

## ABRASION PROTECTION

Panduit abrasion protection products provide an economical and easy way to insulate, protect, bundle and color-code components and cable. A wide variety of sizes and materials are available to meet a broad range of indoor and outdoor applications. To help assure optimum quality, Panduit abrasion protection products are designed and manufactured to meet applicable quality standards including International, UL, Military, ISO, and Aerospace.



- **Pan-Wrap™ Split Harness Wrap** features a patented slot pattern to improve flexibility and abrasion protection
- **Spiral wrap** bundles and protects wire and cable while providing the largest variety of colors, materials, and sizes to meet a variety of needs
- **Grommet edging** protects wire and cable from damage caused by sharp panel edges
- **Heat shrink** is available in many different materials and sizes to meet a variety of needs
- **Corrugated loom tubing** is crush, impact, and abrasion resistant to reduce the risk of damage to wire and cable
- **Braided expandable sleeving** provides continuous abrasion resistance and lightweight durable protection, with a flexible open weave that will not trap heat or humidity

Panduit abrasion protection products provide quality at the lowest installed cost. With a continued focus on new product development, Panduit continues to meet customer needs.

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

## Part Number System for Pan-Wrap™

| PW             | 50               | F                                 | — | C                 | 20                      |
|----------------|------------------|-----------------------------------|---|-------------------|-------------------------|
| Type           | Outside Diameter | Material                          |   | Package Size      | Color Suffix            |
| PW = Pan-Wrap™ | 38 = 3/8"        | F = Polyethylene                  |   | L = 50' (15.2m)   | Leave Blank = Natural   |
|                | 50 = 1/2"        | FR = Flame Retardant Polyethylene |   | C = 100' (30.5m)  | 20 = Black Polyethylene |
|                | 75 = 3/4"        |                                   |   | T = 200' (61.0m)  | 3 = Orange              |
|                | 100 = 1"         |                                   |   | TL = 250' (76.2m) | 4 = Yellow              |
|                | 150 = 1 1/2"     |                                   |   |                   |                         |

## Pan-Wrap™ Split Harness Wrap



- Patented slot pattern provides improved flexibility and abrasion protection in any application
- Unique wall design provides for easy cable breakouts
- Innovative design maintains uniform bundle protection in dynamic applications
- Considerably reduces installation time
- Large overlap accommodates a wide range of bundle diameters
- Packaged on a reel for easy handling and dispensing of product

| Part Number  | Material                     | Color   | Length Per Reel |      | Max. Bundle Diameter |      | Min. Bundle Diameter† |      | Temperature Range               | Nominal I.D. |      | Std. Pkg. Qty.* |
|--------------|------------------------------|---------|-----------------|------|----------------------|------|-----------------------|------|---------------------------------|--------------|------|-----------------|
|              |                              |         | Ft.             | m    | In.                  | mm   | In.                   | mm   |                                 | In.          | mm   |                 |
| PW38F-TL     | Polyethylene                 | Natural | 250             | 76.2 | 0.43                 | 10.9 | 0.25                  | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.38         | 9.5  | 1               |
| PW38F-TL20   | Polyethylene                 | Black   | 250             | 76.2 | 0.43                 | 10.9 | 0.25                  | 6.4  |                                 | 0.38         | 9.5  | 1               |
| PW38FR-TLY   | Flame Retardant Polyethylene | Natural | 250             | 76.2 | 0.43                 | 10.9 | 0.25                  | 6.4  | -4°F – 167°F<br>(-20°C – 75°C)  | 0.38         | 9.5  | 1               |
| PW38FR-TL20Y | Flame Retardant Polyethylene | Black   | 250             | 76.2 | 0.43                 | 10.9 | 0.25                  | 6.4  |                                 | 0.38         | 9.5  | 1               |
| PW50F-T      | Polyethylene                 | Natural | 200             | 61.0 | 0.55                 | 14.0 | 0.43                  | 10.9 | -40°F – 122°F<br>(-40°C – 50°C) | 0.50         | 12.7 | 1               |
| PW50F-T20    | Polyethylene                 | Black   | 200             | 61.0 | 0.55                 | 14.0 | 0.43                  | 10.9 |                                 | 0.50         | 12.7 | 1               |
| PW50F-T3     | Polyethylene                 | Orange  | 200             | 61.0 | 0.55                 | 14.0 | 0.43                  | 10.9 |                                 | 0.50         | 12.7 | 1               |
| PW50F-T4     | Polyethylene                 | Yellow  | 200             | 61.0 | 0.55                 | 14.0 | 0.43                  | 10.9 |                                 | 0.50         | 12.7 | 1               |
| PW50FR-TY    | Flame Retardant Polyethylene | Natural | 200             | 61.0 | 0.55                 | 14.0 | 0.43                  | 10.9 | -4°F – 167°F<br>(-20°C – 75°C)  | 0.50         | 12.7 | 1               |
| PW50FR-T20Y  | Flame Retardant Polyethylene | Black   | 200             | 61.0 | 0.55                 | 14.0 | 0.43                  | 10.9 |                                 | 0.50         | 12.7 | 1               |
| PW75F-C      | Polyethylene                 | Natural | 100             | 30.5 | 0.81                 | 20.6 | 0.55                  | 14.0 | -40°F – 122°F<br>(-40°C – 50°C) | 0.75         | 19.1 | 1               |
| PW75F-C20    | Polyethylene                 | Black   | 100             | 30.5 | 0.81                 | 20.6 | 0.55                  | 14.0 |                                 | 0.75         | 19.1 | 1               |
| PW75F-C3     | Polyethylene                 | Orange  | 100             | 30.5 | 0.81                 | 20.6 | 0.55                  | 14.0 |                                 | 0.75         | 19.1 | 1               |
| PW75F-C4     | Polyethylene                 | Yellow  | 100             | 30.5 | 0.81                 | 20.6 | 0.55                  | 14.0 |                                 | 0.75         | 19.1 | 1               |
| PW75FR-CY    | Flame Retardant Polyethylene | Natural | 100             | 30.5 | 0.81                 | 20.6 | 0.55                  | 14.0 | -4°F – 167°F<br>(-20°C – 75°C)  | 0.75         | 19.1 | 1               |
| PW75FR-C20Y  | Flame Retardant Polyethylene | Black   | 100             | 30.5 | 0.81                 | 20.6 | 0.55                  | 14.0 |                                 | 0.75         | 19.1 | 1               |
| PW100F-C     | Polyethylene                 | Natural | 100             | 30.5 | 1.13                 | 28.6 | 0.81                  | 20.6 | -40°F – 122°F<br>(-40°C – 50°C) | 1.00         | 25.4 | 1               |
| PW100F-C20   | Polyethylene                 | Black   | 100             | 30.5 | 1.13                 | 28.6 | 0.81                  | 20.6 |                                 | 1.00         | 25.4 | 1               |
| PW100F-C3    | Polyethylene                 | Orange  | 100             | 30.5 | 1.13                 | 28.6 | 0.81                  | 20.6 |                                 | 1.00         | 25.4 | 1               |
| PW100F-C4    | Polyethylene                 | Yellow  | 100             | 30.5 | 1.13                 | 28.6 | 0.81                  | 20.6 |                                 | 1.00         | 25.4 | 1               |
| PW100FR-CY   | Flame Retardant Polyethylene | Natural | 100             | 30.5 | 1.13                 | 28.6 | 0.81                  | 20.6 | -4°F – 167°F<br>(-20°C – 75°C)  | 1.00         | 25.4 | 1               |
| PW100FR-C20Y | Flame Retardant Polyethylene | Black   | 100             | 30.5 | 1.13                 | 28.6 | 0.81                  | 20.6 |                                 | 1.00         | 25.4 | 1               |
| PW150F-L     | Polyethylene                 | Natural | 50              | 15.2 | 1.63                 | 41.3 | 1.13                  | 28.6 | -40°F – 122°F<br>(-40°C – 50°C) | 1.50         | 38.1 | 1               |
| PW150F-L20   | Polyethylene                 | Black   | 50              | 15.2 | 1.63                 | 41.3 | 1.13                  | 28.6 |                                 | 1.50         | 38.1 | 1               |
| PW150F-L3    | Polyethylene                 | Orange  | 50              | 15.2 | 1.63                 | 41.3 | 1.13                  | 28.6 |                                 | 1.50         | 38.1 | 1               |
| PW150F-L4    | Polyethylene                 | Yellow  | 50              | 15.2 | 1.63                 | 41.3 | 1.13                  | 28.6 |                                 | 1.50         | 38.1 | 1               |
| PW150FR-LY   | Flame Retardant Polyethylene | Natural | 50              | 15.2 | 1.63                 | 41.3 | 1.13                  | 28.6 | -4°F – 167°F<br>(-20°C – 75°C)  | 1.50         | 38.1 | 1               |
| PW150FR-L20Y | Flame Retardant Polyethylene | Black   | 50              | 15.2 | 1.63                 | 41.3 | 1.13                  | 28.6 |                                 | 1.50         | 38.1 | 1               |

†Diameter can be further reduced with the use of Panduit cable ties.

\*Order number of reels required.

## Pan-Wrap™ Installation Tools

- Patented installation tool with 180° opening allows easy loading of maximum bundle diameters to speed installation, providing the lowest installed cost



| Part Number | Color | For Use With   | Std. Pkg. Qty.** |
|-------------|-------|----------------|------------------|
| PWT38       | White | PW38F- Series  | 1                |
| PWT50       | White | PW50F- Series  | 1                |
| PWT75       | White | PW75F- Series  | 1                |
| PWT100      | White | PW100F- Series | 1                |
| PWT150      | White | PW150F- Series | 1                |

\*\*Order number of tools required.

## Part Number System for Spiral Wrap

| T               | 25                                                                                                   | F                                                                                                                                                                                                     | - | C                                                                                            | 16              |
|-----------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----------------------------------------------------------------------------------------------|-----------------|
| Type            | Outside Diameter                                                                                     | Material                                                                                                                                                                                              |   | Package Size                                                                                 | Color Suffix    |
| T = Spiral Wrap | 12 = 1/8"<br>19 = 3/16"<br>25 = 1/4"<br>38 = 3/8"<br>50 = 1/2"<br>62 = 5/8"<br>75 = 3/4"<br>100 = 1" | F = Polyethylene<br>R = Fire Resistant Polyethylene<br>FR = Flame Retardant Polyethylene<br>N = Nylon<br>NZFR = Halogen-Free Flame Retardant Nylon<br>T = TFE^<br>P = Weather Resistant Polypropylene |   | X = 10'<br>Q = 25'<br>L = 50'<br>C = 100'<br>T = 200'<br>TL = 250'<br>D = 500'<br>M = 1,000' | See Table Below |

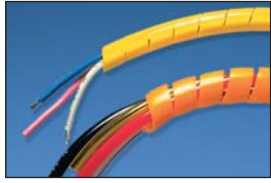
| Color                   | Color Suffix             | Material Availability |                             |                              |           |                                      |                                 |         |
|-------------------------|--------------------------|-----------------------|-----------------------------|------------------------------|-----------|--------------------------------------|---------------------------------|---------|
|                         |                          | Polyethylene          | Fire Resistant Polyethylene | Flame Retardant Polyethylene | Nylon 6.6 | Halogen-Free Flame Retardant Nylon 6 | Weather Resistant Polypropylene | TEFLON▲ |
| Natural*                | No Suffix Will be Listed | ✓                     | ✓                           | ✓                            | ✓         |                                      |                                 | ✓       |
| Weather Resistant Black | 0                        | ✓                     |                             |                              | ✓         |                                      | ✓                               |         |
| Brown                   | 1                        | ✓                     |                             |                              |           |                                      |                                 |         |
| Red                     | 2                        | ✓                     |                             |                              |           |                                      |                                 |         |
| Orange                  | 3                        | ✓                     |                             |                              |           |                                      |                                 |         |
| Yellow                  | 4                        | ✓                     |                             |                              |           |                                      |                                 |         |
| Green                   | 5                        | ✓                     |                             |                              |           |                                      |                                 |         |
| Blue                    | 6                        | ✓                     |                             |                              |           |                                      |                                 |         |
| Purple                  | 7                        | ✓                     |                             |                              |           |                                      |                                 |         |
| Gray                    | 8                        | ✓                     |                             |                              |           |                                      |                                 |         |
| White                   | 10                       | ✓                     |                             |                              |           |                                      |                                 |         |
| Pink                    | 16                       | ✓                     |                             |                              |           |                                      |                                 |         |
| Black                   | 20                       | ✓                     | ✓                           | ✓                            | ✓         | ✓                                    |                                 |         |

^TFE is Polytetrafluorethylene material.

\*Natural can range from transparent, opaque, to white.

A.  
System  
Overview

## Spiral Wrap



- Harness multiple cables into a single manageable bundle
- Allows breakouts of single/multiple cables
- Provides abrasion protection for wire, cables, hoses, and tubing

- Multiple colors allow easy identification of cable bundles
- Installation tool supplied in each package
- Available in multiple materials
- Reusable

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

| Part Number | Material*    | Color   | Length Per Reel |       | Bundle Diameter Range |             | Outside Diameter |      | Temperature Range               | Wall Thickness |      | Std. Pkg. Qty.† |
|-------------|--------------|---------|-----------------|-------|-----------------------|-------------|------------------|------|---------------------------------|----------------|------|-----------------|
|             |              |         | Ft.             | m     | In.                   | mm          | In.              | mm   |                                 | In.            | mm   |                 |
| T12F-C      | Polyethylene | Natural | 100             | 30.5  | 1/16 – 1/2            | 1.6 – 12.7  | 0.12             | 3.2  | -40°F – 122°F<br>(-40°C – 50°C) | 0.030          | 0.76 | 1               |
| T12F-D      | Polyethylene | Natural | 500             | 152.4 | 1/16 – 1/2            | 1.6 – 12.7  | 0.12             | 3.2  | -40°F – 122°F<br>(-40°C – 50°C) | 0.030          | 0.76 | 1               |
| T19F-C      | Polyethylene | Natural | 100             | 30.5  | 1/8 – 1               | 3.2 – 25.4  | 0.19             | 4.8  | -40°F – 122°F<br>(-40°C – 50°C) | 0.035          | 0.89 | 1               |
| T19F-M      | Polyethylene | Natural | 1,000           | 304.8 | 1/8 – 1               | 3.2 – 25.4  | 0.19             | 4.8  | -40°F – 122°F<br>(-40°C – 50°C) | 0.035          | 0.89 | 1               |
| T25F-C      | Polyethylene | Natural | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8  | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-C1     | Polyethylene | Brown   | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8  | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-C2     | Polyethylene | Red     | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8  | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-C3Y    | Polyethylene | Orange  | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8  | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-C4Y    | Polyethylene | Yellow  | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8  | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-C5     | Polyethylene | Green   | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8  | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-C6     | Polyethylene | Blue    | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8  | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-C7     | Polyethylene | Purple  | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8  | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-C8     | Polyethylene | Gray    | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8  | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-C10    | Polyethylene | White   | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8  | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-C16    | Polyethylene | Pink    | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8  | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-M      | Polyethylene | Natural | 1,000           | 304.8 | 3/16 – 2              | 4.8 – 50.8  | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T38F-C      | Polyethylene | Natural | 100             | 30.5  | 5/16 – 3              | 7.9 – 76.2  | 0.38             | 9.5  | -40°F – 122°F<br>(-40°C – 50°C) | 0.055          | 1.40 | 1               |
| T38F-TL     | Polyethylene | Natural | 250             | 76.2  | 5/16 – 3              | 7.9 – 76.2  | 0.38             | 9.5  | -40°F – 122°F<br>(-40°C – 50°C) | 0.055          | 1.40 | 1               |
| T50F-X      | Polyethylene | Natural | 10              | 3.1   | 3/8 – 4               | 9.5 – 101.6 | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-C      | Polyethylene | Natural | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6 | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-C1     | Polyethylene | Brown   | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6 | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-C2     | Polyethylene | Red     | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6 | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-C3Y    | Polyethylene | Orange  | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6 | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-C4Y    | Polyethylene | Yellow  | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6 | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-C5     | Polyethylene | Green   | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6 | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-C6     | Polyethylene | Blue    | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6 | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-C7     | Polyethylene | Purple  | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6 | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-C8     | Polyethylene | Gray    | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6 | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-C10    | Polyethylene | White   | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6 | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-C16    | Polyethylene | Pink    | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6 | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |

\*Flame retardant products are manufactured from a material that is rated UL 94V-0.

†Reel packaging may contain splices. Contact Panduit Customer Service for further information.

## Spiral Wrap (continued)

| Part Number | Material                       | Color   | Length Per Reel |       | Bundle Diameter Range |              | Outside Diameter |      | Temperature Range               | Wall Thickness |      | Std. Pkg. Qty.† |
|-------------|--------------------------------|---------|-----------------|-------|-----------------------|--------------|------------------|------|---------------------------------|----------------|------|-----------------|
|             |                                |         | Ft.             | m     | In.                   | mm           | In.              | mm   |                                 | In.            | mm   |                 |
| T50F-TL     | Polyethylene                   | Natural | 250             | 76.2  | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-TL4Y   | Polyethylene                   | Yellow  | 250             | 76.2  | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T62F-C      | Polyethylene                   | Natural | 100             | 30.5  | 1/2 – 4 1/2           | 12.7 – 114.3 | 0.62             | 15.9 | -40°F – 122°F<br>(-40°C – 50°C) | 0.062          | 1.57 | 1               |
| T62F-TL     | Polyethylene                   | Natural | 250             | 76.2  | 1/2 – 4 1/2           | 12.7 – 114.3 | 0.62             | 15.9 | -40°F – 122°F<br>(-40°C – 50°C) | 0.062          | 1.57 | 1               |
| T75F-C      | Polyethylene                   | Natural | 100             | 30.5  | 5/8 – 5               | 15.9 – 127.0 | 0.75             | 19.1 | -40°F – 122°F<br>(-40°C – 50°C) | 0.065          | 1.65 | 1               |
| T75F-T      | Polyethylene                   | Natural | 200             | 61.0  | 5/8 – 5               | 15.9 – 127.0 | 0.75             | 19.1 | -40°F – 122°F<br>(-40°C – 50°C) | 0.065          | 1.65 | 1               |
| T100F-C     | Polyethylene                   | Natural | 100             | 30.5  | 7/8 – 6               | 22.2 – 152.4 | 1.00             | 25.4 | -40°F – 122°F<br>(-40°C – 50°C) | 0.070          | 1.78 | 1               |
| T12F-C0     | Weather Resistant Polyethylene | Black   | 100             | 30.5  | 1/16 – 1/2            | 1.6 – 12.7   | 0.12             | 3.2  | -40°F – 122°F<br>(-40°C – 50°C) | 0.030          | 0.76 | 1               |
| T12F-D0     | Weather Resistant Polyethylene | Black   | 500             | 152.4 | 1/16 – 1/2            | 1.6 – 12.7   | 0.12             | 3.2  | -40°F – 122°F<br>(-40°C – 50°C) | 0.030          | 0.76 | 1               |
| T19F-C0     | Weather Resistant Polyethylene | Black   | 100             | 30.5  | 1/8 – 1               | 3.2 – 25.4   | 0.19             | 4.8  | -40°F – 122°F<br>(-40°C – 50°C) | 0.035          | 0.89 | 1               |
| T25F-X0     | Weather Resistant Polyethylene | Black   | 10              | 3.1   | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-C0     | Weather Resistant Polyethylene | Black   | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25F-M0     | Weather Resistant Polyethylene | Black   | 1,000           | 304.8 | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T38F-C0     | Weather Resistant Polyethylene | Black   | 100             | 30.5  | 5/16 – 3              | 7.9 – 76.2   | 0.38             | 9.5  | -40°F – 122°F<br>(-40°C – 50°C) | 0.055          | 1.40 | 1               |
| T38F-TL0    | Weather Resistant Polyethylene | Black   | 250             | 76.2  | 5/16 – 3              | 7.9 – 76.2   | 0.38             | 9.5  | -40°F – 122°F<br>(-40°C – 50°C) | 0.055          | 1.40 | 1               |
| T50F-X0     | Weather Resistant Polyethylene | Black   | 10              | 3.1   | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-C0     | Weather Resistant Polyethylene | Black   | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50F-TL0    | Weather Resistant Polyethylene | Black   | 250             | 76.2  | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -40°F – 122°F<br>(-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T62F-C0     | Weather Resistant Polyethylene | Black   | 100             | 30.5  | 1/2 – 4 1/2           | 12.7 – 114.3 | 0.62             | 15.9 | -40°F – 122°F<br>(-40°C – 50°C) | 0.062          | 1.57 | 1               |
| T62F-TL0    | Weather Resistant Polyethylene | Black   | 250             | 76.2  | 1/2 – 4 1/2           | 12.7 – 114.3 | 0.62             | 15.9 | -40°F – 122°F<br>(-40°C – 50°C) | 0.062          | 1.57 | 1               |
| T75F-C0     | Weather Resistant Polyethylene | Black   | 100             | 30.5  | 5/8 – 5               | 15.9 – 127.0 | 0.75             | 19.1 | -40°F – 122°F<br>(-40°C – 50°C) | 0.065          | 1.65 | 1               |
| T75F-T0     | Weather Resistant Polyethylene | Black   | 200             | 61.0  | 5/8 – 5               | 15.9 – 127.0 | 0.75             | 19.1 | -40°F – 122°F<br>(-40°C – 50°C) | 0.065          | 1.65 | 1               |
| T100F-C0    | Weather Resistant Polyethylene | Black   | 100             | 30.5  | 7/8 – 6               | 22.2 – 152.4 | 1.00             | 25.4 | -40°F – 122°F<br>(-40°C – 50°C) | 0.070          | 1.78 | 1               |
| T12R-CY     | Fire Resistant Polyethylene    | Natural | 100             | 30.5  | 1/16 – 1/2            | 1.6 – 12.7   | 0.12             | 3.2  | -40°F – 122°F<br>(-40°C – 50°C) | 0.030          | 0.76 | 1               |
| T19R-CY     | Fire Resistant Polyethylene    | Natural | 100             | 30.5  | 1/8 – 1               | 3.2 – 25.4   | 0.19             | 4.8  | -40°F – 122°F<br>(-40°C – 50°C) | 0.035          | 0.89 | 1               |
| T25R-CY     | Fire Resistant Polyethylene    | Natural | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25R-C20Y   | Fire Resistant Polyethylene    | Black   | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -40°F – 122°F<br>(-40°C – 50°C) | 0.040          | 1.02 | 1               |

\*Flame retardant products are manufactured from a material that is rated UL 94V-0.

†Reel packaging may contain splices. Contact Panduit Customer Service for further information.

