



# EPS-200 Tubing

Adhesive-Lined, 2:1, Flexible, Polyolefin

## Data Sheet

### Product Description

3M™ EPS-200 is a 2:1 thin-wall tubing offering the advantages of integral adhesive-lined construction. The tubing is made from a flame-retardant, flexible polyolefin with a thin layer of special thermoplastic adhesive. The heat-shrinkable outer wall is selectively cross-linked while maintaining the high flow and excellent adhesion of the inner sealant liner.

When heated in excess of 121°C (250°F), EPS-200 rapidly shrinks to a skintight fit, forcing the melted adhesive lining to flow and cover the substrate. The adhesive forms a flexible bond with a wide variety of rubbers, plastics and metals. Upon cooling, the adhesive solidifies forming a permanent, non-drying, flexible and water resistant barrier. EPS-200 is rated for operation at -55°C (-67°F) to 110°C (230°F). Adhesive reflow will occur at temperatures above 80°C (176°F).

### Typical Applications

EPS-200 offers convenient protection of electronic components, wire splices or bundling of wires. Automotive, truck and marine wiring splices and connections are quickly and easily protected from harsh environments.

### Shrink Ratio

EPS-200 Tubing has a 2:1 shrink ratio. When freely recovered, the tubing will shrink to 50% of its original diameter. The recovered wall thickness of the tubing is proportional to the degree of recovery.

### Standard Colors

Black. Other colors and clear are available subject to factory quotation. The clear tubing is not flame retardant.

### Standard Packaging

Four-foot lengths. Cut pieces and other lengths (including spooled) are available subject to factory quotation.

### Ordering Information

Order EPS-200 Tubing by product name, size equivalent to the expanded inside diameter, package type and color. Other sizes are available subject to factory quotation. Always order the largest size that will shrink snugly over the item to be covered.

Example: EPS-200, 3/8", 4 ft., black.

### Standard Sizes and Dimensions

Ordering Size	Expanded I.D.		Recovered I.D.		Total Recovered Wall Thickness (Nominal)	Melttable Recovered Wall Thickness (Nominal)
	(Minimum)	(Maximum)	(Minimum)	(Maximum)		
	in.	(mm)	in.	(mm)	in. (mm)	in. (mm)
1/8	.125	(3,18)	.063	(1,60)	.027 (0,68)	.004 (0,10)
3/16	.187	(4,75)	.093	(2,36)	.027 (0,68)	.004 (0,10)
1/4	.250	(6,35)	.125	(3,18)	.030 (0,76)	.005 (0,13)
3/8	.375	(9,53)	.187	(4,75)	.031 (0,79)	.005 (0,13)
1/2	.500	(12,70)	.250	(6,35)	.032 (0,81)	.006 (0,15)
3/4	.750	(19,05)	.375	(9,53)	.037 (0,94)	.006 (0,15)
1	1.000	(25,40)	.500	(12,70)	.046 (1,17)	.008 (0,20)
1-1/2	1.500	(38,10)	.750	(19,05)	.049 (1,24)	.008 (0,20)
2	2.000	(50,80)	1.000	(25,40)	.060 (1,52)	.015 (0,38)

### Typical Properties

#### Applicable Specification

MIL-DTL-23053/4, Class 2; UL File E-39100

#### Physical

Tensile Strength 2100 PSI  
 Ultimate Elongation 450%  
 Longitudinal Change +1, -5%  
 Secant Modulus (2%) 17,000 PSI  
 Specific Gravity 1.3  
 \*Heat Aging Elongation 175% (168 hrs. @ 175°C)  
 \*Heat Shock No dripping, (4 hrs. @ 225°C) flowing, cracking  
 \*Low Temperature Flexibility (4 hrs. @ -55°C) No cracking  
 Flammability Self-extinguish meets UL224  
 All-Tubing Flame Test (jacket)

#### Chemical

Corrosion Resistance (Copper mirror) Non-corrosive  
 Fungus Resistance Non-nutrient  
 Water Absorption 0.3%  
 Fluid Resistance Excellent

#### Adhesive

Peel Strength, pli  
 Polyethylene 30  
 PVC 10  
 Lead 15  
 Aluminum 40  
 Corrosive Effect (Copper mirror) Non-corrosive

#### Electrical

Dielectric Strength 800 V/mil  
 Volume Resistivity 10<sup>14</sup> ohm-cm

Technical information provided consists of typical product data and should not be used for specification purposes. Unless otherwise noted, all tests are performed at room temperature.

\* Outer wall only.