



TP Tubing

Semi-Rigid Polyolefin

Data Sheet

Product Description

3M™ TP Tubing is a semi-rigid cross-linked polyolefin tubing ideally suited for electrical insulation and strain-relief of crimped or soldered terminals in electronic or electrical applications. Due to its high 2.5:1 shrink ratio, only four standard sizes of TP Tubing are needed to cover most popular terminations and connectors.

Minimum shrink temperature for TP tubing is 135°C (275°F). The tubing is flame retardant and rated for continuous operation from -55°C (-67°F) to 135°C (275°F). It will withstand temperatures up to 250°C (482°F) for short periods.

TP tubing is ULRecognized and CSA Certified for 600 volts @ 125°C (257°F).

Typical Applications

TP tubing is formulated for fast recovery and is supplied in pre-cut lengths, making it ideal for use with automatic equipment for insulation and strain relief of terminals. In combination with automated installation, this tubing can significantly reduce application costs while improving product quality and uniformity. For manual installation, TP Tubing can be applied with forced hot-air or infrared shrinking tools or ovens.

Shrink Ratio

3M TP tubing has a 2.5:1 shrink ratio. When freely recovered, the tubing will shrink to less than 40% of its as-supplied internal diameter. The recovered wall thickness of the tubing is proportional to the degree of recovery.

Standard Colors

Black. Other colors available subject to factory quotation.

Standard Packaging

Cartons of 1" cut pieces. Other cut piece lengths available subject to factory quotation.

Ordering Information

Order TP Tubing by product name, part number, and color. Standard one-inch lengths will be supplied in standard package quantities. Always order the largest size that will shrink snugly over the item to be covered.

Example: TP-320, 1" black.

Standard Sizes and Dimensions

Part Number	Standard Package Pieces	Expanded I.D. (Minimum)		Recovered I.D. (Maximum)		Recovered Wall Thickness (Nominal)		Standard Length	
		in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)
TP-240	15M	.240	(6,1)	.095	(2,41)	.031	(0,79)	1	(25,4)
TP-320	10M	.320	(8,1)	.125	(3,18)	.031	(0,79)	1	(25,4)
TP-375	10M	.375	(9,5)	.150	(3,81)	.031	(0,79)	1	(25,4)
TP-485	5M	.485	(12,3)	.200	(5,08)	.031	(0,79)	1	(25,4)

Typical Properties

Applicable Specification – ULFile E-157227; CSA LR38227					
Physical		Electrical		Chemical	
Tensile Strength	1900 PSI	Dielectric Strength	800 V/mil	Corrosive Effect	Non-corrosive
Ultimate Elongation	350%	Volume Resistivity	10 ¹⁵ ohm-cm	Fungus Resistance	Non-nutrient
Longitudinal Change	0, -10%	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.			
Secant Modulus (2%)	35,000				
Specific Gravity	1.25				
Heat Aging (168 hrs. @ 175°C)	Elongation 175%				
Flammability	Self-extinguish				

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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