Table continues on page C3.6



## A. System Overview

## B1. Cable Ties

## B2. Cable Accessories

## B3. Stainless Steel Ties

## C1. Wiring Duct

## C2. Surface Raceway

## C3. Abrasion Protection

## C4. Cable Management

## D1. Terminals

## D2. Power Connectors

## D3. Grounding Connectors

## E1. Labeling Systems

## E2. Labels

## E3. Pre-Printed & Write-On Markers

## E4. Permanent Identification

## E5. Lockout/Tagout & Safety Solutions

## F. Index

## Spiral Wrap (continued)

| Part Number | Material*                    | Color   | Length Per Reel |       | Bundle Diameter Range |              | Outside Diameter |      | Temperature Range            | Wall Thickness |      | Std. Pkg. Qty.‡ |
|-------------|------------------------------|---------|-----------------|-------|-----------------------|--------------|------------------|------|------------------------------|----------------|------|-----------------|
|             |                              |         | Ft.             | m     | In.                   | mm           | In.              | mm   |                              | In.            | mm   |                 |
| T25R-MY     | Fire Resistant Polyethylene  | Natural | 1,000           | 304.8 | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -40°F – 122°F (-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T25R-M20Y   | Fire Resistant Polyethylene  | Black   | 1,000           | 304.8 | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -40°F – 122°F (-40°C – 50°C) | 0.040          | 1.02 | 1               |
| T38R-CY     | Fire Resistant Polyethylene  | Natural | 100             | 30.5  | 5/16 – 3              | 7.9 – 76.2   | 0.38             | 9.5  | -40°F – 122°F (-40°C – 50°C) | 0.055          | 1.40 | 1               |
| T38R-TLY    | Fire Resistant Polyethylene  | Natural | 250             | 76.2  | 5/16 – 3              | 7.9 – 76.2   | 0.38             | 9.5  | -40°F – 122°F (-40°C – 50°C) | 0.055          | 1.40 | 1               |
| T50R-CY     | Fire Resistant Polyethylene  | Natural | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -40°F – 122°F (-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T50R-TLY    | Fire Resistant Polyethylene  | Natural | 250             | 76.2  | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -40°F – 122°F (-40°C – 50°C) | 0.060          | 1.52 | 1               |
| T62R-CY     | Fire Resistant Polyethylene  | Natural | 100             | 30.5  | 1/2 – 4 1/2           | 12.7 – 114.3 | 0.62             | 15.9 | -40°F – 122°F (-40°C – 50°C) | 0.062          | 1.57 | 1               |
| T75R-CY     | Fire Resistant Polyethylene  | Natural | 100             | 30.5  | 5/8 – 5               | 15.9 – 127.0 | 0.75             | 19.1 | -40°F – 122°F (-40°C – 50°C) | 0.065          | 1.65 | 1               |
| T100R-CY    | Fire Resistant Polyethylene  | Natural | 100             | 30.5  | 7/8 – 6               | 22.2 – 152.4 | 1.00             | 25.4 | -40°F – 122°F (-40°C – 50°C) | 0.070          | 1.78 | 1               |
| T12FR-CY    | Flame Retardant Polyethylene | Natural | 100             | 30.5  | 1/16 – 1/2            | 1.6 – 12.7   | 0.12             | 3.2  | -4°F – 167°F (-20°C – 75°C)  | 0.030          | 0.76 | 1               |
| T12FR-C20Y  | Flame Retardant Polyethylene | Black   | 100             | 30.5  | 1/16 – 1/2            | 1.6 – 12.7   | 0.12             | 3.2  | -4°F – 167°F (-20°C – 75°C)  | 0.030          | 0.76 | 1               |
| T19FR-CY    | Flame Retardant Polyethylene | Natural | 100             | 30.5  | 1/8 – 1               | 3.2 – 25.4   | 0.19             | 4.8  | -4°F – 167°F (-20°C – 75°C)  | 0.035          | 0.89 | 1               |
| T19FR-C20Y  | Flame Retardant Polyethylene | Black   | 100             | 30.5  | 1/8 – 1               | 3.2 – 25.4   | 0.19             | 4.8  | -4°F – 167°F (-20°C – 75°C)  | 0.035          | 0.89 | 1               |
| T25FR-CY    | Flame Retardant Polyethylene | Natural | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -4°F – 167°F (-20°C – 75°C)  | 0.040          | 1.02 | 1               |
| T25FR-C20Y  | Flame Retardant Polyethylene | Black   | 100             | 30.5  | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -4°F – 167°F (-20°C – 75°C)  | 0.040          | 1.02 | 1               |
| T25FR-MY    | Flame Retardant Polyethylene | Natural | 1,000           | 304.8 | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -4°F – 167°F (-20°C – 75°C)  | 0.040          | 1.02 | 1               |
| T25FR-M20Y  | Flame Retardant Polyethylene | Black   | 1,000           | 304.8 | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -4°F – 167°F (-20°C – 75°C)  | 0.040          | 1.02 | 1               |
| T38FR-CY    | Flame Retardant Polyethylene | Natural | 100             | 30.5  | 5/16 – 3              | 7.9 – 76.2   | 0.38             | 9.5  | -4°F – 167°F (-20°C – 75°C)  | 0.055          | 1.40 | 1               |
| T38FR-C20Y  | Flame Retardant Polyethylene | Black   | 100             | 30.5  | 5/16 – 3              | 7.9 – 76.2   | 0.38             | 9.5  | -4°F – 167°F (-20°C – 75°C)  | 0.055          | 1.40 | 1               |
| T38FR-TLY   | Flame Retardant Polyethylene | Natural | 250             | 76.2  | 5/16 – 3              | 7.9 – 76.2   | 0.38             | 9.5  | -4°F – 167°F (-20°C – 75°C)  | 0.055          | 1.40 | 1               |
| T50FR-CY    | Flame Retardant Polyethylene | Natural | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -4°F – 167°F (-20°C – 75°C)  | 0.060          | 1.52 | 1               |
| T50FR-C20Y  | Flame Retardant Polyethylene | Black   | 100             | 30.5  | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -4°F – 167°F (-20°C – 75°C)  | 0.060          | 1.52 | 1               |
| T50FR-TLY   | Flame Retardant Polyethylene | Natural | 250             | 76.2  | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -4°F – 167°F (-20°C – 75°C)  | 0.060          | 1.52 | 1               |
| T62FR-CY    | Flame Retardant Polyethylene | Natural | 100             | 30.5  | 1/2 – 4 1/2           | 12.7 – 114.3 | 0.62             | 15.9 | -4°F – 167°F (-20°C – 75°C)  | 0.062          | 1.57 | 1               |
| T62FR-C20Y  | Flame Retardant Polyethylene | Black   | 100             | 30.5  | 1/2 – 4 1/2           | 12.7 – 114.3 | 0.62             | 15.9 | -4°F – 167°F (-20°C – 75°C)  | 0.062          | 1.57 | 1               |
| T75FR-CY    | Flame Retardant Polyethylene | Natural | 100             | 30.5  | 5/8 – 5               | 15.9 – 127.0 | 0.75             | 19.1 | -4°F – 167°F (-20°C – 75°C)  | 0.065          | 1.65 | 1               |
| T75FR-C20Y  | Flame Retardant Polyethylene | Black   | 100             | 30.5  | 5/8 – 5               | 15.9 – 127.0 | 0.75             | 19.1 | -4°F – 167°F (-20°C – 75°C)  | 0.065          | 1.65 | 1               |
| T75FR-TY    | Flame Retardant Polyethylene | Natural | 200             | 61.0  | 5/8 – 5               | 15.9 – 127.0 | 0.75             | 19.1 | -4°F – 167°F (-20°C – 75°C)  | 0.065          | 1.65 | 1               |
| T100FR-CY   | Flame Retardant Polyethylene | Natural | 100             | 30.5  | 7/8 – 6               | 22.2 – 152.4 | 1.00             | 25.4 | -4°F – 167°F (-20°C – 75°C)  | 0.070          | 1.78 | 1               |
| T100FR-C20Y | Flame Retardant Polyethylene | Black   | 100             | 30.5  | 7/8 – 6               | 22.2 – 152.4 | 1.00             | 25.4 | -4°F – 167°F (-20°C – 75°C)  | 0.070          | 1.78 | 1               |

\*Flame retardant products are manufactured from a material that is rated UL 94V-0.

‡Reel packaging may contain splices. Contact Panduit Customer Service for further information.

## Spiral Wrap (continued)

| Part Number | Material*                       | Color   | Length Per Reel |      | Bundle Diameter Range |              | Outside Diameter |      | Temperature Range                  | Wall Thickness |      | Std. Pkg. Qty.† |
|-------------|---------------------------------|---------|-----------------|------|-----------------------|--------------|------------------|------|------------------------------------|----------------|------|-----------------|
|             |                                 |         | Ft.             | m    | In.                   | mm           | In.              | mm   |                                    | In.            | mm   |                 |
| T12N-C      | Nylon 6.6                       | Natural | 100             | 30.5 | 1/16 – 1/2            | 1.6 – 12.7   | 0.12             | 3.2  | -40°F – 149°F<br>(-40°C – 65°C)    | 0.015          | 0.38 | 1               |
| T19N-C      | Nylon 6.6                       | Natural | 100             | 30.5 | 1/8 – 1               | 3.2 – 25.4   | 0.19             | 4.8  | -40°F – 149°F<br>(-40°C – 65°C)    | 0.020          | 0.51 | 1               |
| T25N-C      | Nylon 6.6                       | Natural | 100             | 30.5 | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -40°F – 149°F<br>(-40°C – 65°C)    | 0.023          | 0.58 | 1               |
| T38N-C      | Nylon 6.6                       | Natural | 100             | 30.5 | 5/16 – 3              | 7.9 – 76.2   | 0.38             | 9.5  | -40°F – 149°F<br>(-40°C – 65°C)    | 0.030          | 0.76 | 1               |
| T50N-C      | Nylon 6.6                       | Natural | 100             | 30.5 | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -40°F – 149°F<br>(-40°C – 65°C)    | 0.032          | 0.81 | 1               |
| T62N-C      | Nylon 6.6                       | Natural | 100             | 30.5 | 1/2 – 4 1/2           | 12.7 – 114.3 | 0.62             | 15.9 | -40°F – 149°F<br>(-40°C – 65°C)    | 0.035          | 0.89 | 1               |
| T75N-C      | Nylon 6.6                       | Natural | 100             | 30.5 | 5/8 – 5               | 15.9 – 127.0 | 0.75             | 19.1 | -40°F – 149°F<br>(-40°C – 65°C)    | 0.040          | 1.02 | 1               |
| T100N-C     | Nylon 6.6                       | Natural | 100             | 30.5 | 7/8 – 6               | 22.2 – 152.4 | 1.00             | 25.4 | -40°F – 149°F<br>(-40°C – 65°C)    | 0.045          | 1.14 | 1               |
| T12N-C0     | Weather Resistant Nylon 6.6     | Black   | 100             | 30.5 | 1/16 – 1/2            | 1.6 – 12.7   | 0.12             | 3.2  | -40°F – 149°F<br>(-40°C – 65°C)    | 0.015          | 0.38 | 1               |
| T19N-C0     | Weather Resistant Nylon 6.6     | Black   | 100             | 30.5 | 1/8 – 1               | 3.2 – 25.4   | 0.19             | 4.8  | -40°F – 149°F<br>(-40°C – 65°C)    | 0.020          | 0.51 | 1               |
| T25N-C0     | Weather Resistant Nylon 6.6     | Black   | 100             | 30.5 | 3/16 – 2              | 4.8 – 50.4   | 0.25             | 6.4  | -40°F – 149°F<br>(-40°C – 65°C)    | 0.023          | 0.58 | 1               |
| T38N-C0     | Weather Resistant Nylon 6.6     | Black   | 100             | 30.5 | 5/16 – 3              | 7.9 – 76.2   | 0.38             | 9.5  | -40°F – 149°F<br>(-40°C – 65°C)    | 0.030          | 0.76 | 1               |
| T50N-C0     | Weather Resistant Nylon 6.6     | Black   | 100             | 30.5 | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -40°F – 149°F<br>(-40°C – 65°C)    | 0.032          | 0.81 | 1               |
| T62N-C0     | Weather Resistant Nylon 6.6     | Black   | 100             | 30.5 | 1/2 – 4 1/2           | 12.7 – 114.3 | 0.62             | 15.9 | -40°F – 149°F<br>(-40°C – 65°C)    | 0.035          | 0.89 | 1               |
| T75N-C0     | Weather Resistant Nylon 6.6     | Black   | 100             | 30.5 | 5/8 – 5               | 15.9 – 127.0 | 0.75             | 19.1 | -40°F – 149°F<br>(-40°C – 65°C)    | 0.040          | 1.02 | 1               |
| T100N-C0    | Weather Resistant Nylon 6.6     | Black   | 100             | 30.5 | 7/8 – 6               | 22.2 – 152.4 | 1.00             | 25.4 | -40°F – 149°F<br>(-40°C – 65°C)    | 0.045          | 1.14 | 1               |
| T38P-C0     | Weather Resistant Polypropylene | Black   | 100             | 30.5 | 5/16 – 3              | 7.9 – 76.2   | 0.38             | 9.5  | -40°F – 239°F<br>(-40°C – 115°C)   | 0.030          | 0.76 | 1               |
| T50P-C0     | Weather Resistant Polypropylene | Black   | 100             | 30.5 | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -40°F – 239°F<br>(-40°C – 115°C)   | 0.030          | 0.76 | 1               |
| T100P-C0    | Weather Resistant Polypropylene | Black   | 100             | 30.5 | 7/8 – 6               | 22.2 – 152.4 | 1.00             | 25.4 | -40°F – 239°F<br>(-40°C – 115°C)   | 0.030          | 0.76 | 1               |
| T12T-C      | TFE^                            | Natural | 100             | 30.5 | 1/16 – 1/2            | 1.6 – 12.7   | 0.12             | 3.2  | -454°F – 500°F<br>(-270°C – 260°C) | 0.020          | 0.51 | 1               |
| T19T-C      | TFE^                            | Natural | 100             | 30.5 | 1/8 – 1               | 3.2 – 25.4   | 0.19             | 4.8  | -454°F – 500°F<br>(-270°C – 260°C) | 0.030          | 0.76 | 1               |
| T25T-L      | TFE^                            | Natural | 50              | 15.2 | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -454°F – 500°F<br>(-270°C – 260°C) | 0.030          | 0.76 | 1               |
| T25T-L0     | TFE^                            | Black   | 50              | 15.2 | 3/16 – 2              | 4.8 – 50.8   | 0.25             | 6.4  | -454°F – 500°F<br>(-270°C – 260°C) | 0.030          | 0.76 | 1               |
| T38T-L      | TFE^                            | Natural | 50              | 15.2 | 5/16 – 3              | 7.9 – 76.2   | 0.38             | 9.5  | -454°F – 500°F<br>(-270°C – 260°C) | 0.030          | 0.76 | 1               |
| T50T-Q      | TFE^                            | Natural | 25              | 7.6  | 3/8 – 4               | 9.5 – 101.6  | 0.50             | 12.7 | -454°F – 500°F<br>(-270°C – 260°C) | 0.030          | 0.76 | 1               |
| T62T-Q      | TFE^                            | Natural | 25              | 7.6  | 1/2 – 4 1/2           | 12.7 – 114.3 | 0.62             | 15.9 | -454°F – 500°F<br>(-270°C – 260°C) | 0.030          | 0.76 | 1               |
| T75T-X      | TFE^                            | Natural | 10              | 3.1  | 5/8 – 5               | 15.9 – 127.0 | 0.75             | 19.1 | -454°F – 500°F<br>(-270°C – 260°C) | 0.030          | 0.76 | 1               |
| T100T-X     | TFE^                            | Natural | 10              | 3.1  | 7/8 – 6               | 22.2 – 152.4 | 1.00             | 25.4 | -454°F – 500°F<br>(-270°C – 260°C) | 0.040          | 1.02 | 1               |

\*Flame retardant products are manufactured from a material that is rated UL 94V-0.

†Reel packaging may contain splices. Contact Panduit Customer Service for further information.

^TFE is Polytetrafluorethylene material.

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

## Part Number System for Grommet Edging

**GEE**

**Type**

GE = Grommet Edging Strips  
GEE = Slotted Grommet Edging  
GES = Solid Grommet Edging

**36**

**Max. Panel Thickness**

36 = 0.036" thickness  
62 = 0.062" thickness  
99 = 0.099" thickness  
144 = 0.144" thickness  
189 = 0.189" thickness

**F**

**Material**

F = Polyethylene  
N = Nylon 6.6  
FR = Flame Retardant Polyethylene

**-**

**A**

**Adhesive**

A = Adhesive Lined  
Leave Blank = Non-Adhesive

**-**

**C**

**Package Size**

Q = 25'  
L = 50'  
C = 100'

**0**

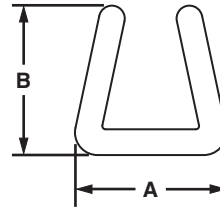
**Color Suffix**

0 = Weather Resistant Black  
Leave Blank = Natural

## Grommet Edging

- Use slotted product on irregularly shaped and round panel holes
- Solid product is used only on straight edges

- Provided in 0.030" (0.8mm) thick material making it highly flexible



| Part Number | Width A |     | Height B |     | Panel Thickness Range |           | Material                       | Color   | Temperature Range               | Std. Pkg. Qty.‡ |
|-------------|---------|-----|----------|-----|-----------------------|-----------|--------------------------------|---------|---------------------------------|-----------------|
|             | In.     | mm  | In.      | mm  | In.                   | mm        |                                |         |                                 |                 |
| Slotted     |         |     |          |     |                       |           |                                |         |                                 |                 |
| GEE36F-C    | 0.11    | 2.7 | 0.12     | 3.0 | 0.026 – 0.036         | 0.7 – 0.9 | Polyethylene                   | Natural | -40°F – 122°F<br>(-40°C – 50°C) | 1               |
| GEE36F-C0   | 0.11    | 2.7 | 0.12     | 3.0 | 0.026 – 0.036         | 0.7 – 0.9 | Weather Resistant Polyethylene | Black   |                                 | 1               |
| GEE62F-C    | 0.13    | 3.3 | 0.16     | 4.1 | 0.036 – 0.062         | 0.9 – 1.6 | Polyethylene                   | Natural |                                 | 1               |
| GEE62F-C0   | 0.13    | 3.3 | 0.16     | 4.1 | 0.036 – 0.062         | 0.9 – 1.6 | Weather Resistant Polyethylene | Black   |                                 | 1               |
| GEE99F-C    | 0.17    | 4.3 | 0.19     | 4.7 | 0.062 – 0.099         | 1.6 – 2.5 | Polyethylene                   | Natural |                                 | 1               |
| GEE99F-C0   | 0.17    | 4.3 | 0.19     | 4.7 | 0.062 – 0.099         | 1.6 – 2.5 | Weather Resistant Polyethylene | Black   |                                 | 1               |
| GEE144F-C   | 0.21    | 5.4 | 0.22     | 5.6 | 0.099 – 0.144         | 2.5 – 3.7 | Polyethylene                   | Natural |                                 | 1               |
| GEE144F-C0  | 0.21    | 5.4 | 0.22     | 5.6 | 0.099 – 0.144         | 2.5 – 3.7 | Weather Resistant Polyethylene | Black   |                                 | 1               |

‡Reel packaging may contain splices. Contact Panduit Customer Service for further information.



## Grommet Edging (continued)

|                                                   | Width<br>A |     | Height<br>B |     | Panel Thickness Range |           |                                |         | Temperature<br>Range            | Std.<br>Pkg.<br>Qty.‡ |
|---------------------------------------------------|------------|-----|-------------|-----|-----------------------|-----------|--------------------------------|---------|---------------------------------|-----------------------|
| Part Number                                       | In.        | mm  | In.         | mm  | In.                   | mm        | Material                       | Color   |                                 |                       |
| Solid – Use on straight edges only                |            |     |             |     |                       |           |                                |         |                                 |                       |
| GES36F-C                                          | 0.11       | 2.7 | 0.12        | 3.0 | 0.026 – 0.036         | 0.7 – 0.9 | Polyethylene                   | Natural | -40°F – 122°F<br>(-40°C – 50°C) | 1                     |
| GES36F-C0                                         | 0.11       | 2.7 | 0.12        | 3.0 | 0.026 – 0.036         | 0.7 – 0.9 | Weather Resistant Polyethylene | Black   |                                 | 1                     |
| GES62F-C                                          | 0.13       | 3.3 | 0.16        | 4.1 | 0.036 – 0.062         | 0.9 – 1.6 | Polyethylene                   | Natural |                                 | 1                     |
| GES62F-C0                                         | 0.13       | 3.3 | 0.16        | 4.1 | 0.036 – 0.062         | 0.9 – 1.6 | Weather Resistant Polyethylene | Black   |                                 | 1                     |
| GES99F-C                                          | 0.17       | 4.3 | 0.19        | 4.7 | 0.062 – 0.099         | 1.6 – 2.5 | Polyethylene                   | Natural |                                 | 1                     |
| GES99F-C0                                         | 0.17       | 4.3 | 0.19        | 4.7 | 0.062 – 0.099         | 1.6 – 2.5 | Weather Resistant Polyethylene | Black   |                                 | 1                     |
| GES144F-C                                         | 0.21       | 5.4 | 0.22        | 5.6 | 0.099 – 0.144         | 2.5 – 3.7 | Polyethylene                   | Natural |                                 | 1                     |
| GES144F-C0                                        | 0.21       | 5.4 | 0.22        | 5.6 | 0.099 – 0.144         | 2.5 – 3.7 | Weather Resistant Polyethylene | Black   |                                 | 1                     |
| GES189F-C                                         | 0.30       | 7.6 | 0.30        | 7.6 | 0.144 – 0.189         | 3.7 – 4.8 | Polyethylene                   | Natural |                                 | 1                     |
| GES189F-C0                                        | 0.30       | 7.6 | 0.30        | 7.6 | 0.144 – 0.189         | 3.7 – 4.8 | Weather Resistant Polyethylene | Black   |                                 | 1                     |
| Slotted Adhesive Lined                            |            |     |             |     |                       |           |                                |         |                                 |                       |
| GEE62F-A-C                                        | 0.13       | 3.3 | 0.16        | 4.1 | 0.036 – 0.062         | 0.9 – 1.6 | Polyethylene                   | Natural | -40°F – 122°F<br>(-40°C – 50°C) | 1                     |
| GEE62F-A-C0                                       | 0.13       | 3.3 | 0.16        | 4.1 | 0.036 – 0.062         | 0.9 – 1.6 | Weather Resistant Polyethylene | Black   |                                 | 1                     |
| GEE99F-A-C                                        | 0.17       | 4.3 | 0.19        | 4.7 | 0.062 – 0.099         | 1.6 – 2.5 | Polyethylene                   | Natural |                                 | 1                     |
| GEE99F-A-C0                                       | 0.17       | 4.3 | 0.19        | 4.7 | 0.062 – 0.099         | 1.6 – 2.5 | Weather Resistant Polyethylene | Black   |                                 | 1                     |
| GEE144F-A-C                                       | 0.21       | 5.4 | 0.22        | 5.6 | 0.099 – 0.144         | 2.5 – 3.7 | Polyethylene                   | Natural |                                 | 1                     |
| GEE144F-A-C0                                      | 0.21       | 5.4 | 0.22        | 5.6 | 0.099 – 0.144         | 2.5 – 3.7 | Weather Resistant Polyethylene | Black   |                                 | 1                     |
| Solid Adhesive Lined – Use on straight edges only |            |     |             |     |                       |           |                                |         |                                 |                       |
| GES62F-A-C                                        | 0.13       | 3.3 | 0.16        | 4.1 | 0.036 – 0.062         | 0.9 – 1.6 | Polyethylene                   | Natural | -40°F – 122°F<br>(-40°C – 50°C) | 1                     |
| GES62F-A-C0                                       | 0.13       | 3.3 | 0.16        | 4.1 | 0.036 – 0.062         | 0.9 – 1.6 | Weather Resistant Polyethylene | Black   |                                 | 1                     |
| GES99F-A-C                                        | 0.17       | 4.3 | 0.19        | 4.7 | 0.062 – 0.099         | 1.6 – 2.5 | Polyethylene                   | Natural |                                 | 1                     |
| GES99F-A-C0                                       | 0.17       | 4.3 | 0.19        | 4.7 | 0.062 – 0.099         | 1.6 – 2.5 | Weather Resistant Polyethylene | Black   |                                 | 1                     |
| GES144F-A-C                                       | 0.21       | 5.4 | 0.22        | 5.6 | 0.099 – 0.144         | 2.5 – 3.7 | Polyethylene                   | Natural |                                 | 1                     |
| GES144F-A-C0                                      | 0.21       | 5.4 | 0.22        | 5.6 | 0.099 – 0.144         | 2.5 – 3.7 | Weather Resistant Polyethylene | Black   |                                 | 1                     |
| Slotted Flame Retardant                           |            |     |             |     |                       |           |                                |         |                                 |                       |
| GEE36FR-CY                                        | 0.11       | 2.7 | 0.12        | 3.0 | 0.026 – 0.036         | 0.7 – 0.9 | Flame Retardant Polyethylene   | Natural | -4°F – 167°F<br>(-20°C – 75°C)  | 1                     |
| GEE62FR-CY                                        | 0.13       | 3.3 | 0.16        | 4.1 | 0.036 – 0.062         | 0.9 – 1.6 | Flame Retardant Polyethylene   | Natural |                                 | 1                     |
| GEE99FR-CY                                        | 0.17       | 4.3 | 0.19        | 4.7 | 0.062 – 0.099         | 1.6 – 2.5 | Flame Retardant Polyethylene   | Natural |                                 | 1                     |
| GEE144FR-CY                                       | 0.21       | 5.4 | 0.22        | 5.6 | 0.099 – 0.144         | 2.5 – 3.7 | Flame Retardant Polyethylene   | Natural |                                 | 1                     |

‡Reel packaging may contain splices. Contact Panduit Customer Service for further information.

