55°C to +150°C
- Continuous design for cut-to-length requirements and cost savings
- Colors - white



### Specifications:

SAE AS23053/18, Class 3

### Required Printer & Ribbon:

Printer - Sumimark™ IV PLUS  
Marking System  
Ribbon - Sumimark™ SM3

### Print Performance:

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



### Product Overview

**Quality Counts!** Sumimark™ SM3-31, 2:1 heat shrink tubing is a highly flame retarded, fluoropolymer tubing. For use in applications which require high level of abrasion resistance and resistance to solvents.

**Lower Cost!** Due to open and continuous design, SM3-31 provides significantly lower installation cost versus precut formats.

**How can we help?** Contact us for more information:

800 758 3515  
customerservice@seipusa.com  
www.seipusa.com

**Technical Specifications:**

SAE AS23053/18, Class 3  
RoHS/RoHS2 Compliant

## SM3-31 Modified Fluoropolymer 2:1 Shrink Ratio

	Property	Test Method	Requirement
	Tensile strength (psi)	ASTM D638	1500 min.
	Elongation (%)	ASTM D638	200 min.
	Specific gravity	ASTM D792	2.0 max.
	Low temperature flex (-55 °C)	AMS-DTL-23053	no cracking
	Heat shock (250 °C, 4 hrs)	AMS-DTL-23053	no cracking
	Heat resistance (175 °C, 168 hrs)		
	Elongation (%)	ASTM D638	100 min.
	Secant modulus (psi)	ASTM D882	2.5 x 10 <sup>4</sup> max.
	Longitudnal change (%)	AMS-DTL-23053	+/- 10
<b>Electrical</b>	Dielectric strength (volts/mil)	ASTM D876	400 min.
	Volume resistivity (ohm-cm)	ASTM D876	1.0 x 10 <sup>11</sup> min.
<b>Chemical</b>	Copper stability (180 °C, 168 hrs)		
	Elongation (%)	UL224	70% of unaged
	Water absorption (%)	ASTM D570	0.5 max.
	Fluid resistance (23°C, 24 hrs.)		
	Tensile strength (psi)	AMS-DTL-23053	1000 min.
	Flammability	UL 224 VW-1	Pass
	Shrink temperature, nominal		120°C
<b>Print Adherence</b>	Abrasion (eraser method)	SAE-AS5942	30 rubs
	Fluid Resistance:	MIL-STD-202G, Method 215	
	Isopropyl Alcohol/Mineral Spirts Blend		10 rubs (x3)
	Terpene Defluxer		10 rubs (x3)
	H <sub>2</sub> O/PGME/Monoethanolamine		10 rubs (x3)
	UV Resistance: 720 hrs. xenon arc lamp exposure		marks legible

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Product insight

Rev. A, May 2022

**Standard Sizes:**

Please see table to the right for standard sizes.

**Standard Colors:**

White.  
Black and clear available with MOQ

**Dimensional Information:**

Please refer to diagram to the right for dimensions.

**Standard Package:**

Continuous, spooled. Feet.

**How to order:**

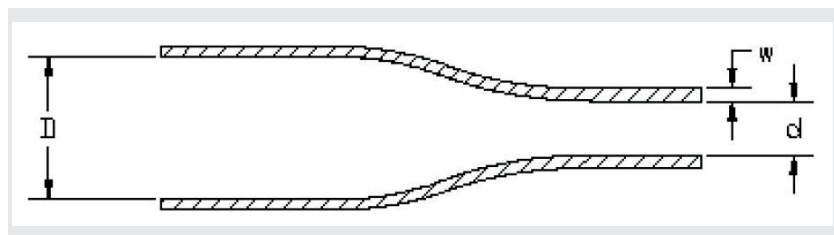
Example: SM3-31, 1/4", Black

## SM3-31

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### Modified Fluoropolymer 2:1 Shrink Ratio

Size	ID Min		ID Max		Wall Thickness Nom		Packaging
	(as supp.)		(after recov.)		(after recov.)		
inch	inch	mm	inch	mm	inch	mm	ft
1/8	.125	3.2	.062	1.6	.010	0.31	200
3/16	.187	4.8	.093	2.4	.010	0.31	150
1/4	.250	6.4	.125	3.2	.012	0.36	125
3/8	.375	9.5	.187	4.8	.012	0.36	125
1/2	.500	12.7	.250	6.4	.012	0.36	100
3/4	.750	19.1	.375	9.5	.017	0.43	100
1	1.00	25.4	.500	12.7	.019	0.48	75



Type of material	Size	Color	Packaging
SM3-31	1/4	White	Spool

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