



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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3M™ Heat Shrink Tubing EPS-400

Adhesive-Lined, 4:1, Semi-Rigid, Polyolefin

Description 3M Heat Shrink Tubing EPS-400 is a medium-wall, semi-rigid 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-400 tubing rapidly shrinks to a skintight fit, forcing the melted adhesive to flow and cover the substrate. 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 Meets requirements of:

UL Recognized, UL File E-157227 at 600 Volts and 125 °C maximum

CSA Recognized, CSA File LR38227

Applications EPS-400 tubing offers excellent 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-400 tubing has a 4:1 shrink ratio. When fully recovered, the tubing will shrink 25% 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 shrink temperature minimum of 121°C (250 °F).

Standard Sizes and Dimensions

Ordering Size (Nominal)	Expanded I.D. (Minimum)		Recovered I.D. (Maximum)		Total Recovered Wall Thickness (Nominal)		Meltable Recovered Wall Thickness	
	In.	(mm)	In.	(mm)	In.	(mm)	In.	(mm)
.300	.300	(7,62)	.060	(1,52)	.033	(0,84)	.028	(0,71)
.350	.350	(8,89)	.080	(2,03)	.038	(0,97)	.033	(0,84)
.450	.450	(11,43)	.105	(2,67)	.043	(1,09)	.053	(1,35)
.700	.700	(17,78)	.175	(4,45)	.060	(1,52)	.055	(1,40)



3M™ Heat Shrink Tubing EPS-400

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)
Color	Black and other color-coded sizes
Tensile Strength	1900 PSI
Ultimate Elongation	400%
Longitudinal Change	+1, -10%
Secant Modulus (2%)	33,000 PSI
Specific Gravity	1.25
Heat Aging (outer wall only) 168 hrs @ 175°C	Elongation 175%
Heat shock (outer wall only) 4 hrs @ 250 °C	No dripping, flowing, cracking
Low Temperature Flexibility (outer wall only) 4 hrs @ -55 °C	No cracking
Flammability	Self-extinguishing

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	30
PVC	10
Lead	15
Aluminum	40
Corrosive Effect (Copper mirror)	Non-corrosive

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Shelf Life & Storage 3M Heat Shrink Tubing EPS-400 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 are available subject to factory quotation.

Please contact your local distributor; available from 3M.com/electrical [Where to Buy] or call 1-800-676-8381.

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78-8129-9269-7 Rev B