Table continues on page C3.10

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

## Grommet Edging (continued)

|                                                     | Width<br>A |      | Height<br>B |     | Panel Thickness Range |            |                              |         |                                 | Std.<br>Pkg.<br>Qty.‡ |
|-----------------------------------------------------|------------|------|-------------|-----|-----------------------|------------|------------------------------|---------|---------------------------------|-----------------------|
| Part Number                                         | In.        | mm   | In.         | mm  | In.                   | mm         | Material                     | Color   | Temperature<br>Range            |                       |
| Solid Flame Retardant – Used on straight edges only |            |      |             |     |                       |            |                              |         |                                 |                       |
| GES36FR-CY                                          | 0.11       | 2.7  | 0.12        | 3.0 | 0.026 – 0.036         | 0.7 – 0.9  | Flame Retardant Polyethylene | Natural | -4°F – 167°F<br>(-20°C – 75°C)  | 1                     |
| GES62FR-CY                                          | 0.13       | 3.3  | 0.16        | 4.1 | 0.036 – 0.062         | 0.9 – 1.6  | Flame Retardant Polyethylene | Natural |                                 | 1                     |
| GES99FR-CY                                          | 0.17       | 4.3  | 0.19        | 4.7 | 0.062 – 0.099         | 1.6 – 2.5  | Flame Retardant Polyethylene | Natural |                                 | 1                     |
| GES144FR-CY                                         | 0.21       | 5.4  | 0.22        | 5.6 | 0.099 – 0.144         | 2.5 – 3.7  | Flame Retardant Polyethylene | Natural |                                 | 1                     |
| Slotted Nylon                                       |            |      |             |     |                       |            |                              |         |                                 |                       |
| GEE47N-C                                            | 0.13       | 3.2  | 0.14        | 3.6 | 0.039 – 0.055         | 1.0 – 1.4  | Nylon 6                      | Natural | -40°F – 149°F<br>(-40°C – 65°C) | 1                     |
| GEE55N-C                                            | 0.13       | 3.4  | 0.14        | 3.6 | 0.047 – 0.063         | 1.2 – 1.6  | Nylon 6                      | Natural |                                 | 1                     |
| GEE71N-C                                            | 0.15       | 3.8  | 0.14        | 3.6 | 0.063 – 0.079         | 1.6 – 2.0  | Nylon 6                      | Natural |                                 | 1                     |
| GEE98N-C                                            | 0.18       | 4.6  | 0.14        | 3.6 | 0.091 – 0.106         | 2.3 – 2.7  | Nylon 6                      | Natural |                                 | 1                     |
| GEE134N-C                                           | 0.21       | 5.3  | 0.14        | 3.6 | 0.126 – 0.142         | 3.2 – 3.6  | Nylon 6                      | Natural |                                 | 1                     |
| Military Standard MS21266 in 12 3/4" Lengths        |            |      |             |     |                       |            |                              |         |                                 |                       |
| GE52-C                                              | 0.15       | 3.8  | 0.16        | 3.9 | 0.015 – 0.052         | 0.4 – 1.3  | Nylon 6.6                    | Natural | -40°F – 149°F<br>(-40°C – 65°C) | 100                   |
| GE52-C69*                                           | 0.15       | 3.8  | 0.16        | 3.9 | 0.015 – 0.052         | 0.4 – 1.3  | Flame Retardant Nylon 6.6    | Natural |                                 | 100                   |
| GE85-C                                              | 0.18       | 4.5  | 0.16        | 3.9 | 0.052 – 0.085         | 1.3 – 2.2  | Nylon 6.6                    | Natural |                                 | 100                   |
| GE85-C69*                                           | 0.18       | 4.5  | 0.16        | 3.9 | 0.052 – 0.085         | 1.3 – 2.2  | Flame Retardant Nylon 6.6    | Natural |                                 | 100                   |
| GE128-C                                             | 0.22       | 5.6  | 0.16        | 3.9 | 0.085 – 0.128         | 2.2 – 3.3  | Nylon 6.6                    | Natural |                                 | 100                   |
| GE128-C69*                                          | 0.22       | 5.6  | 0.16        | 3.9 | 0.085 – 0.128         | 2.2 – 3.3  | Flame Retardant Nylon 6.6    | Natural |                                 | 100                   |
| GE192-L                                             | 0.33       | 8.3  | 0.23        | 5.8 | 0.128 – 0.192         | 3.3 – 4.9  | Nylon 6.6                    | Natural |                                 | 50                    |
| GE192-L69*                                          | 0.33       | 8.3  | 0.23        | 5.8 | 0.128 – 0.192         | 3.3 – 4.9  | Flame Retardant Nylon 6.6    | Natural |                                 | 50                    |
| GE255-L                                             | 0.39       | 9.8  | 0.24        | 6.1 | 0.192 – 0.255         | 4.9 – 6.5  | Nylon 6.6                    | Natural |                                 | 50                    |
| GE318-L                                             | 0.46       | 11.3 | 0.26        | 6.5 | 0.255 – 0.318         | 6.5 – 8.1  | Nylon 6.6                    | Natural |                                 | 50                    |
| GE380-Q                                             | 0.52       | 13.1 | 0.26        | 6.5 | 0.318 – 0.380         | 8.1 – 9.7  | Nylon 6.6                    | Natural |                                 | 25                    |
| GE510-Q                                             | 0.64       | 16.3 | 0.26        | 6.5 | 0.380 – 0.510         | 9.7 – 13.0 | Nylon 6.6                    | Natural |                                 | 25                    |

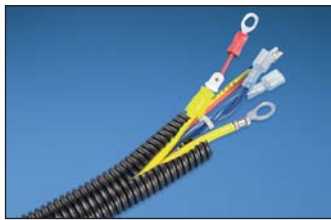
‡Reel packaging may contain splices. Contact Panduit Customer Service for further information.

\*This material is not listed under Military Standard MS21266.

## Part Number System for Corrugated Loom Tubing

| CLT                                  | 100                                                                                                                                     | N                                             | — | C                                                                                                                                                                                    | 630                                                                                                                  |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Type                                 | Bundle Diameter                                                                                                                         | Material                                      |   | Package Size                                                                                                                                                                         | Color Suffix                                                                                                         |
| CLT = Slit Wall<br>CLTS = Solid Wall | 25 = 1/4"<br>35 = 5/16"<br>38 = 3/8"<br>50 = 1/2"<br>62 = 5/8"<br>75 = 3/4"<br>100 = 1"<br>125 = 1 1/4"<br>150 = 1 1/2"<br>188 = 1 7/8" | N = Heat Stabilized Nylon<br>F = Polyethylene |   | X = 10'<br>L = 50'<br>C = 100'<br>T = 200'<br>D = 500'<br>.75M = 750'<br>125M = 1,250'<br>2M = 2,000'<br>2.5M = 2,500'<br>4M = 4,000'<br>5M = 5,000'<br>7M = 7,000'<br>10M = 10,000' | 630 = Heat Stabilized Black Nylon 6<br>20 = Black Polyethylene<br>3 = Orange Polyethylene<br>4 = Yellow Polyethylene |

## Corrugated Loom Tubing – Slit



- Provides protection for cables
- Packaged on a reel for easy handling and dispensing of product
- For indoor use only
- Available in Nylon or Polyethylene, this product features a lengthwise slit which makes it easy to install onto a bundle of wires or a pre-assembled harness assembly
- Crush, impact and abrasion resistant

| Part Number   | Material     | Color  | Length Per Reel |        | Inside Diameter |      | Outside Diameter |      | Temperature Range            | Std. Pkg. Qty.* |
|---------------|--------------|--------|-----------------|--------|-----------------|------|------------------|------|------------------------------|-----------------|
|               |              |        | Ft.             | m      | In.             | mm   | In.              | mm   |                              |                 |
| Slit Wall     |              |        |                 |        |                 |      |                  |      |                              |                 |
| CLT25F-C3     | Polyethylene | Orange | 100             | 30.5   | 0.28            | 7.0  | 0.40             | 10.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT25F-C4     | Polyethylene | Yellow | 100             | 30.5   | 0.28            | 7.0  | 0.40             | 10.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT25F-C20    | Polyethylene | Black  | 100             | 30.5   | 0.28            | 7.0  | 0.40             | 10.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT25F-10M20  | Polyethylene | Black  | 10,000          | 3048.0 | 0.28            | 7.0  | 0.40             | 10.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT35F-C3     | Polyethylene | Orange | 100             | 30.5   | 0.35            | 8.9  | 0.50             | 12.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT35F-C4     | Polyethylene | Yellow | 100             | 30.5   | 0.35            | 8.9  | 0.50             | 12.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT35F-C20    | Polyethylene | Black  | 100             | 30.5   | 0.35            | 8.9  | 0.50             | 12.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT35F-7M20   | Polyethylene | Black  | 7,000           | 2133.6 | 0.35            | 8.9  | 0.50             | 12.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT38F-C3     | Polyethylene | Orange | 100             | 30.5   | 0.42            | 10.5 | 0.56             | 14.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT38F-C4     | Polyethylene | Yellow | 100             | 30.5   | 0.42            | 10.5 | 0.56             | 14.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT38F-C20    | Polyethylene | Black  | 100             | 30.5   | 0.42            | 10.5 | 0.56             | 14.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT38F-5M20   | Polyethylene | Black  | 5,000           | 1524.0 | 0.42            | 10.5 | 0.56             | 14.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT50F-C3     | Polyethylene | Orange | 100             | 30.5   | 0.51            | 12.8 | 0.67             | 17.0 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT50F-C4     | Polyethylene | Yellow | 100             | 30.5   | 0.51            | 12.8 | 0.67             | 17.0 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT50F-C20    | Polyethylene | Black  | 100             | 30.5   | 0.51            | 12.8 | 0.67             | 17.0 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT50F-4M20   | Polyethylene | Black  | 4,000           | 1219.2 | 0.51            | 12.8 | 0.67             | 17.0 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT62F-C3     | Polyethylene | Orange | 100             | 30.5   | 0.65            | 16.5 | 0.82             | 20.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT62F-C4     | Polyethylene | Yellow | 100             | 30.5   | 0.65            | 16.5 | 0.82             | 20.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT62F-C20    | Polyethylene | Black  | 100             | 30.5   | 0.65            | 16.5 | 0.82             | 20.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT62F-2.5M20 | Polyethylene | Black  | 2,500           | 762.0  | 0.65            | 16.5 | 0.82             | 20.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT75F-C3     | Polyethylene | Orange | 100             | 30.5   | 0.76            | 19.3 | 0.94             | 23.8 | -40°F – 122°F (-40°C – 50°C) | 1               |

\*Reel packaging may contain splices. Contact Panduit Customer Service for further information.

Table continues on page C3.12

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

## Corrugated Loom Tubing – Slit (continued)

| Part Number    | Material     | Color  | Length Per Reel |       | Inside Diameter |      | Outside Diameter |      | Temperature Range            | Std. Pkg. Qty.* |
|----------------|--------------|--------|-----------------|-------|-----------------|------|------------------|------|------------------------------|-----------------|
|                |              |        | Ft.             | m     | In.             | mm   | In.              | mm   |                              |                 |
| CLT75F-C4      | Polyethylene | Yellow | 100             | 30.5  | 0.76            | 19.3 | 0.94             | 23.8 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT75F-C20     | Polyethylene | Black  | 100             | 30.5  | 0.76            | 19.3 | 0.94             | 23.8 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT75F-2M20    | Polyethylene | Black  | 2,000           | 609.6 | 0.76            | 19.3 | 0.94             | 23.8 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT100F-X4     | Polyethylene | Yellow | 10              | 3.1   | 0.92            | 23.2 | 1.09             | 27.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT100F-C3     | Polyethylene | Orange | 100             | 30.5  | 0.92            | 23.2 | 1.09             | 27.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT100F-C4     | Polyethylene | Yellow | 100             | 30.5  | 0.92            | 23.2 | 1.09             | 27.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT100F-C20    | Polyethylene | Black  | 100             | 30.5  | 0.92            | 23.2 | 1.09             | 27.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT100F-125M20 | Polyethylene | Black  | 1,250           | 381.0 | 0.92            | 23.2 | 1.09             | 27.7 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT125F-L3     | Polyethylene | Orange | 50              | 15.2  | 1.29            | 32.8 | 1.50             | 38.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT125F-L4     | Polyethylene | Yellow | 50              | 15.2  | 1.29            | 32.8 | 1.50             | 38.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT125F-L20    | Polyethylene | Black  | 50              | 15.2  | 1.29            | 32.8 | 1.50             | 38.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT125F-.75M20 | Polyethylene | Black  | 750             | 228.6 | 1.29            | 32.8 | 1.50             | 38.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT150F-X3     | Polyethylene | Orange | 10              | 3.1   | 1.48            | 37.6 | 1.73             | 43.9 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT150F-X4     | Polyethylene | Yellow | 10              | 3.1   | 1.48            | 37.6 | 1.73             | 43.9 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT150F-T20    | Polyethylene | Black  | 200             | 61.0  | 1.48            | 37.6 | 1.73             | 43.9 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT150F-D3     | Polyethylene | Orange | 500             | 152.4 | 1.48            | 37.6 | 1.73             | 43.9 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT150F-D4     | Polyethylene | Yellow | 500             | 152.4 | 1.48            | 37.6 | 1.73             | 43.9 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT150F-D20    | Polyethylene | Black  | 500             | 152.4 | 1.48            | 37.6 | 1.73             | 43.9 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT188F-X3     | Polyethylene | Orange | 10              | 3.1   | 1.88            | 47.8 | 2.17             | 55.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT188F-X4     | Polyethylene | Yellow | 10              | 3.1   | 1.88            | 47.8 | 2.17             | 55.1 | -40°F – 122°F (-40°C – 50°C) | 1               |
| CLT188F-X20    | Polyethylene | Black  | 10              | 3.1   | 1.88            | 47.8 | 2.17             | 55.1 | -40°F – 122°F (-40°C – 50°C) | 1               |

### Solid Wall

|                |              |        |        |        |      |      |      |      |                              |   |
|----------------|--------------|--------|--------|--------|------|------|------|------|------------------------------|---|
| CLTS25F-C      | Polyethylene | Black  | 100    | 30.5   | 0.28 | 7.0  | 0.40 | 10.1 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS25F-C3     | Polyethylene | Orange | 100    | 30.5   | 0.28 | 7.0  | 0.40 | 10.1 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS25F-10M    | Polyethylene | Black  | 10,000 | 3048.0 | 0.28 | 7.0  | 0.40 | 10.1 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS35F-C      | Polyethylene | Black  | 100    | 30.5   | 0.35 | 8.9  | 0.50 | 12.7 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS35F-C3     | Polyethylene | Orange | 100    | 30.5   | 0.35 | 8.9  | 0.50 | 12.7 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS38F-C      | Polyethylene | Black  | 100    | 30.5   | 0.42 | 10.5 | 0.56 | 14.1 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS38F-C3     | Polyethylene | Orange | 100    | 30.5   | 0.42 | 10.5 | 0.56 | 14.1 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS50F-C      | Polyethylene | Black  | 100    | 30.5   | 0.51 | 12.8 | 0.67 | 17.0 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS50F-C3     | Polyethylene | Orange | 100    | 30.5   | 0.51 | 12.8 | 0.67 | 17.0 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS62F-C      | Polyethylene | Black  | 100    | 30.5   | 0.65 | 16.5 | 0.82 | 20.7 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS62F-C3     | Polyethylene | Orange | 100    | 30.5   | 0.65 | 16.5 | 0.82 | 20.7 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS75F-C      | Polyethylene | Black  | 100    | 30.5   | 0.76 | 19.3 | 0.94 | 23.8 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS75F-C3     | Polyethylene | Orange | 100    | 30.5   | 0.76 | 19.3 | 0.94 | 23.8 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS75F-2M     | Polyethylene | Black  | 2,000  | 609.6  | 0.76 | 19.3 | 0.94 | 23.8 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS100F-C     | Polyethylene | Black  | 100    | 30.5   | 0.92 | 23.2 | 1.09 | 27.7 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS100F-C3    | Polyethylene | Orange | 100    | 30.5   | 0.92 | 23.2 | 1.09 | 27.7 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS100F-1.25M | Polyethylene | Black  | 1,250  | 381.0  | 0.92 | 23.2 | 1.09 | 27.7 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS150F-D     | Polyethylene | Black  | 500    | 152.4  | 1.48 | 37.6 | 1.73 | 43.9 | -40°F – 122°F (-40°C – 50°C) | 1 |
| CLTS150F-D3    | Polyethylene | Orange | 500    | 152.4  | 1.48 | 39.1 | 1.73 | 43.9 | -40°F – 122°F (-40°C – 50°C) | 1 |

\*Reel packaging may contain splices. Contact Panduit Customer Service for further information.

## Corrugated Loom Tubing – Slit (continued)

| Part Number     | Material                | Color | Length Per Reel |        | Inside Diameter |      | Outside Diameter |      | Temperature Range             | Std. Pkg. Qty.* |
|-----------------|-------------------------|-------|-----------------|--------|-----------------|------|------------------|------|-------------------------------|-----------------|
|                 |                         |       | Ft.             | m      | In.             | mm   | In.              | mm   |                               |                 |
| Nylon Slit      |                         |       |                 |        |                 |      |                  |      |                               |                 |
| CLT25N-C630     | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.28            | 7.0  | 0.40             | 10.1 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT25N-10M630   | Heat Stabilized Nylon 6 | Black | 10,000          | 3048.0 | 0.28            | 7.0  | 0.40             | 10.1 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT35N-C630     | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.35            | 8.9  | 0.50             | 12.7 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT38N-C630     | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.42            | 10.5 | 0.56             | 14.1 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT38N-5M630    | Heat Stabilized Nylon 6 | Black | 5,000           | 1524.0 | 0.42            | 10.5 | 0.56             | 14.1 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT50N-C630     | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.51            | 12.8 | 0.67             | 17.0 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT50N-4M630    | Heat Stabilized Nylon 6 | Black | 4,000           | 1219.2 | 0.51            | 12.8 | 0.67             | 17.0 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT62N-C630     | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.65            | 16.5 | 0.82             | 20.7 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT62N-2.5M630  | Heat Stabilized Nylon 6 | Black | 2,500           | 762.0  | 0.65            | 16.5 | 0.82             | 20.7 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT75N-C630     | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.76            | 19.3 | 0.94             | 23.8 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT75N-2M630    | Heat Stabilized Nylon 6 | Black | 2,000           | 609.6  | 0.76            | 19.3 | 0.94             | 23.8 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT100N-C630    | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.92            | 23.2 | 1.09             | 27.7 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT100N-125M630 | Heat Stabilized Nylon 6 | Black | 1,250           | 381.0  | 0.92            | 23.2 | 1.09             | 27.7 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT125N-L630    | Heat Stabilized Nylon 6 | Black | 50              | 15.2   | 1.29            | 32.8 | 1.50             | 38.1 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT125N-.75M630 | Heat Stabilized Nylon 6 | Black | 750             | 228.6  | 1.29            | 32.8 | 1.50             | 38.1 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT150N-D630    | Heat Stabilized Nylon 6 | Black | 500             | 152.4  | 1.48            | 37.6 | 1.73             | 43.9 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLT188N-6C630   | Heat Stabilized Nylon 6 | Black | 600             | 182.9  | 1.88            | 47.8 | 2.17             | 55.1 | -40°F – 230°F (-40°C – 110°C) | 1               |
| Nylon Solid     |                         |       |                 |        |                 |      |                  |      |                               |                 |
| CLTS25N-C       | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.28            | 7.0  | 0.40             | 10.1 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLTS25N-10M     | Heat Stabilized Nylon 6 | Black | 10,000          | 3048.0 | 0.28            | 7.0  | 0.40             | 10.1 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLTS35N-C       | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.35            | 8.9  | 0.50             | 12.7 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLTS38N-C       | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.42            | 10.5 | 0.56             | 14.1 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLTS50N-C       | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.51            | 12.8 | 0.67             | 17.0 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLTS62N-C       | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.65            | 16.5 | 0.82             | 20.7 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLTS75N-C       | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.76            | 19.3 | 0.94             | 23.8 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLTS75N-2M      | Heat Stabilized Nylon 6 | Black | 2,000           | 609.6  | 0.76            | 19.3 | 0.94             | 23.8 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLTS100N-C      | Heat Stabilized Nylon 6 | Black | 100             | 30.5   | 0.92            | 23.2 | 1.09             | 27.7 | -40°F – 230°F (-40°C – 110°C) | 1               |
| CLTS125N-L      | Heat Stabilized Nylon 6 | Black | 50              | 15.2   | 1.29            | 32.8 | 1.50             | 38.1 | -40°F – 230°F (-40°C – 110°C) | 1               |

\*Reel packaging may contain splices. Contact Panduit Customer Service for further information.

