



EPS-300 Tubing

Adhesive-Lined, 3:1, Flexible, Polyolefin

Data Sheet

Product Description

3M™ EPS-300 is a thin-wall tubing offering the advantages of integral, adhesive-lined construction. The tubing is made from flame-retardant, flexible polyolefin with an internal layer of special thermoplastic adhesive. The heat-shrinkable outer wall is selectively cross-linked, while the adhesive maintains high flow and excellent adhesion characteristics.

When heated in excess of 121°C (250°F), EPS-300 rapidly shrinks to a skintight fit, forcing the melted adhesive 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-300 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-300 offers superb environmental protection for electronic components, wire splices, wire bundles and harness breakouts. Automotive, truck and marine wire splices and harness breakouts are also quickly and easily protected from a variety of harsh environments.

Shrink Ratio

EPS-300 Tubing has a 3:1 shrink ratio. When freely recovered, the tubing will shrink to 33% of its original diameter. The recovered wall thickness of the tubing is proportional to the degree of recovery.

Standard Colors

Black and clear in all sizes. Red in 1/2", 3/4" and 1" only. Clear tubing is not flame retardant or UL approved.

Standard Packaging

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

Ordering Information

Order EPS-300 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-300, 1/2", 4 ft., black.

Standard Sizes and Dimensions

Ordering Size	Expanded I.D. (Minimum) in. (mm)	Recovered I.D. (Maximum) in. (mm)	Total Recovered Wall Thickness (Nominal) in. (mm)	Meltable Recovered Wall Thickness (Nominal) in. (mm)
1/8	.125 (3,18)	.040 (1,02)	.040 (1,02)	.020 (0,51)
3/16	.187 (4,75)	.062 (1,57)	.040 (1,02)	.020 (0,51)
1/4	.250 (6,35)	.080 (2,03)	.040 (1,02)	.020 (0,51)
3/8	.375 (9,53)	.120 (3,05)	.055 (1,40)	.025 (0,62)
1/2	.500 (12,70)	.160 (4,06)	.070 (1,78)	.030 (0,76)
3/4	.750 (19,05)	.250 (6,35)	.085 (2,16)	.035 (0,89)
1	1.000 (25,40)	.320 (8,13)	.100 (2,54)	.040 (1,02)
1-1/2	1.500 (38,10)	.510 (12,95)	.100 (2,54)	.040 (1,02)

Typical Properties

Applicable Specification

MIL-DTL-23053/4, Class 3; UL File E-157227; ABS

Physical

Tensile Strength 2100 PSI
Ultimate Elongation 450%
Longitudinal Change +1, -15%
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 700 V/mil
Volume Resistivity 10¹⁴ 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.

Limited Warranty – 3M expressly warrants that for a period of ninety days from the date of purchase, 3M static control products will be free of defects in materials (parts) and workmanship (labor). Defects occurring during the warranty period will be repaired or products will be replaced at 3M's option and expense, if 3M receives notice during the warranty period. Defective products must be returned to 3M with proof of purchase date.

Warranty Exclusions – THE FOREGOING EXPRESS WARRANTY IS MADE IN LIEU OF ALL OTHER PRODUCT WARRANTIES, EXPRESS AND IMPLIED, INCLUDING FITNESS AND MERCHANTABILITY. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean, or repair products.

Limit of Liability – In no event will 3M or Seller be responsible or liable for special, incidental, or consequential losses or damages, whether based in tort or contract. Fulfillment of 3M's warranty obligations will be Customer's exclusive remedy and 3M's and Seller's limit of liability for any breach of warranty or otherwise.

For your nearest distributor or to order, call 1-800-328-1368

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