



# VFP-876 Tubing

Very Flexible Polyolefin

## Data Sheet

### Product Description

3M™ VFP-876 is the most flexible of the heat-shrinkable, polyolefin tubings. Rated at 135°C, VFP-876 Tubing has been engineered to offer a low shrink temperature of 100°C (212°F). This allows the tubing to shrink rapidly, thereby minimizing heat exposure and possible damage to sensitive substrate materials or components.

VFP-876 Tubing meets MIL-R-46846, Type V and AMS-3587 and is UL Recognized (ULFile Nos. E-39100 and E-69751). It is rated for continuous operation from -55°C (-67°F) to 135°C (275°F) and withstands elevated temperatures to 300°C (572°F) for brief periods.

### Typical Applications

The extra flexibility and low shrink temperature of VFP-876 Tubing make it ideal for shrink-fit jacketing and insulation of flexible wire bundles and sensitive components.

### Shrink Ratio

VFP-876 Tubing has a 2:1 shrink ratio. When freely recovered, the tubing will shrink to 50% of its as-supplied internal diameter. The recovered wall thickness of the tubing is proportional to the degree of recovery. High expansion-ratio VFP-876 Tubing is available subject to factory quotation.

### Standard Colors

VFP-876 (flame retardant)—black, white and yellow. Other colors and clear available subject to factory quotation.

### Standard Packaging

Four-foot lengths or large spools. Cut pieces available subject to factory quotation.

### Ordering Information

Order VFP-876 by product name, size equivalent to expanded inside diameter, package type and color. Always order the largest size that will shrink snugly over the item to be covered.

Example: VFP-876, 1/4," 4 ft., white.

### Standard Sizes and Dimensions

| Ordering Size | Expanded I.D.<br>(Minimum) |         | Recovered I.D.<br>(Maximum) |         | Recovered Wall Thickness<br>(Nominal) |        |
|---------------|----------------------------|---------|-----------------------------|---------|---------------------------------------|--------|
|               | in.                        | (mm)    | in.                         | (mm)    | in.                                   | (mm)   |
| 3/64          | .046                       | (1,17)  | .023                        | (0,58)  | .016                                  | (0,41) |
| 1/16          | .063                       | (1,60)  | .031                        | (0,79)  | .017                                  | (0,43) |
| 3/32          | .093                       | (2,36)  | .046                        | (1,17)  | .020                                  | (0,51) |
| 1/8           | .125                       | (3,18)  | .062                        | (1,57)  | .020                                  | (0,51) |
| 3/16          | .187                       | (4,75)  | .093                        | (2,36)  | .020                                  | (0,51) |
| 1/4           | .250                       | (6,35)  | .125                        | (3,18)  | .025                                  | (0,64) |
| 3/8           | .375                       | (9,53)  | .187                        | (4,75)  | .025                                  | (0,64) |
| 1/2           | .500                       | (12,70) | .250                        | (6,35)  | .025                                  | (0,64) |
| 3/4           | .750                       | (19,05) | .375                        | (9,53)  | .030                                  | (0,76) |
| 1             | 1.000                      | (25,40) | .500                        | (12,70) | .035                                  | (0,89) |
| 1-1/2         | 1.500                      | (38,10) | .750                        | (19,05) | .040                                  | (1,02) |
| 2             | 2.000                      | (50,80) | 1.000                       | (25,40) | .045                                  | (1,14) |

### Typical Properties

#### Applicable Specification

**MIL-R-46846, Type V; ULFile E-39100, E-69751; CSA LR38227**

#### Physical

Tensile Strength 2100 PSI  
 Ultimate Elongation 450%  
 Longitudinal Change ±5%  
 Secant Modulus (2%) 11,000 PSI  
 Specific Gravity 1.3  
 Heat Aging Elongation (168 hrs. @ 175°C)(200% min.) 250%  
 Heat Shock No dripping, (4 hrs. @ 250°C) cracking, passes mandrel wrap test  
 Low Temperature Flexibility (4 hrs. @ -55°C) No cracking  
 Flammability Self-extinguish meets UL 224 All-Tubing Flame Test

#### Electrical

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

#### Chemical

Corrosive Effect Non-corrosive  
 Solvent Resistance  
 Tensile Strength 750 PSI  
 Dielectric Strength 400 V/mil  
 Water Absorption 0.2%  
 Fungus Resistance Non-nutrient

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.

**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 ALLOTHER 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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