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index



A.  
System  
Overview

## Corrugated Loom Tubing Fittings

- Provide a secure way to join CLT at junctions and breakouts while improving the appearance of wire harnesses

- Color: Black
- Material: Polypropylene

B1.  
Cable Ties

B2.  
Cable  
Accessories



B3.  
Stainless  
Steel Ties

| Part Number | Branch Diameter |      | Trunk Diameter |     | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------|-----------------|------|----------------|-----|----------------|----------------|
|             | In.             | mm   | In.            | mm  |                |                |
| CF382538F-Q | 0.38            | 9.5  | 0.25           | 6.4 | 25             | 100            |
| CF502550F-Q | 0.50            | 12.7 | 0.25           | 6.4 | 25             | 100            |
| CF503850F-Q | 0.50            | 12.7 | 0.38           | 9.5 | 25             | 100            |
| CF752575F-Q | 0.75            | 19.1 | 0.25           | 6.4 | 25             | 100            |
| CF753875F-Q | 0.75            | 19.1 | 0.38           | 9.5 | 25             | 100            |

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

## Part Number System for Braided Expandable Sleeveing

| <u>SE</u>                                             | <u>25</u>             | <u>PFR</u>          | <u>-</u> | <u>M</u>           | <u>R</u> | <u>0</u>     |
|-------------------------------------------------------|-----------------------|---------------------|----------|--------------------|----------|--------------|
| Type                                                  | Nominal I.D. Size     | Material            |          | Package Size       | R = Reel | Color Suffix |
| SE = Sleeveing Expandable                             | 12 = 1/8" (3.2mm)     | P = Polyethylene    |          | L = 50' (15.2m)    |          | 0 = Black    |
|                                                       | 25 = 1/4" (6.4mm)     | Terephthalate (PET) |          | C = 100' (30.5m)   |          | 8 = Gray     |
|                                                       | 38 = 3/8" (9.5mm)     | PFR = Polyethylene  |          | T = 200' (61.0m)   |          | 10 = White   |
|                                                       | 50 = 1/2" (12.7mm)    | Terephthalate (PET) |          | D = 500' (152.4m)  |          |              |
|                                                       | 75 = 3/4" (19.1mm)    | Flame Retardant     |          | M = 1000' (304.8m) |          |              |
| PSC = Fray Resistant Polyethylene Terephthalate (PET) | 125 = 1 1/4" (31.8mm) |                     |          |                    |          |              |
|                                                       | 150 = 1 1/2" (38.1mm) |                     |          |                    |          |              |
|                                                       | 175 = 1 3/4" (44.5mm) |                     |          |                    |          |              |

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index



## Braided Expandable Sleeve – Polyethylene Terephthalate (PET)

- Provides continuous abrasion protection for wires, cables, hoses and tubing
- Highly flexible open weave will not trap heat or humidity
- Allows for use with irregular shapes

- Lightweight, durable protection
- Rated for use up to 257°F (125°C)
- Compliant with U.S. and European passenger rail standards



| Part Number | Color | Nominal I.D. |      | Nominal Diameter Range |             | Length per reel |       | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------|-------|--------------|------|------------------------|-------------|-----------------|-------|----------------|----------------|
|             |       | In.          | mm   | In.                    | mm          | Ft.             | m     |                |                |
| SE12P-TR0   | Black | 0.12         | 3.2  | 0.094 – 0.250          | 2.4 – 6.4   | 200             | 61.0  | 1              | 4              |
| SE12P-TR8   | Gray  | 0.12         | 3.2  | 0.094 – 0.250          | 2.4 – 6.4   | 200             | 61.0  | 1              | 4              |
| SE12P-MR0   | Black | 0.12         | 3.2  | 0.094 – 0.250          | 2.4 – 6.4   | 1000            | 304.8 | 1              | 2              |
| SE12P-MR8   | Gray  | 0.12         | 3.2  | 0.094 – 0.250          | 2.4 – 6.4   | 1000            | 304.8 | 1              | 2              |
| SE12P-MR10  | White | 0.12         | 3.2  | 0.094 – 0.250          | 2.4 – 6.4   | 1000            | 304.8 | 1              | 2              |
| SE25P-TR0   | Black | 0.25         | 6.4  | 0.125 – 0.375          | 3.2 – 9.5   | 200             | 61.0  | 1              | 4              |
| SE25P-TR8   | Gray  | 0.25         | 6.4  | 0.125 – 0.375          | 3.2 – 9.5   | 200             | 61.0  | 1              | 4              |
| SE25P-MR0   | Black | 0.25         | 6.4  | 0.125 – 0.375          | 3.2 – 9.5   | 1000            | 304.8 | 1              | 2              |
| SE25P-MR8   | Gray  | 0.25         | 6.4  | 0.125 – 0.375          | 3.2 – 9.5   | 1000            | 304.8 | 1              | 2              |
| SE25P-MR10  | White | 0.25         | 6.4  | 0.125 – 0.375          | 3.2 – 9.5   | 1000            | 304.8 | 1              | 2              |
| SE38P-TR0   | Black | 0.38         | 9.5  | 0.188 – 0.500          | 4.8 – 15.9  | 200             | 61.0  | 1              | 4              |
| SE38P-TR8   | Gray  | 0.38         | 9.5  | 0.188 – 0.500          | 4.8 – 15.9  | 200             | 61.0  | 1              | 4              |
| SE38P-MR0   | Black | 0.38         | 9.5  | 0.188 – 0.500          | 4.8 – 15.9  | 1000            | 304.8 | 1              | 2              |
| SE38P-MR8   | Gray  | 0.38         | 9.5  | 0.188 – 0.500          | 4.8 – 15.9  | 1000            | 304.8 | 1              | 2              |
| SE38P-MR10  | White | 0.38         | 9.5  | 0.188 – 0.500          | 4.8 – 15.9  | 1000            | 304.8 | 1              | 2              |
| SE50P-CR0   | Black | 0.50         | 12.7 | 0.250 – 0.750          | 6.4 – 19.1  | 100             | 30.5  | 1              | 4              |
| SE50P-CR8   | Gray  | 0.50         | 12.7 | 0.250 – 0.750          | 6.4 – 19.1  | 100             | 30.5  | 1              | 4              |
| SE50P-DR0   | Black | 0.50         | 12.7 | 0.250 – 0.750          | 6.4 – 19.1  | 500             | 152.4 | 1              | 2              |
| SE50P-DR8   | Gray  | 0.50         | 12.7 | 0.250 – 0.750          | 6.4 – 19.1  | 500             | 152.4 | 1              | 2              |
| SE50P-DR10  | White | 0.50         | 12.7 | 0.250 – 0.750          | 6.4 – 19.1  | 500             | 152.4 | 1              | 2              |
| SE75P-CR0   | Black | 0.75         | 19.1 | 0.500 – 1.25           | 12.7 – 31.8 | 100             | 30.5  | 1              | 4              |
| SE75P-CR8   | Gray  | 0.75         | 19.1 | 0.500 – 1.25           | 12.7 – 31.8 | 100             | 30.5  | 1              | 4              |
| SE75P-DR0   | Black | 0.75         | 19.1 | 0.500 – 1.25           | 12.7 – 31.8 | 500             | 152.4 | 1              | 2              |
| SE75P-DR8   | Gray  | 0.75         | 19.1 | 0.500 – 1.25           | 12.7 – 31.8 | 500             | 152.4 | 1              | 2              |
| SE75P-DR10  | White | 0.75         | 19.1 | 0.500 – 1.25           | 12.7 – 31.8 | 500             | 152.4 | 1              | 2              |
| SE125P-LR0  | Black | 1.25         | 31.8 | 0.750 – 1.50           | 19.1 – 38.1 | 50              | 15.2  | 1              | 4              |
| SE125P-LR8  | Gray  | 1.25         | 31.8 | 0.750 – 1.50           | 19.1 – 38.1 | 50              | 15.2  | 1              | 4              |
| SE125P-TR0  | Black | 1.25         | 31.8 | 0.750 – 1.50           | 19.1 – 38.1 | 200             | 61.0  | 1              | 2              |
| SE125P-TR8  | Gray  | 1.25         | 31.8 | 0.750 – 1.50           | 19.1 – 38.1 | 200             | 61.0  | 1              | 2              |
| SE125P-TR10 | White | 1.25         | 31.8 | 0.750 – 1.50           | 19.1 – 38.1 | 200             | 61.0  | 1              | 2              |
| SE150P-LR0  | Black | 1.50         | 38.1 | 1.00 – 2.13            | 25.4 – 54.0 | 50              | 15.2  | 1              | 4              |
| SE150P-LR8  | Gray  | 1.50         | 38.1 | 1.00 – 2.13            | 25.4 – 54.0 | 50              | 15.2  | 1              | 4              |
| SE150P-TR0  | Black | 1.50         | 38.1 | 1.00 – 2.13            | 25.4 – 54.0 | 200             | 61.0  | 1              | 2              |
| SE150P-TR8  | Gray  | 1.50         | 38.1 | 1.00 – 2.13            | 25.4 – 54.0 | 200             | 61.0  | 1              | 2              |
| SE150P-TR10 | White | 1.50         | 38.1 | 1.00 – 2.13            | 25.4 – 54.0 | 200             | 61.0  | 1              | 2              |
| SE175P-TR0  | Black | 1.75         | 44.5 | 1.25 – 2.75            | 31.8 – 69.9 | 200             | 61.0  | 1              | 2              |

Reel packaging may contain splices. Contact Panduit Customer Service for further information.

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout/  
& Safety  
Solutions

F.  
Index

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index



## Braided Expandable Sleeving – Flame Retardant Polyethylene Terephthalate

- Provides continuous abrasion protection for wires, cables, hoses and tubing
- Highly flexible open weave will not trap heat or humidity
- Rated for use up to 257°F (125°C)
- Allows for use with irregular shapes
- Flammability: Meets UL 1441 VW-1
- Compliant with U.S. and European passenger rail standards



| Part Number   | Color | Nominal I.D. |      | Nominal Diameter Range |             | Length per reel |       | Std. Pkg. Qty. | Std. Ctn. Qty. |
|---------------|-------|--------------|------|------------------------|-------------|-----------------|-------|----------------|----------------|
|               |       | In.          | mm   | In.                    | mm          | Ft.             | m     |                |                |
| SE12PFR-TR0   | Black | 0.12         | 3.2  | 0.094 – 0.250          | 2.4 – 6.4   | 200             | 61.0  | 1              | 4              |
| SE12PFR-MR0   | Black | 0.12         | 3.2  | 0.094 – 0.250          | 2.4 – 6.4   | 1000            | 304.8 | 1              | 2              |
| SE12PFR-TR8   | Gray  | 0.12         | 3.2  | 0.094 – 0.250          | 2.4 – 6.4   | 200             | 61.0  | 1              | 4              |
| SE12PFR-MR8   | Gray  | 0.12         | 3.2  | 0.094 – 0.250          | 2.4 – 6.4   | 1000            | 304.8 | 1              | 2              |
| SE12PFR-MR10  | White | 0.12         | 3.2  | 0.094 – 0.250          | 2.4 – 6.4   | 1000            | 304.8 | 1              | 2              |
| SE25PFR-TR0   | Black | 0.25         | 6.4  | 0.125 – 0.375          | 3.2 – 9.5   | 200             | 61.0  | 1              | 4              |
| SE25PFR-MR0   | Black | 0.25         | 6.4  | 0.125 – 0.375          | 3.2 – 9.5   | 1000            | 304.8 | 1              | 2              |
| SE25PFR-TR8   | Gray  | 0.25         | 6.4  | 0.125 – 0.375          | 3.2 – 9.5   | 200             | 61.0  | 1              | 4              |
| SE25PFR-MR8   | Gray  | 0.25         | 6.4  | 0.125 – 0.375          | 3.2 – 9.5   | 1000            | 304.8 | 1              | 2              |
| SE25PFR-MR10  | White | 0.25         | 6.4  | 0.125 – 0.375          | 3.2 – 9.5   | 1000            | 304.8 | 1              | 2              |
| SE38PFR-MR0   | Black | 0.38         | 9.5  | 0.188 – 0.625          | 4.8 – 15.9  | 1000            | 304.8 | 1              | 2              |
| SE38PFR-TR0   | Black | 0.38         | 9.5  | 0.188 – 0.625          | 4.8 – 15.9  | 200             | 61.0  | 1              | 4              |
| SE38PFR-TR8   | Gray  | 0.38         | 9.5  | 0.188 – 0.625          | 4.8 – 15.9  | 200             | 61.0  | 1              | 4              |
| SE38PFR-MR8   | Gray  | 0.38         | 9.5  | 0.188 – 0.500          | 4.8 – 12.7  | 1000            | 304.8 | 1              | 2              |
| SE38PFR-MR10  | White | 0.38         | 9.5  | 0.188 – 0.500          | 4.8 – 12.7  | 1000            | 304.8 | 1              | 2              |
| SE50PFR-CR0   | Black | 0.50         | 12.7 | 0.250 – 0.750          | 6.4 – 19.1  | 100             | 30.5  | 1              | 4              |
| SE50PFR-CR8   | Gray  | 0.50         | 12.7 | 0.250 – 0.750          | 6.4 – 19.1  | 100             | 30.5  | 1              | 4              |
| SE50PFR-DR0   | Black | 0.50         | 12.7 | 0.250 – 0.750          | 6.4 – 19.1  | 500             | 152.4 | 1              | 2              |
| SE50PFR-DR8   | Gray  | 0.50         | 12.7 | 0.250 – 0.750          | 6.4 – 19.1  | 500             | 152.4 | 1              | 2              |
| SE50PFR-DR10  | White | 0.50         | 12.7 | 0.250 – 0.750          | 6.4 – 19.1  | 500             | 152.4 | 1              | 2              |
| SE75PFR-CR0   | Black | 0.75         | 19.1 | 0.500 – 1.25           | 12.7 – 31.8 | 100             | 30.5  | 1              | 4              |
| SE75PFR-CR8   | Gray  | 0.75         | 19.1 | 0.500 – 1.25           | 12.7 – 31.8 | 100             | 30.5  | 1              | 4              |
| SE75PFR-DR0   | Black | 0.75         | 19.1 | 0.500 – 1.25           | 12.7 – 31.8 | 500             | 152.4 | 1              | 2              |
| SE75PFR-DR8   | Gray  | 0.75         | 19.1 | 0.500 – 1.25           | 12.7 – 31.8 | 500             | 152.4 | 1              | 2              |
| SE75PFR-DR10  | White | 0.75         | 19.1 | 0.500 – 1.25           | 12.7 – 31.8 | 500             | 152.4 | 1              | 2              |
| SE125PFR-LR0  | Black | 1.25         | 31.8 | 0.750 – 1.50           | 19.1 – 38.1 | 50              | 15.2  | 1              | 4              |
| SE125PFR-LR8  | Gray  | 1.25         | 31.8 | 0.750 – 1.50           | 19.1 – 38.1 | 50              | 15.2  | 1              | 4              |
| SE125PFR-TR0  | Black | 1.25         | 31.8 | 0.750 – 1.50           | 19.1 – 38.1 | 200             | 61.0  | 1              | 2              |
| SE125PFR-TR8  | Gray  | 1.25         | 31.8 | 0.750 – 1.50           | 19.1 – 38.1 | 200             | 61.0  | 1              | 2              |
| SE125PFR-TR10 | White | 1.25         | 31.8 | 0.750 – 1.50           | 19.1 – 38.1 | 200             | 61.0  | 1              | 2              |
| SE150PFR-LR0  | Black | 1.50         | 38.1 | 1.00 – 2.13            | 25.4 – 54.0 | 50              | 15.2  | 1              | 4              |
| SE150PFR-LR8  | Gray  | 1.50         | 38.1 | 1.00 – 2.13            | 25.4 – 54.0 | 50              | 15.2  | 1              | 4              |
| SE150PFR-TR0  | Black | 1.50         | 38.1 | 1.00 – 2.13            | 25.4 – 54.0 | 200             | 61.0  | 1              | 2              |
| SE150PFR-TR8  | Gray  | 1.50         | 38.1 | 1.00 – 2.13            | 25.4 – 54.0 | 200             | 61.0  | 1              | 2              |
| SE150PFR-TR10 | White | 1.50         | 38.1 | 1.00 – 2.13            | 25.4 – 54.0 | 200             | 61.0  | 1              | 2              |
| SE175PFR-TR0  | Black | 1.75         | 44.5 | 1.25 – 2.75            | 31.8 – 69.9 | 200             | 61.0  | 1              | 2              |

## Tooling Head

- Sleeving cutter/end sealer blade – used with popular soldering guns to cut and seal sleeving



| Part Number | Description                                                                                                                                                                           | Std. Pkg. Qty. |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| HKBS        | For dual straight shank soldering guns with .500" spacing typical guns: WELLER Straight Shank Model 8200; WEN Model 199 or 100 (Replace tip holding screws with (2) screws included). | 1              |



## Fray Resistant Braided Expandable Sleeving

- Fray-resistant design resists fraying when cut with scissors
- Provides continuous abrasion protection resistance for wires, cables, and tubing
- For indoor use only
- Rated for use up to 257°F (125°C)
- Material: Polyethylene Terephthalate



| Part Number  | Color | Nominal I.D. |      | Nominal Diameter Range |             | Length Per Reel‡ |      | Std. Pkg. Qty. | Std. Ctn. Qty. |
|--------------|-------|--------------|------|------------------------|-------------|------------------|------|----------------|----------------|
|              |       | In.          | mm   | In.                    | mm          | Ft.              | m    |                |                |
| SE12PSC-TR0  | Black | 0.12         | 3.2  | 0.13 – 0.25            | 3.2 – 6.4   | 200              | 61.0 | 1              | 4              |
| SE25PSC-TR0  | Black | 0.25         | 6.4  | 0.16 – 0.44            | 4.0 – 11.1  | 200              | 61.0 | 1              | 4              |
| SE38PSC-TR0  | Black | 0.38         | 9.5  | 0.19 – 0.63            | 4.8 – 15.9  | 200              | 61.0 | 1              | 4              |
| SE50PSC-CR0  | Black | 0.50         | 12.7 | 0.25 – 0.75            | 6.4 – 19.1  | 100              | 30.5 | 1              | 4              |
| SE75PSC-CR0  | Black | 0.75         | 19.1 | 0.63 – 1.0             | 15.9 – 25.4 | 100              | 30.5 | 1              | 4              |
| SE125PSC-LR0 | Black | 1.25         | 31.8 | 1.0 – 1.5              | 25.4 – 38.1 | 50               | 15.2 | 1              | 4              |
| SE150PSC-LR0 | Black | 1.50         | 38.1 | 1.3 – 2.0              | 31.8 – 50.8 | 50               | 15.2 | 1              | 4              |

‡Reel packaging may contain splices. Contact Panduit Customer Service for further information.

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

A.  
System  
Overview

## Part Number System for Non-Shrink PVC Tubing

TV105

—

12

M

B1.  
Cable Ties

### Type

TV105 = PVC Tubing

### Nominal Size

12 = 12 AWG  
6 = 6 AWG  
3 = 3 AWG  
1 = 1 AWG  
0.38 = 3/8"  
0.50 = 1/2"  
0.75 = 3/4"  
1.0 = 1"

### Package Quantity

C = 100' (30.5m)  
TL = 250' (76.2m)  
D = 500' (152.4m)  
M = 1000' (304.8m)

### Color Suffix

Leave Blank = Clear  
20 = Black

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

## UL® SP® Non-Shrink PVC Tubing

- Provides insulation and protection for lead wires, wire harness assemblies, soldered joints and components in electrical and electronic equipment
- All purpose flexible and non-shrinkable
- Resistant to heat and moisture
- Flammability: Meets UL 224 VW-1

- Voltage rating: 300 V and 600 V
- ASTM D-922 Grade CFR
- MIL-I-631 Type F, Form U, Grade C- Class 1 Category 1
- Material: Polyvinyl chloride (PVC)
- UL oil resistant class 1 rating
- Continuous use temperature range: -4°F – 221°F (-20°C – 105°C)



D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout/  
& Safety  
Solutions

F.  
Index

| Part Number    | Color | Nominal Size | Length Per Reel |       | Max. Inside Diameter |       | Wall Thickness |      | Max. Voltage Rating | Std. Pkg. Qty. | Std. Ctn. Qty. |
|----------------|-------|--------------|-----------------|-------|----------------------|-------|----------------|------|---------------------|----------------|----------------|
|                |       |              | Ft.             | m     | In                   | mm    | In             | mm   |                     |                |                |
| TV105-12MY     | Clear | 12 AWG       | 1000            | 304.8 | 0.089                | 2.26  | 0.016          | 0.41 | 300 V               | 1              | 2              |
| TV105-12M20Y   | Black | 12 AWG       | 1000            | 304.8 | 0.089                | 2.26  | 0.016          | 0.41 | 300 V               | 1              | 2              |
| TV105-6MY      | Clear | 6 AWG        | 1000            | 304.8 | 0.178                | 4.52  | 0.020          | 0.51 | 300 V               | 1              | 2              |
| TV105-6M20Y    | Black | 6 AWG        | 1000            | 304.8 | 0.178                | 4.52  | 0.020          | 0.51 | 300 V               | 1              | 2              |
| TV105-3MY      | Clear | 3 AWG        | 1000            | 304.8 | 0.249                | 6.32  | 0.020          | 0.51 | 300 V               | 1              | 2              |
| TV105-3M20Y    | Black | 3 AWG        | 1000            | 304.8 | 0.249                | 6.32  | 0.020          | 0.51 | 300 V               | 1              | 2              |
| TV105-1MY      | Clear | 1 AWG        | 1000            | 304.8 | 0.311                | 7.89  | 0.020          | 0.51 | 300 V               | 1              | —              |
| TV105-1M20Y    | Black | 1 AWG        | 1000            | 304.8 | 0.311                | 7.89  | 0.020          | 0.51 | 300 V               | 1              | —              |
| TV105-.38DY    | Clear | 3/8          | 500             | 152.4 | 0.399                | 10.13 | 0.025          | 0.64 | 600 V               | 1              | —              |
| TV105-.38D20Y  | Black | 3/8          | 500             | 152.4 | 0.399                | 10.13 | 0.025          | 0.64 | 600 V               | 1              | —              |
| TV105-.50DY    | Clear | 1/2          | 500             | 152.4 | 0.524                | 13.30 | 0.025          | 0.64 | 600 V               | 1              | —              |
| TV105-.50D20Y  | Black | 1/2          | 500             | 152.4 | 0.524                | 13.30 | 0.025          | 0.64 | 600 V               | 1              | —              |
| TV105-.75TLY   | Clear | 3/4          | 250             | 76.2  | 0.786                | 19.96 | 0.035          | 0.89 | 600 V               | 1              | —              |
| TV105-.75TL20Y | Black | 3/4          | 250             | 76.2  | 0.786                | 19.96 | 0.035          | 0.89 | 600 V               | 1              | —              |
| TV105-1.0CY    | Clear | 1            | 100             | 30.5  | 1.036                | 26.31 | 0.035          | 0.89 | 600 V               | 1              | 2              |
| TV105-1.0C20Y  | Black | 1            | 100             | 30.5  | 1.036                | 26.31 | 0.035          | 0.89 | 600 V               | 1              | 2              |

## Duct Seal – Sealing Compounds

- Seals irregular openings from air, dust, or water
- Non-hardening sealant that adheres to metal, masonry, wood or plastic
- Provides vibration dampening
- Safe and easy to use, non-corrosive, non-toxic, no asbestos, will not stain or harm hands, and no unpleasant odor.
- Dielectric strength: 200 V/Mil, Min .030" thick



| Part Number | Description                                | Std. Pkg. Qty. |
|-------------|--------------------------------------------|----------------|
| DS1         | Duct seal (sealing compound) 1 lb. package | 1              |
| DS5         | Duct seal (sealing compound) 5 lb. package | 1              |

## Flammability Tests and Classification

### Abrasion Protection Products Flammability Tests and Classifications



- A number of test procedures have been developed which can be used for the evaluation and comparison of various materials to support combustion
- Review the following classifications to find which category is designed to suit your abrasion and protection applications

### UL 94 Vertical Burning Test

Test samples of material, with dimension  $125 \pm 5\text{mm}$  by  $13.0 \pm 5\text{mm}$  and provided in the minimum and maximum thickness of the intended end use product, are tested in an unconditioned (as manufactured) state and in a conditioned state (7 days at 168F°, 75°C). The test requires the placement of a precisely controlled flame under a vertically supported specimen for a 10 second period. The flame is removed and the duration of flaming is recorded. If the flame extinguishes, the specimen is immediately subjected to a second 10 second ignition period. Duration of flaming is again recorded. A piece of 100% cotton is placed under the specimen. Also observed and documented is if the sample drips flaming particles that ignite the cotton indicator below.

