3M™ Heat Shrink Tubing EPS-300

Adhesive-Lined, 3:1, Flexible, Polyolefin

Data Sheet **November 2018**

Description	3M™ Heat Shrink Tubing EPS-300 is a 3:1 thin-wall, flexible 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 maintaining the high flow and excellent adhesion of the inner sealant liner. When heated in excess of 121°C (250°F), 3M EPS-300 tubing 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. Adhesive reflow will occur at temperatures above 80°C (176°F).
Agency Approvals & Self Certifications	• UL Recognized (all colors except clear), UL File E-157227 at 600 Volts and 125°C maximum • CSA Recognized, CSA File LR38227 • For RoHS and REACH information, please visit www.3M.com/regs
Applications	3M EPS-300 tubing offers excellent environmental protection for electronic components, wire splices, wire bundles and harness breakouts. Automotive, truck and marine wiring splices and harness breakouts are quickly and easily protected from harsh environments.
Shrink Ratio	3M EPS-300 tubing has a 3:1 shrink ratio. When freely recovered, the tubing will shrink 33% of its as-supplied diameter. The recovered wall thickness of the tubing is proportional to the degree of recovery. The operating temperature range is from -55°C (-67°F) to 110°C (230°F), with a shrinking temperature minimum of 121°C (250°F).

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Typical Properties

Not for specifications. Values are typical, not to be considered minimum or maximum. Properties measured at room temperature 73°F (23°C) unless otherwise stated.

Physical Property	Typical Value US units (metric)
Tensile Strength	2100 PSI
Ultimate Elongation	450%
Longitudinal Change	+1, -15%
Secant Modulus (2%)	17,000 PSI
Specific Gravity	1.3
Heat Aging (outer wall only) 168 hrs @ 175°C	Elongation 175%
Heat shock (outer wall only) 4 hrs @ 225 °C	No dripping, flowing, cracking
Low Temperature Flexibility (outer wall only) 4 hrs @ -55 °C	No cracking
Flammability	Self-extinguishing, meets UL224 All-Tubing Flame Test (jacket)

Electrical Property (Test Method)	Typical Value US units (metric)
Dielectric Strength	700 V/mil
Volume Resistivity	10^{14} ohm/cm

Chemical Property (Test Method)	Typical Value US units (metric)
Corrosion Resistance (Copper mirror)	Non-corrosive
Fungus Resistance	Non-nutrient
Water Absorption	0.3%
Fluid Resistance	Excellent

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

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Standard Sizes and Dimensions

Ordering Size (Nominal)	Expanded I.D. (Minimum) In.	(mm)	Recovered I.D. (Maximum In.	(mm)	Total Recovered Wall Thickness (Nominal) In.	(mm)	Meltable Recovered Wall Thickness 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)

Standard Colors

Black, Red

Also available in Clear, White and Yellow. Price, MOQ and Lead Time will vary for these colors. Please contact Local Sales Representative or Customer Service Representative for more information.

NOTE: The clear tubing is not flame retardant or UL listed.

Shelf Life & Storage

3M™ Heat Shrink Tubing EPS-300 has a 10-year shelf life from date of manufacture when stored in a humidity controlled storage (10°C/50°F to 27°C/80°F and <75% relative humidity).

Availability

Standard Packaging

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

Please contact your local distributor; available from 3M.com/oem [Where to Buy] or call 1.800.676.8381.

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