### Materials Classification

| Criteria Conditions                                                                                            | V-0               | V-1                | V-2                |
|----------------------------------------------------------------------------------------------------------------|-------------------|--------------------|--------------------|
| Afterflame time for each individual specimen $t_1$ or $t_2$                                                    | $\leq 10\text{s}$ | $\leq 30\text{s}$  | $\leq 30\text{s}$  |
| Total Afterflame time for any condition set ( $t_1$ plus $t_2$ for the 5 specimens)                            | $\leq 50\text{s}$ | $\leq 250\text{s}$ | $\leq 250\text{s}$ |
| Afterflame plus afterglow time for each individual specimen after the second flame application ( $t_2 + t_3$ ) | $\leq 30\text{s}$ | $\leq 60\text{s}$  | $\leq 60\text{s}$  |
| Afterflame or afterglow of any specimen up to the holding clamp                                                | No                | No                 | No                 |
| Cotton indicator ignited by flaming particles or drops                                                         | No                | No                 | Yes                |

|       |                                                |
|-------|------------------------------------------------|
| $t_1$ | Afterflame time after first flame application  |
| $t_2$ | Afterflame time after second flame application |
| $t_3$ | Afterglow time after second flame application  |

### MATERIALS CLASSIFIED UL 94 HB

- Specimens shall have a maximum burn rate of  $<1.5 \text{ in./min}$  over 3 inches of thickness of .120 inches to .5 inches
- Specimens shall have a maximum burn rate of  $<30 \text{ in./min}$  over 3 inches for a thickness less than .120 inches

### UL 224 VERTICAL WIRE FLAME TEST

Samples of fully recovered tubing are placed over a length of fine spring steel music wire. The test requires the precise placement of a controlled flame that contacts the heat shrink tubing. The flame is applied in five 15 second intervals with a time period between applications. If the flame extinguishes immediately after the first flame removal, subsequent flame applications are made to the tubing. Duration of specimen flaming is noted. A piece of surgical cotton is placed under the specimen. If a flaming or glowing piece of tubing drips and ignites the cotton, this is also noted.

### MATERIALS CLASSIFIED AS VW-1 SHALL:

- Not flame or glow longer than 60 seconds following any of the five applications of the flame
- Not ignite or damage more than 25% of kraft paper flag that is placed around the top of the tubing
- Not have any specimens which drip flaming particles and ignite the surgical cotton located 9 1/2 inches below the test specimen

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index



|     |                                   |
|-----|-----------------------------------|
| A.  | System Overview                   |
| B1. | Cable Ties                        |
| B2. | Cable Accessories                 |
| B3. | Stainless Steel Ties              |
| C1. | Wiring Duct                       |
| C2. | Surface Raceway                   |
| C3. | Abrasion Protection               |
| C4. | Cable Management                  |
| D1. | Terminals                         |
| D2. | Power Connectors                  |
| D3. | Grounding Connectors              |
| E1. | Labeling Systems                  |
| E2. | Labels                            |
| E3. | Pre-Printed & Write-On Markers    |
| E4. | Permanent Identification          |
| E5. | Lockout/Tagout & Safety Solutions |
| F.  | Index                             |

## Abrasion Protection Materials Technical Data

|             |                                                                                                                                                                                                                                                                                            | Ratings and Approvals            |                      |                     | Physical Properties                          |                         |                             |                                 | Chemical Resistance                                         |           |                                     |                              |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------|---------------------|----------------------------------------------|-------------------------|-----------------------------|---------------------------------|-------------------------------------------------------------|-----------|-------------------------------------|------------------------------|
|             |                                                                                                                                                                                                                                                                                            | UL Temperature Index             | Flammability (UL 94) | Melting Temperature | Abrasion Resistance (Lower number is better) | Specific Gravity (D792) | Minimum Tensile @23°C (psi) | Water Absorption (Max. 24 hrs.) | Organic Solvents                                            | Alkalies  | Acids                               | Petro-Chemicals              |
| SPIRAL WRAP | <b>Natural Polyethylene</b><br>Lowest cost material for indoor use up to 122°F.<br>Natural is available in all sizes.                                                                                                                                                                      | -40°F (-40°C) to 122°F (50°C)    | HB                   | 239°F (115°C)       | 22 mg                                        | 0.91 – 0.93             | 1400 (D368)                 | 0.01%                           | Resistant below 140°F (60°C) except to chlorinated solvents | Resistant | Resistant except to oxidizing acids | Some Discoloration           |
|             | <b>Weather Resistant Polyethylene</b><br>This material has the same properties as natural polyethylene, and also has additives which allow it to resist the effects of ultraviolet light and acid rain in an outdoor environment. This product is available in black only.                 | -40°F (-40°C) to 122°F (50°C)    | HB                   | 239°F (115°C)       | 20 mg                                        | 0.93 – 1.09             | 2000 (D368)                 | 0.03%                           | Resistant below 140°F (60°C) except to chlorinated solvents | Resistant | Resistant except to oxidizing acids | No Discoloration             |
|             | <b>Fire Resistant Polyethylene*</b><br>UL94-V-2 Rating<br>This material is self extinguishing and passes the UL 94 flame retardant test with V-2 rating.                                                                                                                                   | -40°F (-40°C) to 122°F (50°C)    | V-2                  | 239°F (115°C)       | 27 mg                                        | 1.00 – 1.30             | 1400 (D368)                 | 0.02%                           | Resistant below 140°F (60°C) except to chlorinated solvents | Resistant | Resistant except to oxidizing acids | Some Discoloration           |
|             | <b>Flame Retardant Polyethylene*</b><br>UL94-V-0 Rating. This material is self extinguishing and passes the UL94 flame retardant test with a V-0 rating.                                                                                                                                   | -4°F (-20°C) to 167°F (75°C)     | V-0                  | 270°F (132°C)       | 22 mg                                        | 1.23 – 1.37             | 1500 (D368)                 | 0.02%                           | Resistant except to halogenated hydrocarbons                | Resistant | Resistant                           | Resistant Some Discoloration |
|             | <b>Weather Resistant Polypropylene</b><br>This material is resistant to chemical attack and is suitable for harsh environment applications requiring UV/weather resistance and withstanding high temperatures.                                                                             | -40°F (-40°C) to 239°F (115°C)   | HB                   | 334°F (168°C)       | —                                            | 0.902                   | 4000 (D638)                 | 0.1%                            | Resistant except to halogenated hydrocarbons                | Resistant | Resistant                           | Resistant No Discoloration   |
|             | <b>Nylon 6.6</b><br>Nylon is strong, durable material for indoor use up to 149°F. It offers a combination of lightweight, wide temperature range, and high abrasion resistance. This material is suitable for applications where heavy vibration or stress exists on the wiring or tubing. | -40°F (-40°C) to 149°F (65°C)    | HB                   | 505°F (263°C)       | 7 mg                                         | 1.13 – 1.15             | 12,400 (D368)               | 1.2%                            | Resistant except to halogenated hydrocarbons                | Resistant | Not recommended                     | Resistant No Discoloration   |
|             | <b>Weather Resistant Nylon 6.6</b><br>This material has the same properties as natural Nylon and also has additives which allow it to resist the effects of ultraviolet light in an outdoor environment. This product is available in black only.                                          | -40°F (-40°C) to 149°F (65°C)    | HB                   | 505°F (263°C)       | 7 mg                                         | 1.13 – 1.15             | 12,400 (D368)               | 1.2%                            | Resistant except to halogenated hydrocarbons                | Resistant | Not recommended                     | Resistant No Discoloration   |
|             | <b>TFE†</b><br>This material is a non-flammable, fluorocarbon resin material. Highly resistant to most chemicals, high resistance to UV exposure, wide operating temperature range, can be used in cryogenic applications. Color: Opaque to Translucent.                                   | -454°F (-270°C) to 500°F (260°C) | V-0                  | 648°F (342°C)       | 7 mg                                         | 2.13 – 2.22             | 3000 (D876)                 | 0.01%                           | Resistant                                                   | Resistant | Resistant                           | Resistant No Discoloration   |
|             | <b>Natural Polyethylene</b><br>Lowest cost material for indoor use up to 122°C.<br>Natural is available in all sizes.                                                                                                                                                                      | -40°F (-40°C) to 122°F (50°C)    | HB                   | 239°F (115°C)       | 22 mg                                        | 0.91 – 0.93             | 1400 (D638)                 | 0.01%                           | Resistant below 140°F (60°C) except to chlorinated solvents | Resistant | Resistant except to oxidizing acids | Some Discoloration           |
|             | <b>Flame Retardant Polyethylene*</b><br>UL94-V-0 Rating. This material is self extinguishing and passes the UL94 flame retardant test with a V-0 rating.                                                                                                                                   | -4°F (-20°C) to 167°F (75°C)     | V-0                  | 270°F (132°C)       | 22 mg                                        | 1.15                    | 1500 (D876)                 | 0.02%                           | Resistant except to halogenated hydrocarbons                | Resistant | Resistant                           | Resistant Some Discoloration |
| PAN-WRAP™   |                                                                                                                                                                                                                                                                                            |                                  |                      |                     |                                              |                         |                             |                                 |                                                             |           |                                     |                              |

Note: Typical operating temperature ranges are extended based on end use application and specific environment tests.

†TFE is Polytetrafluoroethylene material.

\*Contains halogens. Other materials are halogen free.

## Abrasion Protection Materials Technical Data (continued)

|                |                                                                                                                                                                                                                                                                                                                   | Ratings and Approvals          |                      |                     | Physical Properties                          |                         |                              |                                 | Chemical Resistance                                           |                              |                                     |                              |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------------|---------------------|----------------------------------------------|-------------------------|------------------------------|---------------------------------|---------------------------------------------------------------|------------------------------|-------------------------------------|------------------------------|
|                |                                                                                                                                                                                                                                                                                                                   | UL Temperature Index           | Flammability (UL 94) | Melting Temperature | Abrasion Resistance (Lower number is better) | Specific Gravity (D792) | Minimum Tensile @ 23°C (psi) | Water Absorption (Max. 24 hrs.) | Organic Solvents                                              | Alkalies                     | Acids                               | Petro-Chemicals              |
| SLEEVING       | <b>Polyethylene Terephthalate (PET)</b><br>This material is a thermoplastic polyester material designed for indoor applications. It is rated for use up to 257°F and will tolerate short-term exposure up to 446°F. Colors: Black, White and Gray.                                                                | -94°F (-70°C) to 257°F (125°C) | HB                   | 500°F (260°C)       | —                                            | 1.39                    | 100,000 (D876)               | 0.08%                           | Resistant to some solvents                                    | Resistant to most weak bases | Resistant                           | Some Discoloration           |
|                | <b>Flame Retardant Polyethylene*</b> Terephthalate (PET)<br>This material is a self-extinguishing thermoplastic polyester that can be used indoors. It is also rated for use up to 257°F and will tolerate short term exposure up to 446°F. It is provided with tracers to identify the flame retardant material. | -94°F (-70°C) to 257°F (125°C) | UL 1441 VW-1         | 469°F (243°C)       | —                                            | 1.39                    | 39,295 (D876)                | 0.08%                           | Resistant to some solvents                                    | Resistant to most weak bases | Resistant                           | Resistant Some Discoloration |
| CLT            | <b>Black Polypropylene</b><br>Lowest cost material is for use up to 122°F. Other colors may be available.                                                                                                                                                                                                         | -40°F (-40°C) to 122°F (50°C)  | HB                   | —                   | —                                            | 0.926 – 0.940           | 1500 (D638)                  | —                               | Resistant except to halogenated hydrocarbons                  | Resistant                    | Resistant                           | Resistant No Discoloration   |
|                | <b>Nylon 6</b><br>Nylon is a strong, impact modified, heat stabilized, durable high abrasion resistant material.                                                                                                                                                                                                  | -40°F (-40°C) to 230°F (110°C) | HB                   | 410°F (211°C)       | —                                            | 1.06 – 1.16             | 8000 (D638)                  | —                               | Resistant except to halogenated hydrocarbons                  | Resistant                    | Not recommended                     | Resistant No Discoloration   |
| PVC            | <b>PVC Non-Shrink Tubing*</b><br>This material provides insulation and protection for continuous use at temperature -4°F (-20°C) to 221°F (105°C).                                                                                                                                                                | -4°F (-20°C) to 221°F (105°C)  | UL 224 VW-1          | —                   | —                                            | 1.35                    | 2500 (D876)                  | —                               | Resistant except to aromatic hydrocarbons, ketones and esters | Resistant                    | Resistant                           | Resistant No Discoloration   |
| CLT FITTINGS   | <b>Black Polyethylene</b><br>Lowest cost material is for use up to 122°F. Other colors may be available.                                                                                                                                                                                                          | -40°F (-40°C) to 122°F (50°C)  | UL94 HB              | —                   | —                                            | 1.04                    | 3,900 (D638)                 | 0.02 – 0.03%                    | Resistant except to halogenated hydrocarbons                  | Resistant                    | Resistant except to oxidizing acids | Resistant Some Discoloration |
| GROMMET EDGING | <b>Natural Polyethylene</b><br>Lowest cost material for indoor use up to 122°F. Natural is available in all sizes.                                                                                                                                                                                                | -40°F (-40°C) to 122°F (50°C)  | HB                   | 239°F (115°C)       | 22 mg                                        | 0.91 – 1.09             | 1400 (D638)                  | —                               | Resistant below 140°F (60°C) except to chlorinated solvents   | Resistant                    | Resistant except to oxidizing acids | Some Discoloration           |
|                | <b>Weather Resistant Polyethylene</b><br>This material has the same properties as natural polyethylene, and also has additives which allow it to resist the effects of ultraviolet light and acid rain in an outdoor environment. This product is available in black only.                                        | -40°F (-40°C) to 122°F (50°C)  | HB                   | 239°F (115°C)       | 20 mg                                        | 0.93 – 1.09             | 2000 (D638)                  | 0.03%                           | Resistant below 140°F (60°C) except to chlorinated solvents   | Resistant                    | Resistant except to oxidizing acids | No Discoloration             |
|                | <b>Flame Retardant Polyethylene*</b> UL94-V-0 Rating<br>This material is self-extinguishing and passes the UL94 flame retardant test with a V-0 rating.                                                                                                                                                           | -4°F (-20°C) to 167°F (75°C)   | V-0                  | 270°F (132°C)       | 22 mg                                        | 1.23 – 1.37             | 1200                         | 0.02%                           | Resistant below 194°F (90°C) except to chlorinated solvents   | Resistant                    | Resistant except to oxidizing acids | Some Discoloration           |
|                | <b>Nylon</b><br>Nylon is strong, durable, self-extinguishing material for indoor use up to 149°F. It offers a combination of lightweight, wide temperature range, and high abrasion resistance. This material is suitable for applications where heavy vibration or stress exists on the wiring or tubing.        | -40°F (-40°C) to 149°F (65°C)  | V-2                  | 491°F (255°C)       | 7 mg                                         | 1.03 – 1.15             | 12,400 (D638)                | 1.5%                            | Resistant except to phenols and formic acid                   | Resistant                    | Resistant to most weak acids        | No Discoloration             |

Note: Typical operating temperature ranges are extended based on end use application and specific environment tests.

\*Contains halogens. Other materials are halogen free.

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

## Panduit Heat Shrink Tubing Heat Shrink Tubing Quick Selection Guide

Quick reference for Panduit Heat Shrink for specific location applications



CHARACTERISTICS

|                                 | HSTT        | HSTTV       | HSTTN | HSTTK | HSTTT | HSTTP | HSTTPN | HSTTVA      | HSTTRA     | HSTTA | HSTT4A | HST   | HSEC  | HSECFR |
|---------------------------------|-------------|-------------|-------|-------|-------|-------|--------|-------------|------------|-------|--------|-------|-------|--------|
| U.L. Listed                     |             |             |       |       |       |       |        |             |            |       |        | X     |       |        |
| UL Recognized                   | X‡          | X           |       | X     |       | X     | X      |             |            |       | X      | X     |       | X      |
| CSA Certified                   | X‡          | X           |       | X     |       | X     | X      |             |            |       |        | X     |       |        |
| VW-1-Rated                      |             | X           |       | X     |       | X     | X      | X^          | X^         | X^    | X^     | X     |       |        |
| Very Flexible                   |             | X           | X     |       |       |       |        |             |            |       |        |       |       |        |
| Flexible                        | X           |             |       |       |       | X     | X      | X           |            | X     |        |       |       |        |
| Semi-Rigid                      |             |             |       | X     | X     |       | X      |             | X          |       |        | X     |       |        |
| Thin Wall                       | X           | X           | X     | X     | X     | X     | X      | X           | X          | X     | X      |       |       |        |
| Thick Wall                      |             |             |       |       |       |       |        |             |            |       |        | X     | X     | X      |
| Cross-Linked Material           | X           | X           | X     | X     |       | X     |        | X           | X          | X     | X      | X     | X     | X      |
| Colors Available                | X           | X           |       |       |       |       |        |             |            |       |        | X*    |       |        |
| Shrink Ratio                    | 2:1         | 2:1         | 2:1   | 2:1   | 2:1   | 2:1   | 2:1    | 2:1         | 2.5:1 min. | 3:1   | 4:1    | 3:1   | 2.5:1 | 3:1    |
| Flame Retardant                 | X‡          | X           | X     | X     | X     | X     | X      | X           | X          | X     | X      | X     |       | X      |
| Adhesive Lined (Dual Wall)      |             |             |       |       |       |       |        | X           | X          | X     | X      | X     | X     | X      |
| Meets Military Specifications   | X■          | X■          | X     | X■    | X     |       | X      | X■          | X■         | X■    | X■     | X     |       |        |
| Below Ground Application        |             |             |       |       |       |       |        |             |            |       |        | X     |       |        |
| High Temp Applications (>250°F) |             |             |       | X     | X     |       |        |             |            |       |        |       |       |        |
| Highly Chemical Resistant       |             |             | X     | X     | X     |       |        |             |            |       |        |       |       |        |
| Low Coefficient of Friction     |             |             |       |       | X     |       |        |             |            |       |        |       |       |        |
| Custom Cut Lengths              | X           | X           | X     | X     | X     | X     |        | X           | X          | X     |        | X     |       |        |
| Standard 6" pieces              | X           | X           |       |       |       |       |        | X           |            | X     |        |       |       |        |
| Standard 4' lengths             | X           | X           |       | X     | X     |       |        | X           | X          | X     | X      | X     |       |        |
| Small 25' Reels                 | X           | X           | X     |       |       | X     |        |             |            |       |        |       |       |        |
| Large Reels                     | X           | X           | X     |       |       | X     | X      |             |            |       |        |       |       |        |
| UV Resistant                    | X#          | X#          | X#    | X     | X     | X#    |        | X#          | X#         | X#    | X#     | X#    | X#    | X#     |
| Shrink Temperature              | 194°F       | 194°F       | 275°F | 275°F | 644°F | 212°F | 212°F  | 248°F       | 257°F      | 248°F | 248°F  | 248°F | 248°F | 248°F  |
| Shelf Life (years)              | 5           | 5           | 5**   | 5     | 4     | 1     | 1      | 5           | 5          | 5     | 5      | 10    | 5     | 5      |
| Found on Page...                | C3.24–C3.27 | C3.28–C3.31 | C3.33 | C3.35 | C3.34 | C3.32 | C3.33  | C3.35–C3.36 | C3.37      | C3.36 | C3.37  | C3.38 | C3.39 | C3.39  |

\*Black/Red

\*\*Excluding HSTTN300 which is 2 years.

‡Except Clear

^Outer Wall

■Material Performance only

#Black only

## Part Number System for Thin Wall Heat Shrink

| HSTT                                  | 12                    | 48                 | Q                          | 10                |
|---------------------------------------|-----------------------|--------------------|----------------------------|-------------------|
| Type                                  | Expanded Diameter     | Tube Length        | Package Quantity           | Color             |
| HSTT = Thin Wall                      | 05 = 3/64" (1.2mm)    | 3 = 3" (76.2mm)    | (If Tube Length Specified) | NONE = Black      |
| HSTTV = Thin Wall VW-1                | 06 = 1/16" (1.6mm)    | 6 = 6" (152.4mm)   | 1 = 1 pc.                  | C = Clear         |
| HSTTN = Thin Wall Neoprene            | 09 = 3/32" (2.4mm)    | 9 = 9" (228.6mm)   | 2 = 2 Pcs.                 | 2 = Red           |
| HSTTK = Thin Wall PVDF KYNAR ▲        | 12 = 1/8" (3.2mm)     | 12 = 12" (304.8mm) | 3 = 3 Pcs.                 | 4 = Yellow        |
| HSTTT = Thin Wall TFE‡                | 19 = 3/16" (4.8mm)    | 48 = 48" (1.2m)    | 5 = 5 Pcs.                 | 5 = Green         |
| HSTTP = Thin Wall PVC                 | 25 = 1/4" (6.4mm)     | NONE = REEL        | X = 10 Pcs.                | 6 = Blue          |
| HSTTPN = Crystal Clear Thin Wall PVC  | 38 = 3/8" (9.5mm)     |                    | Q = 25 Pcs.                | 10 = White        |
| HSTTV = Flexible Adhesive Lined       | 50 = 1/2" (12.7mm)    |                    | LQ = 75 Pcs.               | 45 = Yellow/Green |
| HSTTA = Semi-Rigid Adhesive Lined     | 75 = 3/4" (19.1mm)    |                    | CQ = 125 Pcs.              |                   |
| HSTTA = Thin Wall Adhesive Lined      | 100 = 1" (25.4mm)     |                    | T = 200 Pcs.               |                   |
| HSTTA4 = 4:1 Thin Wall Adhesive Lined | 150 = 1 1/2" (38.1mm) |                    | TL = 250 Pcs.              |                   |
| HST = Thick Wall Adhesive Lined       | 200 = 2" (50.8mm)     |                    | Y = 6" Pcs.                |                   |
| HSEC = Heat Shrink End Caps           | 300 = 3" (76.2mm)     |                    |                            |                   |
| HSEC = Heat Shrink End Caps           | 400 = 4" (101.6mm)    |                    |                            |                   |
| HSECFR = Heat Shrink End Caps         | 0.4 = .40" (10.2mm)   |                    |                            |                   |
| HSECFR = Heat Shrink End Caps         | 0.5 = .47" (11.9mm)   |                    |                            |                   |
| HSECFR = Heat Shrink End Caps         | 0.8 = .80" (20.3mm)   |                    |                            |                   |
| HSECFR = Heat Shrink End Caps         | 1.0 = 1.0" (25.4mm)   |                    |                            |                   |
| HSECFR = Heat Shrink End Caps         | 1.1 = 1.1" (27.9mm)   |                    |                            |                   |
| HSECFR = Heat Shrink End Caps         | 1.5 = 1.5" (38.1mm)   |                    |                            |                   |
| HSECFR = Heat Shrink End Caps         | 2.0 = 2.0" (50.8mm)   |                    |                            |                   |
| HSECFR = Heat Shrink End Caps         | 3.0 = 3.0" (76.2mm)   |                    |                            |                   |
| HSECFR = Heat Shrink End Caps         | 4.0 = 4.0" (101.6mm)  |                    |                            |                   |

For Standard Packages containing 6" (152.4mm) lengths, refer to individual pages for complete part number offering.

Note: The above information is to be used as a guide. For specific part number offerings review individual pages for verification.

▲KYNAR is a registered trademark of Atofina Chemicals, Inc.

‡TFE is Polytetrafluoroethylene material.

### Reels

(If No Tube Length Specified)

Q = 25' (7.6m)

L = 50' (15.2m)

C = 100' (30.5m)

T = 200' (61.0m)

D = 500' (152.4m)

M = 1000' (304.8m)

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

## HSTT Heat Shrink 4 Foot Pieces and Reels

- Applications include insulating, protecting, and color coding wires and cables
- Voltage: 600 V
- Shrink ratio: 2:1
- Flammability: Flame retardant EXCEPT clear
- UL Recognized, CSA Certified
- Mil Spec: AMS-DTL-23053/5 Class 1 (Colors) Class 2 (Clear)
- Temperature range: -67°F to 275°F (-55°C to 135°C)
- For dry locations
- Material: Black cross-linked Polyolefin



| Part Number* | Nominal Diameter |     | Min. Expanded I.D. |     | Max. Recovered I.D. |     | Nominal Recovered Wall Thickness |     | Length |     | Length per Reel |       | Std. Pkg. Qty. | Std Ctn. Qty. |
|--------------|------------------|-----|--------------------|-----|---------------------|-----|----------------------------------|-----|--------|-----|-----------------|-------|----------------|---------------|
|              | In.              | mm  | In.                | mm  | In.                 | mm  | In.                              | mm  | Ft.    | m   | Ft.             | m     |                |               |
| HSTT05-48-Q  | 0.046            | 1.2 | 0.046              | 1.2 | 0.023               | 0.6 | 0.016                            | 0.4 | 4      | 1.2 | —               | —     | 25             | —             |
| HSTT05-48-TL | 0.046            | 1.2 | 0.046              | 1.2 | 0.023               | 0.6 | 0.016                            | 0.4 | 4      | 1.2 | —               | —     | 250            | —             |
| HSTT05-C‡    | 0.046            | 1.2 | 0.046              | 1.2 | 0.023               | 0.6 | 0.016                            | 0.4 | —      | —   | 100             | 30.5  | 1              | 10            |
| HSTT05-M‡    | 0.046            | 1.2 | 0.046              | 1.2 | 0.023               | 0.6 | 0.016                            | 0.4 | —      | —   | 1000            | 304.8 | 1              | 2             |
| HSTT06-48-Q  | 0.063            | 1.6 | 0.063              | 1.6 | 0.031               | 0.8 | 0.017                            | 0.4 | 4      | 1.2 | —               | —     | 25             | —             |
| HSTT06-48-TL | 0.063            | 1.6 | 0.063              | 1.6 | 0.031               | 0.8 | 0.017                            | 0.4 | 4      | 1.2 | —               | —     | 250            | —             |
| HSTT06-C‡    | 0.063            | 1.6 | 0.063              | 1.6 | 0.031               | 0.8 | 0.017                            | 0.4 | —      | —   | 100             | 30.5  | 1              | 10            |
| HSTT06-M‡    | 0.063            | 1.6 | 0.063              | 1.6 | 0.031               | 0.8 | 0.017                            | 0.4 | —      | —   | 1000            | 304.8 | 1              | 2             |
| HSTT09-48-Q  | 0.093            | 2.4 | 0.093              | 2.4 | 0.046               | 1.2 | 0.020                            | 0.5 | 4      | 1.2 | —               | —     | 25             | —             |
| HSTT09-48-TL | 0.093            | 2.4 | 0.093              | 2.4 | 0.046               | 1.2 | 0.020                            | 0.5 | 4      | 1.2 | —               | —     | 250            | —             |
| HSTT09-C‡    | 0.093            | 2.4 | 0.093              | 2.4 | 0.046               | 1.2 | 0.020                            | 0.5 | —      | —   | 100             | 30.5  | 1              | 10            |
| HSTT09-M‡    | 0.093            | 2.4 | 0.093              | 2.4 | 0.046               | 1.2 | 0.020                            | 0.5 | —      | —   | 1000            | 304.8 | 1              | 2             |
| HSTT12-48-Q  | 0.125            | 3.2 | 0.125              | 3.2 | 0.062               | 1.6 | 0.020                            | 0.5 | 4      | 1.2 | —               | —     | 25             | —             |
| HSTT12-48-TL | 0.125            | 3.2 | 0.125              | 3.2 | 0.062               | 1.6 | 0.020                            | 0.5 | 4      | 1.2 | —               | —     | 250            | —             |
| HSTT12-C‡    | 0.125            | 3.2 | 0.125              | 3.2 | 0.062               | 1.6 | 0.020                            | 0.5 | —      | —   | 100             | 30.5  | 1              | 10            |
| HSTT12-M‡    | 0.125            | 3.2 | 0.125              | 3.2 | 0.062               | 1.6 | 0.020                            | 0.5 | —      | —   | 1000            | 304.8 | 1              | 2             |
| HSTT19-48-Q  | 0.187            | 4.8 | 0.187              | 4.8 | 0.093               | 2.4 | 0.020                            | 0.5 | 4      | 1.2 | —               | —     | 25             | —             |
| HSTT19-48-TL | 0.187            | 4.8 | 0.187              | 4.8 | 0.093               | 2.4 | 0.020                            | 0.5 | 4      | 1.2 | —               | —     | 250            | —             |
| HSTT19-C‡    | 0.187            | 4.8 | 0.187              | 4.8 | 0.093               | 2.4 | 0.020                            | 0.5 | —      | —   | 100             | 30.5  | 1              | 10            |
| HSTT19-M‡    | 0.187            | 4.8 | 0.187              | 4.8 | 0.093               | 2.4 | 0.020                            | 0.5 | —      | —   | 1000            | 304.8 | 1              | 2             |
| HSTT25-48-Q  | 0.250            | 6.4 | 0.250              | 6.4 | 0.125               | 3.2 | 0.025                            | 0.6 | 4      | 1.2 | —               | —     | 25             | —             |
| HSTT25-48-TL | 0.250            | 6.4 | 0.250              | 6.4 | 0.125               | 3.2 | 0.025                            | 0.6 | 4      | 1.2 | —               | —     | 250            | —             |
| HSTT25-C‡    | 0.250            | 6.4 | 0.250              | 6.4 | 0.125               | 3.2 | 0.025                            | 0.6 | —      | —   | 100             | 30.5  | 1              | 10            |
| HSTT25-D‡    | 0.250            | 6.4 | 0.250              | 6.4 | 0.125               | 3.2 | 0.025                            | 0.6 | —      | —   | 500             | 152.4 | 1              | 2             |
| HSTT38-48-Q  | 0.375            | 9.5 | 0.375              | 9.5 | 0.187               | 4.8 | 0.025                            | 0.6 | 4      | 1.2 | —               | —     | 25             | —             |
| HSTT38-48-TL | 0.375            | 9.5 | 0.375              | 9.5 | 0.187               | 4.8 | 0.025                            | 0.6 | 4      | 1.2 | —               | —     | 250            | —             |
| HSTT38-C‡    | 0.375            | 9.5 | 0.375              | 9.5 | 0.187               | 4.8 | 0.025                            | 0.6 | —      | —   | 100             | 30.5  | 1              | 10            |
| HSTT38-T‡    | 0.375            | 9.5 | 0.375              | 9.5 | 0.187               | 4.8 | 0.025                            | 0.6 | —      | —   | 200             | 61.0  | 1              | 2             |

\*For colors, add C (Clear), 2 (Red), 4 (Yellow), 45 (Yellow/Green), 5 (Green), 6 (Blue) and 10 (White) to end of part number.

‡Part sold per reel

## HSTT Heat Shrink 4 Foot Pieces and Reels (continued)



| Part Number*  | Nominal Diameter |       | Min. Expanded I.D. |       | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Length |     | Length per Reel |      | Std. Pkg. Qty. | Std. Ctn. Qty. |
|---------------|------------------|-------|--------------------|-------|---------------------|------|----------------------------------|-----|--------|-----|-----------------|------|----------------|----------------|
|               | In.              | mm    | In.                | mm    | In.                 | mm   | In.                              | mm  | Ft.    | m   | Ft.             | m    |                |                |
| HSTT50-48-5   | 0.500            | 12.7  | 0.500              | 12.7  | 0.250               | 6.4  | 0.025                            | 0.6 | 4      | 1.2 | —               | —    | 5              | —              |
| HSTT50-48-Q   | 0.500            | 12.7  | 0.500              | 12.7  | 0.250               | 6.4  | 0.025                            | 0.6 | 4      | 1.2 | —               | —    | 25             | —              |
| HSTT50-48-T   | 0.500            | 12.7  | 0.500              | 12.7  | 0.250               | 6.4  | 0.025                            | 0.6 | 4      | 1.2 | —               | —    | 200            | —              |
| HSTT50-C‡     | 0.500            | 12.7  | 0.500              | 12.7  | 0.250               | 6.4  | 0.025                            | 0.6 | —      | —   | 100             | 30.5 | 1              | 10             |
| HSTT50-T‡     | 0.500            | 12.7  | 0.500              | 12.7  | 0.250               | 6.4  | 0.025                            | 0.6 | —      | —   | 200             | 61.0 | 1              | 2              |
| HSTT75-48-5   | 0.750            | 19.1  | 0.750              | 19.1  | 0.375               | 9.5  | 0.030                            | 0.8 | 4      | 1.2 | —               | —    | 5              | —              |
| HSTT75-48-CQ  | 0.750            | 19.1  | 0.750              | 19.1  | 0.375               | 9.5  | 0.030                            | 0.8 | 4      | 1.2 | —               | —    | 125            | —              |
| HSTT75-C‡     | 0.750            | 19.1  | 0.750              | 19.1  | 0.375               | 9.5  | 0.030                            | 0.8 | —      | —   | 100             | 30.5 | 1              | 10             |
| HSTT75-T‡     | 0.750            | 19.1  | 0.750              | 19.1  | 0.375               | 9.5  | 0.030                            | 0.8 | —      | —   | 200             | 61.0 | 1              | 2              |
| HSTT100-48-5  | 1.00             | 25.4  | 1.00               | 25.4  | 0.500               | 12.7 | 0.035                            | 0.9 | 4      | 1.2 | —               | —    | 5              | —              |
| HSTT100-48-LQ | 1.00             | 25.4  | 1.00               | 25.4  | 0.500               | 12.7 | 0.035                            | 0.9 | 4      | 1.2 | —               | —    | 75             | —              |
| HSTT100-C‡    | 1.00             | 25.4  | 1.00               | 25.4  | 0.500               | 12.7 | 0.035                            | 0.9 | —      | —   | 100             | 30.5 | 1              | 2              |
| HSTT150-48-5  | 1.50             | 38.1  | 1.50               | 38.1  | 0.750               | 19.1 | 0.040                            | 1.0 | 4      | 1.2 | —               | —    | 5              | —              |
| HSTT150-C‡    | 1.50             | 38.1  | 1.50               | 38.1  | 0.750               | 19.1 | 0.040                            | 1.0 | —      | —   | 100             | 30.5 | 1              | 2              |
| HSTT200-48-5  | 2.00             | 50.8  | 2.00               | 50.8  | 1.00                | 25.4 | 0.045                            | 1.1 | 4      | 1.2 | —               | —    | 5              | —              |
| HSTT200-L‡    | 2.00             | 50.8  | 2.00               | 50.8  | 1.00                | 25.4 | 0.045                            | 1.1 | —      | —   | 50              | 15.2 | 1              | 2              |
| HSTT300-48-2  | 3.00             | 76.2  | 3.00               | 76.2  | 1.50                | 38.1 | 0.050                            | 1.3 | 4      | 1.2 | —               | —    | 2              | —              |
| HSTT300-L‡    | 3.00             | 76.2  | 3.00               | 76.2  | 1.50                | 38.1 | 0.050                            | 1.3 | —      | —   | 50              | 15.2 | 1              | 0              |
| HSTT400-48-2  | 4.00             | 101.6 | 4.00               | 101.6 | 2.00                | 50.8 | 0.055                            | 1.4 | 4      | 1.2 | —               | —    | 2              | —              |
| HSTT400-L‡    | 4.00             | 101.6 | 4.00               | 101.6 | 2.00                | 50.8 | 0.055                            | 1.4 | —      | —   | 50              | 15.2 | 1              | 0              |

\*For colors, add C (Clear), 2 (Red), 4 (Yellow), 45 (Yellow/Green), 5 (Green), 6 (Blue) and 10 (White) to end of part number.

‡Part sold per reel

## HSTT Heat Shrink on 25 Foot Reels

- Applications include insulating and protecting wires and cables
- Voltage: 600 V
- Shrink ratio: 2:1
- Flammability: Flame retardant EXCEPT clear
- UL Recognized, CSA Certified
- Mil Spec: AMS-DTL-23053/5 Class 1 (Black) Class 2 (Clear)
- Temperature range: -67°F to 275°F (-55°C to 135°C)
- For dry locations
- Material: Cross-linked Polyolefin



| Part Number* | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |     | Nominal Recovered Wall Thickness |     | Std. Pkg. Qty. | Std. Ctn. Qty. |
|--------------|------------------|------|--------------------|------|---------------------|-----|----------------------------------|-----|----------------|----------------|
|              | In.              | mm   | In.                | mm   | In.                 | mm  | In.                              | mm  |                |                |
| HSTT05-Q     | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6 | 0.016                            | 0.4 | 1              | 10             |
| HSTT06-Q     | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8 | 0.017                            | 0.4 | 1              | 10             |
| HSTT09-Q     | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2 | 0.020                            | 0.5 | 1              | 10             |
| HSTT12-Q     | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6 | 0.020                            | 0.5 | 1              | 10             |
| HSTT19-Q     | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4 | 0.020                            | 0.5 | 1              | 10             |
| HSTT25-Q     | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2 | 0.025                            | 0.6 | 1              | 10             |
| HSTT38-Q     | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8 | 0.025                            | 0.6 | 1              | 10             |
| HSTT50-Q     | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4 | 0.025                            | 0.6 | 1              | 10             |
| HSTT75-Q     | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5 | 0.030                            | 0.8 | 1              | 10             |

\* For clear, add C to end of part number.

For technical assistance in the U.S., call 866-405-6654 (outside the U.S., see inside back cover for directory)

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index



A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

## Heat Shrink in 6 Inch Pieces; Black, Single Diameter

- Applications include insulating, protecting, and color coding wires and cables
- Voltage: 600 V
- Shrink ratio: 2:1
- Flammability: Flame retardant
- UL Recognized, CSA Certified
- Mil Spec: AMS-DTL-23053/5 Class 1
- Temperature range: -67°F to 275°F (-55°C to 135°C)
- For dry locations
- Material: Cross-linked Polyolefin



| Part Number | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Total No. Pcs. | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|----------------|----------------|----------------|
|             | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  |                |                |                |
| HSTT06-Y    | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8  | 0.017                            | 0.4 | 26             | 1              | 10             |
| HSTT09-Y    | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2  | 0.020                            | 0.5 | 24             | 1              | 10             |
| HSTT12-Y    | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 0.020                            | 0.5 | 20             | 1              | 10             |
| HSTT19-Y    | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 0.020                            | 0.5 | 18             | 1              | 10             |
| HSTT25-Y    | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 0.025                            | 0.6 | 14             | 1              | 10             |
| HSTT38-Y    | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 0.025                            | 0.6 | 12             | 1              | 10             |
| HSTT50-Y    | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4  | 0.025                            | 0.6 | 10             | 1              | 10             |
| HSTT75-Y    | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5  | 0.030                            | 0.8 | 8              | 1              | 10             |
| HSTT100-Y   | 1.00             | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 0.035                            | 0.9 | 6              | 1              | 10             |

## Heat Shrink in 6 Inch Pieces; Multi-Color, Single Diameter

- Applications include insulating, protecting, and color coding wires and cables
- Voltage: 600 V
- Shrink ratio: 2:1
- Flammability: Flame retardant EXCEPT clear
- UL Recognized, CSA Certified
- Mil Spec: AMS-DTL-23053/5 Class 1 (Colors) Class 2 (Clear)
- Temperature range: -67°F to 275°F (-55°C to 135°C)
- For dry locations
- Material: Cross-linked Polyolefin
- Colors include: clear, red, yellow, green, blue and white



| Part Number | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Total No. Pcs. | Black No. of Pieces | Each Color No. of Pieces | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------|------------------|------|--------------------|------|---------------------|------|----------------|---------------------|--------------------------|----------------|----------------|
|             | In.              | mm   | In.                | mm   | In.                 | mm   |                |                     |                          |                |                |
| HSTT06-YK1  | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8  | 26             | 8                   | 3                        | 1              | 10             |
| HSTT09-YK1  | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2  | 24             | 6                   | 3                        | 1              | 10             |
| HSTT12-YK1  | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 20             | 2                   | 3                        | 1              | 10             |
| HSTT19-YK1  | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 18             | 6                   | 2                        | 1              | 10             |
| HSTT25-YK1  | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 14             | 2                   | 2                        | 1              | 10             |
| HSTT38-YK1  | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 12             | 6                   | 1                        | 1              | 10             |
| HSTT50-YK1  | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4  | 10             | 4                   | 1                        | 1              | 10             |
| HSTT75-YK1  | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5  | 8              | 2                   | 1                        | 1              | 10             |
| HSTT100-YK1 | 1.00             | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 7              | 1                   | 1                        | 1              | 10             |

## Heat Shrink in 6 Inch Pieces; Black, Multiple Diameters

- Applications include insulating and protecting wires and cables
- Voltage: 600 V
- Shrink ratio: 2:1
- UL Recognized, CSA Certified
- Mil Spec: AMS-DTL-23053/5 Class 1
- Temperature range: -67°F to 275°F (-55°C to 135°C)
- For dry locations
- Material: Cross-linked Polyolefin



| Part Number | Nominal Diameter        | No. of Pieces by Diameter                                 | Total No. Pcs. | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------|-------------------------|-----------------------------------------------------------|----------------|----------------|----------------|
| HSTT-YK1    | Various – Smaller Range | Two pcs. each 1/8", 1/16", 3/32", 1/4", 3/16", 3/8", 1/2" | 14             | 1              | 10             |
| HSTT-YK2    | Various – Larger Range  | Two pcs. each 3/8", 1/2", 3/4", 1"                        | 8              | 1              | 10             |

## Heat Shrink in 6 Inch Pieces; Yellow/Green Stripe, Multiple Diameters

- Applications include insulating, protecting, and color coding wires and cables
- Voltage: 600 V
- Shrink ratio: 2:1
- Flammability: Flame retardant
- UL Recognized, CSA Certified
- Mil Spec: AMS-DTL-23053/5 Class 1
- Temperature range: -67°F to 275°F (-55°C to 135°C)
- For dry locations
- Material: Cross-linked Polyolefin



| Part Number | Nominal Diameter        | No. of Pieces by Diameter             | Total No. Pcs. | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------|-------------------------|---------------------------------------|----------------|----------------|----------------|
| HSTT-YK1-45 | Various – Smaller Range | Two pcs. each 1/8", 3/16", 1/4", 3/8" | 8              | 1              | 10             |
| HSTT-YK2-45 | Various – Larger Range  | Two pcs. each 3/8", 1/2", 3/4"        | 6              | 1              | 10             |

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index



## HSTTV Heat Shrink 4 Foot Pieces

- Applications include insulating and protecting wires and cables
- Fast shrink time
- Voltage: 600 V
- Shrink ratio: 2:1
- Flammability: Meets UL 224 VW-1
- UL Recognized, CSA Certified
- Mil Spec: AMS-DTL-23053/5 Class 3
- Temperature range: -67°F to 275°F (-55°C to 135°C)
- For dry locations
- Material: Black cross-linked Polyolefin



| Part Number    | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Std. Pkg. Qty. | Std. Ctn. Qty. |
|----------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|----------------|----------------|
|                | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  |                |                |
| HSTTV05-48-Q   | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6  | 0.016                            | 0.4 | 25             | —              |
| HSTTV05-48-TL  | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6  | 0.016                            | 0.4 | 250            | —              |
| HSTTV06-48-Q   | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8  | 0.017                            | 0.4 | 25             | —              |
| HSTTV06-48-TL  | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8  | 0.017                            | 0.4 | 250            | —              |
| HSTTV09-48-Q   | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2  | 0.020                            | 0.5 | 25             | —              |
| HSTTV09-48-TL  | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2  | 0.020                            | 0.5 | 250            | —              |
| HSTTV12-48-Q   | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 0.020                            | 0.5 | 25             | —              |
| HSTTV12-48-TL  | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 0.020                            | 0.5 | 250            | —              |
| HSTTV19-48-Q   | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 0.020                            | 0.5 | 25             | —              |
| HSTTV19-48-TL  | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 0.020                            | 0.5 | 250            | —              |
| HSTTV25-48-Q   | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 0.025                            | 0.6 | 25             | —              |
| HSTTV25-48-TL  | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 0.025                            | 0.6 | 250            | —              |
| HSTTV38-48-Q   | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 0.025                            | 0.6 | 25             | —              |
| HSTTV38-48-TL  | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 0.025                            | 0.6 | 250            | —              |
| HSTTV50-48-Q   | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4  | 0.025                            | 0.6 | 25             | —              |
| HSTTV50-48-T   | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4  | 0.025                            | 0.6 | 200            | —              |
| HSTTV75-48-5   | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5  | 0.030                            | 0.8 | 5              | —              |
| HSTTV75-48-CQ  | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5  | 0.030                            | 0.8 | 125            | —              |
| HSTTV100-48-5  | 1.00             | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 0.035                            | 0.9 | 5              | —              |
| HSTTV100-48-LQ | 1.00             | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 0.035                            | 0.9 | 75             | —              |
| HSTTV150-48-5  | 1.50             | 38.1 | 1.50               | 38.1 | 0.750               | 19.1 | 0.040                            | 1.0 | 5              | —              |

## HSTTV Heat Shrink on 100 Foot Reels

- Applications include insulating and protecting wires and cables
- Fast shrink time
- Voltage: 600 V
- Shrink ratio: 2:1
- Flammability: Meets UL 224 VW-1
- UL Recognized, CSA Certified
- Mil Spec: AMS-DTL-23053/5 Class 3
- Temperature range: -67°F to 275°F (-55°C to 135°C)
- For dry locations
- Material: Black Cross-linked Polyolefin



| Part Number  | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Std. Pkg. Qty. | Std. Ctn. Qty. |
|--------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|----------------|----------------|
|              | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  |                |                |
| HSTTV05-C    | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6  | 0.016                            | 0.4 | 1              | 10             |
| HSTTV06-C    | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8  | 0.017                            | 0.4 | 1              | 10             |
| HSTTV09-C    | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2  | 0.020                            | 0.5 | 1              | 10             |
| HSTTV12-C    | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 0.020                            | 0.5 | 1              | 10             |
| HSTTV19-C    | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 0.020                            | 0.5 | 1              | 10             |
| HSTTV25-C    | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 0.025                            | 0.6 | 1              | 10             |
| HSTTV38-C    | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 0.025                            | 0.6 | 1              | 10             |
| HSTTV50-C    | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4  | 0.025                            | 0.6 | 1              | 10             |
| HSTTV75-C    | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5  | 0.030                            | 0.8 | 1              | 10             |
| HSTTV100-C   | 1.00             | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 0.035                            | 0.9 | 1              | 2              |
| HSTTV100-C5* | 1.00             | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 0.035                            | 0.9 | 1              | 2              |
| HSTTV150-C   | 1.50             | 38.1 | 1.50               | 38.1 | 0.750               | 19.1 | 0.040                            | 1.0 | 1              | 2              |

\*Green.

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

A.  
System  
Overview

## HSTTV Heat Shrink on Bulk Reels

- Applications include insulating, protecting, and color coding wires and cables
- Fast shrink time
- Voltage: 600 V
- Shrink ratio: 2:1
- Flammability: Meets UL 224 VW-1
- UL Recognized, CSA Certified
- Mil Spec: AMS-DTL-23053/5 Class 3
- Temperature range: -67°F to 275°F (-55°C to 135°C)
- For dry locations
- Material: Cross-linked Polyolefin

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct



C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index



| Part Number | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |     | Nominal Recovered Wall Thickness |     | Length Per Reel |       | Color  | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------|------------------|------|--------------------|------|---------------------|-----|----------------------------------|-----|-----------------|-------|--------|----------------|----------------|
|             | In.              | mm   | In.                | mm   | In.                 | mm  | In.                              | mm  | Ft.             | m     |        |                |                |
| HSTTV05-M   | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6 | 0.016                            | 0.4 | 1000            | 304.8 | Black  | 1              | 2              |
| HSTTV05-M2  | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6 | 0.016                            | 0.4 | 1000            | 304.8 | Red    | 1              | 2              |
| HSTTV05-M4  | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6 | 0.016                            | 0.4 | 1000            | 304.8 | Yellow | 1              | 2              |
| HSTTV05-M6  | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6 | 0.016                            | 0.4 | 1000            | 304.8 | Blue   | 1              | 2              |
| HSTTV06-M   | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8 | 0.017                            | 0.4 | 1000            | 304.8 | Black  | 1              | 2              |
| HSTTV06-M2  | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8 | 0.017                            | 0.4 | 1000            | 304.8 | Red    | 1              | 2              |
| HSTTV06-M4  | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8 | 0.017                            | 0.4 | 1000            | 304.8 | Yellow | 1              | 2              |
| HSTTV06-M6  | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8 | 0.017                            | 0.4 | 1000            | 304.8 | Blue   | 1              | 2              |
| HSTTV09-M   | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2 | 0.020                            | 0.5 | 1000            | 304.8 | Black  | 1              | 2              |
| HSTTV09-M2  | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2 | 0.020                            | 0.5 | 1000            | 304.8 | Red    | 1              | 2              |
| HSTTV09-M4  | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2 | 0.020                            | 0.5 | 1000            | 304.8 | Yellow | 1              | 2              |
| HSTTV09-M6  | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2 | 0.020                            | 0.5 | 1000            | 304.8 | Blue   | 1              | 2              |
| HSTTV12-M   | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6 | 0.020                            | 0.5 | 1000            | 304.8 | Black  | 1              | 2              |
| HSTTV12-M2  | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6 | 0.020                            | 0.5 | 1000            | 304.8 | Red    | 1              | 2              |
| HSTTV12-M4  | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6 | 0.020                            | 0.5 | 1000            | 304.8 | Yellow | 1              | 2              |
| HSTTV12-M6  | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6 | 0.020                            | 0.5 | 1000            | 304.8 | Blue   | 1              | 2              |
| HSTTV19-M   | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4 | 0.020                            | 0.5 | 1000            | 304.8 | Black  | 1              | 2              |
| HSTTV19-M2  | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4 | 0.020                            | 0.5 | 1000            | 304.8 | Red    | 1              | 2              |
| HSTTV19-M4  | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4 | 0.020                            | 0.5 | 1000            | 304.8 | Yellow | 1              | 2              |
| HSTTV19-M6  | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4 | 0.020                            | 0.5 | 1000            | 304.8 | Blue   | 1              | 2              |
| HSTTV25-D   | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2 | 0.025                            | 0.6 | 500             | 152.4 | Black  | 1              | 2              |
| HSTTV25-D2  | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2 | 0.025                            | 0.6 | 500             | 152.4 | Red    | 1              | 2              |
| HSTTV25-D4  | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2 | 0.025                            | 0.6 | 500             | 152.4 | Yellow | 1              | 2              |
| HSTTV25-D6  | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2 | 0.025                            | 0.6 | 500             | 152.4 | Blue   | 1              | 2              |
| HSTTV38-T   | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8 | 0.025                            | 0.6 | 200             | 61.1  | Black  | 1              | 2              |
| HSTTV38-T2  | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8 | 0.025                            | 0.6 | 200             | 61.1  | Red    | 1              | 2              |
| HSTTV38-T4  | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8 | 0.025                            | 0.6 | 200             | 61.1  | Yellow | 1              | 2              |
| HSTTV38-T6  | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8 | 0.025                            | 0.6 | 200             | 61.1  | Blue   | 1              | 2              |
| HSTTV50-T   | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4 | 0.025                            | 0.6 | 200             | 61.1  | Black  | 1              | 2              |
| HSTTV50-T2  | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4 | 0.025                            | 0.6 | 200             | 61.1  | Red    | 1              | 2              |
| HSTTV50-T4  | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4 | 0.025                            | 0.6 | 200             | 61.1  | Yellow | 1              | 2              |
| HSTTV50-T6  | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4 | 0.025                            | 0.6 | 200             | 61.1  | Blue   | 1              | 2              |
| HSTTV75-T   | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5 | 0.030                            | 0.8 | 200             | 61.1  | Black  | 1              | 2              |
| HSTTV75-T2  | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5 | 0.030                            | 0.8 | 200             | 61.1  | Red    | 1              | 2              |
| HSTTV75-T4  | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5 | 0.030                            | 0.8 | 200             | 61.1  | Yellow | 1              | 2              |
| HSTTV75-T6  | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5 | 0.030                            | 0.8 | 200             | 61.1  | Blue   | 1              | 2              |

## HSTTV Heat Shrink on 25 Foot Reels

- Applications include insulating and protecting wires and cables
- Fast shrink time
- Voltage: 600 V
- Shrink ratio: 2:1
- Flammability: Meets UL 224 VW-1
- UL Recognized, CSA Certified
- Mil Spec: AMS-DTL-23053/5 Class 3
- Temperature range: -67°F to 275°F (-55°C to 135°C)
- For dry locations
- Material: Black cross-linked Polyolefin



| Part Number | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|----------------|----------------|
|             | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  |                |                |
| HSTTV05-Q   | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6  | 0.016                            | 0.4 | 1              | 10             |
| HSTTV06-Q   | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8  | 0.017                            | 0.4 | 1              | 10             |
| HSTTV09-Q   | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2  | 0.020                            | 0.5 | 1              | 10             |
| HSTTV12-Q   | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 0.020                            | 0.5 | 1              | 10             |
| HSTTV19-Q   | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 0.020                            | 0.5 | 1              | 10             |
| HSTTV25-Q   | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 0.025                            | 0.6 | 1              | 10             |
| HSTTV38-Q   | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 0.025                            | 0.6 | 1              | 10             |
| HSTTV50-Q   | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4  | 0.025                            | 0.6 | 1              | 10             |
| HSTTV75-Q   | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5  | 0.030                            | 0.8 | 1              | 10             |
| HSTTV100-Q  | 1.00             | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 0.035                            | 0.9 | 1              | 2              |

## HSTTV Heat Shrink 6 Inch Pieces

- Applications include insulating and protecting wires and cables
- Fast shrink time
- Voltage: 600 V
- Shrink ratio: 2:1
- Flammability: Meets UL 224 VW-1
- UL Recognized, CSA Certified
- Mil Spec: AMS-DTL-23053/5 Class 3
- Temperature range: -67°F to 275°F (-55°C to 135°C)
- For dry locations
- Material: Black cross-linked Polyolefin



| Part Number | Nominal Diameter / Size |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Pieces Per Package | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------|-------------------------|------|--------------------|------|---------------------|------|--------------------|----------------|----------------|
|             | In.                     | mm   | In.                | mm   | In.                 | mm   |                    |                |                |
| HSTTV05-Y   | 0.046                   | 1.2  | 0.046              | 1.2  | 0.023               | 0.6  | 26                 | 1              | 10             |
| HSTTV06-Y   | 0.063                   | 1.6  | 0.063              | 1.6  | 0.031               | 0.8  | 26                 | 1              | 10             |
| HSTTV09-Y   | 0.093                   | 2.4  | 0.093              | 2.4  | 0.046               | 1.2  | 24                 | 1              | 10             |
| HSTTV12-Y   | 0.125                   | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 20                 | 1              | 10             |
| HSTTV19-Y   | 0.187                   | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 18                 | 1              | 10             |
| HSTTV25-Y   | 0.250                   | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 14                 | 1              | 10             |
| HSTTV38-Y   | 0.375                   | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 12                 | 1              | 10             |
| HSTTV50-Y   | 0.500                   | 12.7 | 0.500              | 12.7 | 0.250               | 6.4  | 10                 | 1              | 10             |
| HSTTV75-Y   | 0.750                   | 19.1 | 0.750              | 19.1 | 0.375               | 9.5  | 8                  | 1              | 10             |
| HSTTV100-Y  | 1.00                    | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 6                  | 1              | 10             |



A.  
System  
Overview

## HSTTP PVC Heat Shrink

- Applications include insulating and protecting wires and cables
- Good resistance to most fuels and oils
- Voltage: 600 V
- Shrink ratio: 2:1
- Flammability: Meets UL 224 VW-1

- UL Recognized, CSA Certified
- Temperature range: -4°F to 221°F (-20°C to 105°C)
- For dry locations
- Material: Black cross-linked Polyvinyl Chloride
- Mil Spec: AMS-DTL-23053/2 Class 1

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties



C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index



| Part Number | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Length Per Reel |       | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|-----------------|-------|----------------|----------------|
|             | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  | Ft.             | m     |                |                |
| HSTTP05-QY  | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6  | 0.02                             | 0.5 | 25              | 7.6   | 1              | 10             |
| HSTTP05-CY  | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6  | 0.02                             | 0.5 | 100             | 30.5  | 1              | 2              |
| HSTTP05-MY  | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6  | 0.02                             | 0.5 | 1000            | 304.8 | 1              | 2              |
| HSTTP06-QY  | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8  | 0.02                             | 0.5 | 25              | 7.6   | 1              | 10             |
| HSTTP06-CY  | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8  | 0.02                             | 0.5 | 100             | 30.5  | 1              | 2              |
| HSTTP06-MY  | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8  | 0.02                             | 0.5 | 1000            | 304.8 | 1              | 2              |
| HSTTP09-QY  | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2  | 0.025                            | 0.6 | 25              | 7.6   | 1              | 10             |
| HSTTP09-CY  | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2  | 0.025                            | 0.6 | 100             | 30.5  | 1              | 2              |
| HSTTP09-MY  | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2  | 0.025                            | 0.6 | 1000            | 304.8 | 1              | 2              |
| HSTTP12-QY  | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 0.025                            | 0.6 | 25              | 7.6   | 1              | 10             |
| HSTTP12-CY  | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 0.025                            | 0.6 | 100             | 30.5  | 1              | 2              |
| HSTTP12-MY  | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 0.025                            | 0.6 | 1000            | 304.8 | 1              | 2              |
| HSTTP19-QY  | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 0.025                            | 0.6 | 25              | 7.6   | 1              | 10             |
| HSTTP19-CY  | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 0.025                            | 0.6 | 100             | 30.5  | 1              | 2              |
| HSTTP19-MY  | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 0.025                            | 0.6 | 1000            | 304.8 | 1              | 2              |
| HSTTP25-QY  | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 0.025                            | 0.6 | 25              | 7.6   | 1              | 10             |
| HSTTP25-CY  | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 0.025                            | 0.6 | 100             | 30.5  | 1              | 2              |
| HSTTP25-DY  | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 0.025                            | 0.6 | 500             | 152.4 | 1              | 2              |
| HSTTP38-QY  | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 0.03                             | 0.8 | 25              | 7.6   | 1              | 10             |
| HSTTP38-CY  | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 0.03                             | 0.8 | 100             | 30.5  | 1              | 2              |
| HSTTP38-TY  | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 0.03                             | 0.8 | 200             | 61.0  | 1              | 2              |
| HSTTP50-QY  | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4  | 0.03                             | 0.8 | 25              | 7.6   | 1              | 10             |
| HSTTP50-CY  | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4  | 0.03                             | 0.8 | 100             | 30.5  | 1              | 2              |
| HSTTP75-QY  | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5  | 0.035                            | 0.9 | 25              | 7.6   | 1              | 10             |
| HSTTP75-CY  | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5  | 0.035                            | 0.9 | 100             | 30.5  | 1              | 2              |
| HSTTP100-QY | 1.00             | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 0.04                             | 1.0 | 25              | 7.6   | 1              | 2              |
| HSTTP100-CY | 1.00             | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 0.04                             | 1.0 | 100             | 30.5  | 1              | 2              |
| HSTTP150-QY | 1.50             | 38.1 | 1.50               | 38.1 | 0.750               | 19.1 | 0.045                            | 1.1 | 25              | 7.6   | 1              | 2              |
| HSTTP150-CY | 1.50             | 38.1 | 1.50               | 38.1 | 0.750               | 19.1 | 0.045                            | 1.1 | 100             | 30.5  | 1              | 2              |
| HSTTP200-QY | 2.00             | 50.8 | 2.00               | 50.8 | 1.00                | 25.4 | 0.05                             | 1.3 | 25              | 7.6   | 1              | 2              |

## HSTTPN Crystal Clear PVC Heat Shrink



- Low shrink temperature (store below 90°F) to speed installation
- Crystal clear material ensures easy to read labels and splice inspections
- Voltage: 600 V
- Shrink ratio of 2:1 insulates a wide range of diameters and irregular shapes
- Highly flame retardant product manufactured from a material that is rated UL 224 VW-1
- Temperature range: -4°F to 221°F (-20°C to 105°C)
- For dry locations
- Material: Clear Polyvinyl Chloride
- Mil Spec: AMS-DTL-23053/2 Class 2



| Part Number     | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Length |       | Length Per Reel |      | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-----------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|--------|-------|-----------------|------|----------------|----------------|
|                 | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  | In.    | mm    | Ft.             | m    |                |                |
| HSTTPN50-438-L  | 0.46             | 11.7 | 0.46               | 11.7 | 0.25                | 6.4  | 0.022                            | 0.6 | 4.38   | 111.3 | —               | —    | 50             | 500            |
| HSTTPN50-713-Q  | 0.46             | 11.7 | 0.46               | 11.7 | 0.25                | 6.4  | 0.022                            | 0.6 | 7.13   | 181.1 | —               | —    | 25             | 250            |
| HSTTPN62-750-Q  | 0.56             | 14.3 | 0.56               | 14.3 | 0.31                | 8.0  | 0.027                            | 0.7 | 7.50   | 190.5 | —               | —    | 25             | 250            |
| HSTTPN75-775-Q  | 0.70             | 17.7 | 0.70               | 17.7 | 0.38                | 9.5  | 0.027                            | 0.7 | 7.75   | 196.9 | —               | —    | 25             | 250            |
| HSTTPN100-775-Q | 0.90             | 22.9 | 0.90               | 22.9 | 0.50                | 12.7 | 0.030                            | 0.8 | 7.75   | 196.9 | —               | —    | 25             | 250            |
| HSTTPN150-925-X | 1.40             | 35.4 | 1.40               | 35.4 | 0.75                | 19.1 | 0.030                            | 0.8 | 9.25   | 235.0 | —               | —    | 10             | 100            |
| HSTTPN200-950-X | 1.80             | 45.7 | 1.80               | 45.7 | 1.00                | 25.4 | 0.039                            | 1.0 | 9.50   | 241.3 | —               | —    | 10             | 100            |
| HSTTPN50-CC     | 0.46             | 11.7 | 0.46               | 11.7 | 0.25                | 6.4  | 0.022                            | 0.6 | —      | —     | 100             | 30.5 | 1              | 2              |
| HSTTPN62-CC     | 0.56             | 14.3 | 0.56               | 14.3 | 0.31                | 8.0  | 0.027                            | 0.7 | —      | —     | 100             | 30.5 | 1              | 2              |
| HSTTPN75-CC     | 0.70             | 17.7 | 0.70               | 17.7 | 0.38                | 9.5  | 0.027                            | 0.7 | —      | —     | 100             | 30.5 | 1              | 2              |
| HSTTPN100-CC    | 0.90             | 22.9 | 0.90               | 22.9 | 0.50                | 12.7 | 0.030                            | 0.8 | —      | —     | 100             | 30.5 | 1              | 2              |
| HSTTPN150-CC    | 1.40             | 35.4 | 1.40               | 35.4 | 0.75                | 19.1 | 0.030                            | 0.8 | —      | —     | 100             | 30.5 | 1              | 2              |
| HSTTPN200-CC    | 1.80             | 45.7 | 1.80               | 45.7 | 1.00                | 25.4 | 0.039                            | 1.0 | —      | —     | 100             | 30.5 | 1              | 2              |

## HSTTN Neoprene Heat Shrink

- Applications include insulating, protecting, and color coding wires and cables
- Excellent chemical resistance especially to fuels and oils
- Voltage: 600 V
- Shrink ratio: 2:1
- Mil Spec: AMS-DTL-23053/1 Class 2
- Temperature range: -94°F to 250°F (-70°C to 121°C)
- For dry locations
- Material: Black cross-linked Neoprene



| Part Number | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Length per Reel |      | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|-----------------|------|----------------|----------------|
|             | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  | Ft.             | m    |                |                |
| HSTTN25-CY  | 0.250            | 6.4  | 0.250              | 6.4  | 0.143               | 3.6  | 0.035                            | 0.9 | 100             | 30.5 | 1              | 2              |
| HSTTN38-CY  | 0.375            | 9.5  | 0.375              | 9.5  | 0.211               | 5.4  | 0.040                            | 1.0 | 100             | 30.5 | 1              | 2              |
| HSTTN50-CY  | 0.500            | 12.7 | 0.500              | 12.7 | 0.286               | 7.3  | 0.048                            | 1.2 | 100             | 30.5 | 1              | 2              |
| HSTTN63-CY  | 0.625            | 15.9 | 0.625              | 15.9 | 0.357               | 9.1  | 0.052                            | 1.3 | 100             | 30.5 | 1              | 2              |
| HSTTN75-CY  | 0.750            | 19.1 | 0.750              | 19.1 | 0.428               | 10.9 | 0.057                            | 1.5 | 100             | 30.5 | 1              | 2              |
| HSTTN88-CY  | 0.875            | 22.2 | 0.875              | 22.2 | 0.500               | 12.7 | 0.065                            | 1.7 | 100             | 30.5 | 1              | 2              |
| HSTTN100-CY | 1.00             | 25.4 | 1.00               | 25.4 | 0.570               | 14.5 | 0.070                            | 1.8 | 100             | 30.5 | 1              | 2              |
| HSTTN125-CY | 1.25             | 31.8 | 1.25               | 31.8 | 0.714               | 18.1 | 0.087                            | 2.2 | 100             | 30.5 | 1              | 2              |
| HSTTN150-CY | 1.50             | 38.1 | 1.50               | 38.1 | 0.857               | 21.8 | 0.095                            | 2.4 | 100             | 30.5 | 1              | 2              |
| HSTTN175-CY | 1.75             | 44.5 | 1.75               | 44.5 | 1.00                | 25.4 | 0.107                            | 2.7 | 100             | 30.5 | 1              | 1              |
| HSTTN200-QY | 2.00             | 50.8 | 2.00               | 50.8 | 1.14                | 29.0 | 0.110                            | 2.8 | 25              | 7.6  | 1              | 2              |
| HSTTN300-QY | 3.00             | 76.2 | 3.00               | 76.2 | 1.71                | 43.4 | 0.125                            | 3.8 | 25              | 7.6  | 1              | 2              |



A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout/  
& Safety  
Solutions

F.  
Index

## TFE Heat Shrink 4 Foot Pieces

- Applications include insulating and protecting wires and cables
- Voltage: 600 V
- Shrink ratio: 2:1
- Mil Spec: AMS-DTL-23053/12 Class 3
- Temperature range: -88°F to 482°F (-67°C to 250°C)

- Color: Opaque
- For dry locations
- Material: Polytetrafluoroethylene (TFE)
- High temperature; resists corrosive atmosphere
- See page C3.42 for shrink instructions



| Part Number   | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Length |     | Std. Pkg. Qty. |
|---------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|--------|-----|----------------|
|               | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  | Ft.    | m   |                |
| HSTTT03-48-Q  | 30 AWG           | 0.9  | 0.034              | 0.9  | 0.015               | 0.4  | 0.009                            | 0.2 | 4      | 1.2 | 25             |
| HSTTT04-48-Q  | 28 AWG           | 1.0  | 0.038              | 1.0  | 0.018               | 0.5  | 0.009                            | 0.2 | 4      | 1.2 | 25             |
| HSTTT046-48-Q | 26 AWG           | 1.2  | 0.046              | 1.2  | 0.022               | 0.5  | 0.010                            | 0.3 | 4      | 1.2 | 25             |
| HSTTT05-48-Q  | 24 AWG           | 1.3  | 0.050              | 1.3  | 0.027               | 0.7  | 0.010                            | 0.3 | 4      | 1.2 | 25             |
| HSTTT055-48-Q | 22 AWG           | 1.4  | 0.055              | 1.4  | 0.032               | 0.8  | 0.012                            | 0.3 | 4      | 1.2 | 25             |
| HSTTT06-48-Q  | 20 AWG           | 1.5  | 0.060              | 1.5  | 0.039               | 1.0  | 0.012                            | 0.3 | 4      | 1.2 | 25             |
| HSTTT08-48-Q  | 18 AWG           | 1.9  | 0.076              | 1.9  | 0.049               | 1.2  | 0.012                            | 0.3 | 4      | 1.2 | 25             |
| HSTTT09-48-Q  | 16 AWG           | 2.3  | 0.093              | 2.3  | 0.061               | 1.6  | 0.012                            | 0.3 | 4      | 1.2 | 25             |
| HSTTT12-48-Q  | 14 AWG           | 3.0  | 0.120              | 3.0  | 0.072               | 1.8  | 0.012                            | 0.3 | 4      | 1.2 | 25             |
| HSTTT15-48-Q  | 12 AWG           | 3.8  | 0.150              | 3.8  | 0.089               | 2.3  | 0.012                            | 0.3 | 4      | 1.2 | 25             |
| HSTTT19-48-Q  | 10 AWG           | 4.9  | 0.191              | 4.9  | 0.112               | 2.8  | 0.012                            | 0.3 | 4      | 1.2 | 25             |
| HSTTT24-48-Q  | 8 AWG            | 6.0  | 0.240              | 6.0  | 0.141               | 3.6  | 0.015                            | 0.4 | 4      | 1.2 | 25             |
| HSTTT30-48-Q  | 6 AWG            | 7.7  | 0.302              | 7.7  | 0.178               | 4.5  | 0.015                            | 0.4 | 4      | 1.2 | 25             |
| HSTTT37-48-Q  | 4 AWG            | 9.4  | 0.370              | 9.4  | 0.224               | 5.7  | 0.015                            | 0.4 | 4      | 1.2 | 25             |
| HSTTT43-48-Q  | 2 AWG            | 10.9 | 0.430              | 10.9 | 0.278               | 7.0  | 0.015                            | 0.4 | 4      | 1.2 | 25             |
| HSTTT47-48-Q  | 0 AWG            | 11.9 | 0.470              | 11.9 | 0.347               | 8.8  | 0.015                            | 0.4 | 4      | 1.2 | 25             |
| HSTTT56-48-5  | 9/16             | 14.2 | 0.560              | 14.2 | 0.399               | 10.1 | 0.015                            | 0.4 | 4      | 1.2 | 5              |
| HSTTT66-48-5  | 5/8              | 16.6 | 0.655              | 16.6 | 0.462               | 11.7 | 0.018                            | 0.5 | 4      | 1.2 | 5              |
| HSTTT75-48-5  | 3/4              | 19.1 | 0.750              | 19.0 | 0.524               | 13.3 | 0.018                            | 0.5 | 4      | 1.2 | 5              |
| HSTTT93-48-5  | 15/16            | 23.6 | 0.930              | 23.6 | 0.655               | 16.6 | 0.020                            | 0.5 | 4      | 1.2 | 5              |
| HSTTT112-48-5 | 1 1/8            | 28.6 | 1.12               | 28.6 | 0.786               | 20.0 | 0.025                            | 0.6 | 4      | 1.2 | 5              |
| HSTTT131-48-2 | 1 5/16           | 33.3 | 1.31               | 33.3 | 0.911               | 23.1 | 0.030                            | 0.8 | 4      | 1.2 | 2              |
| HSTTT150-48-2 | 1 1/2            | 38.1 | 1.50               | 38.1 | 1.036               | 26.3 | 0.030                            | 0.8 | 4      | 1.2 | 2              |

## HSTTK Kynar® Heat Shrink 4 Foot Pieces

- Applications include insulating and protecting wires and cables
- Excellent chemical and abrasion resistance
- Use in high temperature or solvent rich environment
- Voltage: 600 V
- Shrink ratio: 2:1
- Flammability: Meets UL 224 VW-1
- Mil Spec: AMS-DTL-23053/8
- Temperature range: -67°F to 347°F (-55°C to 175°C)
- For dry locations
- Material: Clear Cross-linked Polyvinylidene Fluoride (PVDF)



| Part Number   | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Std. Pkg. Qty. |
|---------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|----------------|
|               | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  |                |
| HSTTK05-48-Q  | 0.046            | 1.2  | 0.046              | 1.2  | 0.023               | 0.6  | 0.010                            | 0.3 | 25             |
| HSTTK06-48-Q  | 0.063            | 1.6  | 0.063              | 1.6  | 0.031               | 0.8  | 0.010                            | 0.3 | 25             |
| HSTTK09-48-Q  | 0.093            | 2.4  | 0.093              | 2.4  | 0.046               | 1.2  | 0.010                            | 0.3 | 25             |
| HSTTK12-48-Q  | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 0.010                            | 0.3 | 25             |
| HSTTK19-48-Q  | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 0.010                            | 0.3 | 25             |
| HSTTK25-48-Q  | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 0.012                            | 0.3 | 25             |
| HSTTK38-48-Q  | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 0.012                            | 0.3 | 25             |
| HSTTK50-48-5  | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4  | 0.012                            | 0.3 | 5              |
| HSTTK75-48-5  | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5  | 0.017                            | 0.4 | 5              |
| HSTTK100-48-5 | 1.00             | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 0.019                            | 0.5 | 5              |

\*KYNAR is a registered trademark of Atofina Chemicals, Inc.

## HSTTVA Heat Shrink 4 Foot and 6 Inch Pieces

- Applications include insulating and protecting wires and cables
- Flexible tubing with an adhesive inner wall which seals and protects components from moisture and corrosion
- Voltage rating: 600 V
- Shrink ratio: 2:1
- Flammability: Outer wall flame retardant
- Mil Spec: AMS-DTL-23053/4 Class 2
- Temperature range: -67°F to 230°F (-55°C to 110°C)
- For damp locations
- Material: Adhesive lined black cross-linked Polyolefin



| Part Number       | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Std. Pkg Qty. |
|-------------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|---------------|
|                   | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  |               |
| 4' (1.22m) Pieces |                  |      |                    |      |                     |      |                                  |     |               |
| HSTTVA12-48-Q     | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 0.021                            | 0.5 | 25            |
| HSTTVA19-48-Q     | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 0.023                            | 0.6 | 25            |
| HSTTVA25-48-Q     | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 0.029                            | 0.7 | 25            |
| HSTTVA38-48-Q     | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 0.029                            | 0.7 | 25            |
| HSTTVA50-48-5     | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4  | 0.030                            | 0.8 | 5             |
| HSTTVA75-48-5     | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5  | 0.035                            | 0.9 | 5             |
| HSTTVA100-48-5    | 1.00             | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 0.042                            | 1.1 | 5             |
| HSTTVA150-48-5    | 1.50             | 38.1 | 1.50               | 38.1 | 0.750               | 19.1 | 0.047                            | 1.2 | 5             |

Table continues on page C3.36

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

## HSTTVA Heat Shrink 4 Foot and 6 Inch Pieces (continued)

| Part Number         | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Std. Pkg. Qty. | Pieces per Package |
|---------------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|----------------|--------------------|
|                     | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  |                |                    |
| 6" (152.4mm) Pieces |                  |      |                    |      |                     |      |                                  |     |                |                    |
| HSTTVA12-Y          | 0.125            | 3.2  | 0.125              | 3.2  | 0.062               | 1.6  | 0.020                            | 0.5 | 1              | 7                  |
| HSTTVA19-Y          | 0.187            | 4.8  | 0.187              | 4.8  | 0.093               | 2.4  | 0.022                            | 0.6 | 1              | 7                  |
| HSTTVA25-Y          | 0.250            | 6.4  | 0.250              | 6.4  | 0.125               | 3.2  | 0.030                            | 0.8 | 1              | 5                  |
| HSTTVA38-Y          | 0.375            | 9.5  | 0.375              | 9.5  | 0.187               | 4.8  | 0.031                            | 0.8 | 1              | 4                  |
| HSTTVA50-Y          | 0.500            | 12.7 | 0.500              | 12.7 | 0.250               | 6.4  | 0.032                            | 0.8 | 1              | 4                  |
| HSTTVA75-Y          | 0.750            | 19.1 | 0.750              | 19.1 | 0.375               | 9.5  | 0.037                            | 0.9 | 1              | 3                  |
| HSTTVA100-Y         | 1.00             | 25.4 | 1.00               | 25.4 | 0.500               | 12.7 | 0.046                            | 1.2 | 1              | 2                  |

## HSTTA Heat Shrink 4 Foot and 6 Inch Pieces

- Applications include insulating and protecting wires and cables
- Flexible tubing with an adhesive inner wall which seals and protects components from moisture and corrosion
- Voltage rating: 600 V
- Shrink ratio: 3:1
- Flammability: Outer wall flame retardant
- Mil Spec: AMS-DTL-23053/4 Class 3
- Temperature range: -67°F to 230°F (-55°C to 110°C)
- For damp locations
- Material: Adhesive lined black cross-linked Polyolefin



| Part Number       | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|----------------|----------------|
|                   | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  |                |                |
| 4' (1.22m) Pieces |                  |      |                    |      |                     |      |                                  |     |                |                |
| HSTTA19-48-Q      | 0.187            | 4.8  | 0.187              | 4.8  | 0.062               | 1.6  | 0.040                            | 1.0 | 25             | —              |
| HSTTA25-48-Q      | 0.250            | 6.4  | 0.250              | 6.4  | 0.080               | 2.0  | 0.040                            | 1.0 | 25             | —              |
| HSTTA25-48-TL     | 0.250            | 6.4  | 0.250              | 6.4  | 0.080               | 2.0  | 0.040                            | 1.0 | 250            | —              |
| HSTTA38-48-Q      | 0.375            | 9.5  | 0.375              | 9.5  | 0.120               | 3.0  | 0.055                            | 1.4 | 25             | —              |
| HSTTA38-48-TL     | 0.375            | 9.5  | 0.375              | 9.5  | 0.120               | 3.0  | 0.055                            | 1.4 | 250            | —              |
| HSTTA50-48-5      | 0.500            | 12.7 | 0.500              | 12.7 | 0.160               | 4.1  | 0.070                            | 1.8 | 5              | —              |
| HSTTA50-48-T      | 0.500            | 12.7 | 0.500              | 12.7 | 0.160               | 4.1  | 0.070                            | 1.8 | 200            | —              |
| HSTTA75-48-5      | 0.750            | 19.1 | 0.750              | 19.1 | 0.250               | 6.4  | 0.085                            | 2.2 | 5              | —              |
| HSTTA75-48-C      | 0.750            | 19.1 | 0.750              | 19.1 | 0.250               | 6.4  | 0.085                            | 2.2 | 100            | —              |
| HSTTA100-48-5     | 1.00             | 25.4 | 1.00               | 25.4 | 0.320               | 8.1  | 0.100                            | 2.5 | 5              | —              |
| HSTTA100-48-L     | 1.00             | 25.4 | 1.00               | 25.4 | 0.320               | 8.1  | 0.100                            | 2.5 | 50             | —              |
| HSTTA150-48-5     | 1.50             | 38.1 | 1.50               | 38.1 | 0.510               | 12.9 | 0.100                            | 2.5 | 5              | —              |
| HSTTA150-48-Q     | 1.50             | 38.1 | 1.50               | 38.1 | 0.510               | 12.9 | 0.100                            | 2.5 | 25             | —              |

| Part Number         | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Std. Pkg. Qty. | Std. Ctn. Qty. | Pieces per Package |
|---------------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|----------------|----------------|--------------------|
|                     | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  |                |                |                    |
| 6" (152.4mm) Pieces |                  |      |                    |      |                     |      |                                  |     |                |                |                    |
| HSTTA19-Y           | 0.187            | 4.8  | 0.187              | 4.8  | 0.062               | 1.6  | 0.040                            | 1.0 | 1              | 10             | 6                  |
| HSTTA25-Y           | 0.250            | 6.4  | 0.250              | 6.4  | 0.080               | 2.0  | 0.040                            | 1.0 | 1              | 10             | 4                  |
| HSTTA38-Y           | 0.375            | 9.5  | 0.375              | 9.5  | 0.120               | 3.0  | 0.055                            | 1.4 | 1              | 10             | 3                  |
| HSTTA50-Y           | 0.500            | 12.7 | 0.500              | 12.7 | 0.160               | 4.1  | 0.070                            | 1.8 | 1              | 10             | 3                  |
| HSTTA75-Y           | 0.750            | 19.1 | 0.750              | 19.1 | 0.250               | 6.4  | 0.085                            | 2.2 | 1              | 10             | 2                  |
| HSTTA100-Y          | 1.00             | 25.4 | 1.00               | 25.4 | 0.320               | 8.1  | 0.100                            | 2.5 | 1              | 10             | 2                  |
| HSTTA150-Y          | 1.50             | 38.1 | 1.50               | 38.1 | 0.510               | 12.9 | 0.100                            | 2.5 | 1              | 10             | 1                  |

## HSTT4A Heat Shrink 4 Foot Pieces

- Applications include insulating and protecting oversized electrical and electronic components, cables, terminals and connectors
- Flexible tubing with an adhesive inner wall which seals and protects components from moisture and corrosion
- Voltage: 600 V
- Shrink ratio: 4:1
- Flammability: Flame retardant outer wall meets UL 224 VW-1
- Mil Spec: AMS-DTL-23053/4 Class 3
- Temperature range: -67°F to 257°F (-55°C to 125°C)
- For damp locations
- Material: Adhesive lined black cross-linked Polyolefin



| Part Number    | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |      | Length |     | Std. Pkg. Qty. |
|----------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|------|--------|-----|----------------|
|                | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm   | Ft.    | m   |                |
| HSTT4A15-48-Q  | 0.158            | 4.0  | 0.158              | 4.0  | 0.039               | 1.0  | 0.043                            | 1.10 | 4      | 1.2 | 25             |
| HSTT4A31-48-Q  | 0.315            | 8.0  | 0.315              | 8.0  | 0.079               | 2.0  | 0.043                            | 1.10 | 4      | 1.2 | 25             |
| HSTT4A47-48-Q  | 0.472            | 12.0 | 0.472              | 12.0 | 0.118               | 3.0  | 0.055                            | 1.40 | 4      | 1.2 | 25             |
| HSTT4A62-48-5  | 0.630            | 16.0 | 0.630              | 16.0 | 0.158               | 4.0  | 0.070                            | 1.80 | 4      | 1.2 | 5              |
| HSTT4A94-48-5  | 0.945            | 24.0 | 0.945              | 24.0 | 0.236               | 6.0  | 0.088                            | 2.25 | 4      | 1.2 | 5              |
| HSTT4A125-48-5 | 1.26             | 32.0 | 1.26               | 32.0 | 0.315               | 8.0  | 0.100                            | 2.54 | 4      | 1.2 | 5              |
| HSTT4A200-48-5 | 2.05             | 52.0 | 2.05               | 52.0 | 0.512               | 13.0 | 0.100                            | 2.54 | 4      | 1.2 | 5              |

## HSTTRA Heat Shrink 4 Foot Pieces

- Applications include insulating and protecting wires and cables
- Semi-rigid tubing with an adhesive inner wall seals and protects components from moisture and corrosion
- Voltage rating: 600 V
- Shrink ratio: 2.5:1 Minimum
- Mil Spec: AMS-DTL-23053/4 Class 1
- Temperature range: -67°F to 230°F (-55°C to 110°C)
- For damp locations
- Material: Adhesive lined black cross-linked Polyolefin



| Part Number    | Nominal Diameter |      | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Std. Pkg. Qty. |
|----------------|------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|----------------|
|                | In.              | mm   | In.                | mm   | In.                 | mm   | In.                              | mm  |                |
| HSTTRA12-48-Q  | 0.125            | 3.2  | 0.125              | 3.2  | 0.023               | 0.6  | 0.038                            | 1.0 | 25             |
| HSTTRA19-48-Q  | 0.187            | 4.8  | 0.187              | 4.8  | 0.060               | 1.5  | 0.043                            | 1.1 | 25             |
| HSTTRA25-48-Q  | 0.250            | 6.4  | 0.250              | 6.4  | 0.080               | 2.0  | 0.047                            | 1.2 | 25             |
| HSTTRA38-48-Q  | 0.375            | 9.5  | 0.375              | 9.5  | 0.135               | 3.4  | 0.050                            | 1.3 | 25             |
| HSTTRA50-48-5  | 0.500            | 12.7 | 0.500              | 12.7 | 0.195               | 5.0  | 0.055                            | 1.4 | 5              |
| HSTTRA75-48-5  | 0.750            | 19.1 | 0.750              | 19.1 | 0.313               | 8.0  | 0.065                            | 1.7 | 5              |
| HSTTRA100-48-5 | 1.00             | 25.4 | 1.00               | 25.4 | 0.400               | 10.2 | 0.075                            | 1.9 | 5              |

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index



## A. System Overview

### UL® RW® SF® Thick Wall Polyolefin Heat Shrink

## B1. Cable Ties

- Applications include insulating and protecting wires and cables
- Adhesive-lined inner wall seals and protects against moisture
- Thick wall suitable for direct burial according to UL 486D and provides excellent protection

## B2. Cable Accessories

- Voltage rating: UL 486D Listed for 600 V 90°C continuous use
- Shrink ratio: 3:1
- Flammability: Flame retardant outer wall meets UL 224 VW-1

## B3. Stainless Steel Ties



## C1. Wiring Duct

## C2. Surface Raceway

## C3. Abrasion Protection

## C4. Cable Management

## D1. Terminals

## D2. Power Connectors

## D3. Grounding Connectors

## E1. Labeling Systems

## E2. Labels

## E3. Pre-Printed & Write-On Markers

## E4. Permanent Identification

## E5. Lockout/Tagout & Safety Solutions

## F. Index

- UL Listed, UL Recognized and CSA Certified (Except HST3.0 and HST3.5)
- Mil Spec: AMS-DTL-23053/15
- Temperature range: -67°F to 230°F (-55°C to 110°C)
- For wet locations
- Suitable for outdoor, direct sunlight applications (Black only)
- Material: Adhesive lined black and red cross-linked Polyolefin



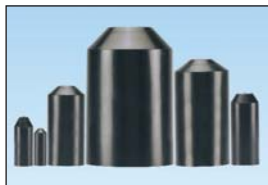
| Part Number     | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Length |        | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-----------------|--------------------|------|---------------------|------|----------------------------------|-----|--------|--------|----------------|----------------|
|                 | In.                | mm   | In.                 | mm   | In.                              | mm  | In.    | mm     |                |                |
| HST0.4-3-Q2Y*   | 0.40               | 10.2 | 0.16                | 4.1  | 0.08                             | 2.0 | 3.0    | 76.2   | 25             | 100            |
| HST0.4-3-QY*    | 0.40               | 10.2 | 0.16                | 4.1  | 0.08                             | 2.0 | 3.0    | 76.2   | 25             | 100            |
| HST0.4-48-5-2Y* | 0.40               | 10.2 | 0.16                | 4.1  | 0.08                             | 2.0 | 48.0   | 1219.2 | 5              | 20             |
| HST0.4-48-5Y*   | 0.40               | 10.2 | 0.16                | 4.1  | 0.08                             | 2.0 | 48.0   | 1219.2 | 5              | 20             |
| HST0.4-6-3Y*    | 0.40               | 10.2 | 0.16                | 4.1  | 0.08                             | 2.0 | 6.0    | 152.4  | 3              | 30             |
| HST0.4-6-X2Y*   | 0.40               | 10.2 | 0.16                | 4.1  | 0.08                             | 2.0 | 6.0    | 152.4  | 10             | 100            |
| HST0.4-6-XY*    | 0.40               | 10.2 | 0.16                | 4.1  | 0.08                             | 2.0 | 6.0    | 152.4  | 10             | 100            |
| HST0.8-12-5-2Y* | 0.75               | 19.1 | 0.22                | 5.6  | 0.09                             | 2.3 | 12.0   | 304.8  | 5              | 50             |
| HST0.8-12-5Y*   | 0.75               | 19.1 | 0.22                | 5.6  | 0.09                             | 2.3 | 12.0   | 304.8  | 5              | 50             |
| HST0.8-48-5-2Y* | 0.75               | 19.1 | 0.22                | 5.6  | 0.09                             | 2.3 | 48.0   | 1219.2 | 5              | 20             |
| HST0.8-48-5Y*   | 0.75               | 19.1 | 0.22                | 5.6  | 0.09                             | 2.3 | 48.0   | 1219.2 | 5              | 20             |
| HST0.8-6-3Y*    | 0.75               | 19.1 | 0.22                | 5.6  | 0.09                             | 2.3 | 6.0    | 152.4  | 3              | 30             |
| HST0.8-6-X2Y*   | 0.75               | 19.1 | 0.22                | 5.6  | 0.09                             | 2.3 | 6.0    | 152.4  | 10             | 100            |
| HST0.8-6-XY*    | 0.75               | 19.1 | 0.22                | 5.6  | 0.09                             | 2.3 | 6.0    | 152.4  | 10             | 100            |
| HST0.8-9-X2Y*   | 0.75               | 19.1 | 0.22                | 5.6  | 0.09                             | 2.3 | 9.0    | 228.6  | 10             | 100            |
| HST0.8-9-XY*    | 0.75               | 19.1 | 0.22                | 5.6  | 0.09                             | 2.3 | 9.0    | 228.6  | 10             | 100            |
| HST1.1-12-5-2Y  | 1.10               | 27.9 | 0.38                | 9.5  | 0.12                             | 3.0 | 12.0   | 304.8  | 5              | 50             |
| HST1.1-12-5Y    | 1.10               | 27.9 | 0.38                | 9.5  | 0.12                             | 3.0 | 12.0   | 304.8  | 5              | 50             |
| HST1.1-48-5-2Y  | 1.10               | 27.9 | 0.38                | 9.5  | 0.12                             | 3.0 | 48.0   | 1219.2 | 5              | 20             |
| HST1.1-48-5Y    | 1.10               | 27.9 | 0.38                | 9.5  | 0.12                             | 3.0 | 48.0   | 1219.2 | 5              | 20             |
| HST1.1-6-3Y     | 1.10               | 27.9 | 0.38                | 9.5  | 0.12                             | 3.0 | 6.0    | 152.4  | 3              | 30             |
| HST1.1-6-X2Y    | 1.10               | 27.9 | 0.38                | 9.5  | 0.12                             | 3.0 | 6.0    | 152.4  | 10             | 100            |
| HST1.1-6-XY     | 1.10               | 27.9 | 0.38                | 9.5  | 0.12                             | 3.0 | 6.0    | 152.4  | 10             | 100            |
| HST1.1-9-2Y     | 1.10               | 27.9 | 0.38                | 9.5  | 0.12                             | 3.0 | 9.0    | 228.6  | 2              | 20             |
| HST1.1-9-X2Y    | 1.10               | 27.9 | 0.38                | 9.5  | 0.12                             | 3.0 | 9.0    | 228.6  | 10             | 100            |
| HST1.1-9-XY     | 1.10               | 27.9 | 0.38                | 9.5  | 0.12                             | 3.0 | 9.0    | 228.6  | 10             | 100            |
| HST1.5-12-1Y    | 1.50               | 38.1 | 0.50                | 12.7 | 0.16                             | 4.1 | 12.0   | 304.8  | 1              | 10             |
| HST1.5-12-5Y    | 1.50               | 38.1 | 0.50                | 12.7 | 0.16                             | 4.1 | 12.0   | 304.8  | 5              | 50             |
| HST1.5-48-5-2Y  | 1.50               | 38.1 | 0.50                | 12.7 | 0.16                             | 4.1 | 48.0   | 1219.2 | 5              | 15             |
| HST1.5-48-5Y    | 1.50               | 38.1 | 0.50                | 12.7 | 0.16                             | 4.1 | 48.0   | 1219.2 | 5              | 15             |
| HST1.5-9-XY     | 1.50               | 38.1 | 0.50                | 12.7 | 0.16                             | 4.1 | 9.0    | 228.6  | 10             | 100            |
| HST2.0-12-2Y    | 2.00               | 50.8 | 0.67                | 16.9 | 0.16                             | 4.1 | 12.0   | 304.8  | 2              | 20             |
| HST2.0-48-2Y    | 2.00               | 50.8 | 0.67                | 16.9 | 0.16                             | 4.1 | 48.0   | 1219.2 | 2              | 8              |
| HST2.0-9-5Y     | 2.00               | 50.8 | 0.67                | 16.9 | 0.16                             | 4.1 | 9.0    | 228.6  | 5              | 50             |
| HST2.7-12-2Y    | 2.70               | 68.6 | 0.87                | 22.1 | 0.16                             | 4.1 | 12.0   | 304.8  | 2              | 20             |
| HST2.7-48-2Y    | 2.70               | 68.6 | 0.87                | 22.1 | 0.16                             | 4.1 | 48.0   | 1219.2 | 2              | 8              |
| HST3.0-12-2     | 3.00               | 76.2 | 1.00                | 25.4 | 0.16                             | 4.1 | 12.0   | 304.8  | 2              | 20             |
| HST3.0-48-2     | 3.00               | 76.2 | 1.00                | 25.4 | 0.16                             | 4.1 | 48.0   | 1219.2 | 2              | 8              |
| HST3.5-12-2Y    | 3.50               | 88.9 | 1.20                | 30.5 | 0.16                             | 4.1 | 12.0   | 304.8  | 2              | 20             |
| HST3.5-48-2Y    | 3.50               | 88.9 | 1.20                | 30.5 | 0.16                             | 4.1 | 48.0   | 1219.2 | 2              | 6              |

\*Product meets performance requirements of AMS-DTL-23053/15; some dimensions differ from specification.

## Heat Shrink End Caps

- Applications include insulating and protecting wires and cables
- Adhesive lined inner wall seals and provides excellent protection against moisture
- Voltage rating of 600 V
- Shrink ratio: 2.5:1 (HSEC); 3:1 (HSECFR)

- Temperature range: -40°F to 257°F (-40°C to 125°C) HSEC  
-67°F to 239°F (-55°C to 110°C) HSECFR
- For wet locations
- Material: Adhesive lined black cross-linked Polyolefin;  
HSECFR = Flame retardant



HSEC



HSECFR



| Part Number | Min. Expanded I.D. |      | Max. Recovered I.D. |      | Nominal Recovered Wall Thickness |     | Cap Length |       | Std. Pkg. Qty. | Std. Ctn. Qty. |
|-------------|--------------------|------|---------------------|------|----------------------------------|-----|------------|-------|----------------|----------------|
|             | In.                | mm   | In.                 | mm.  | In.                              | mm  | In.        | mm    |                |                |
| HSEC0.5-X   | 0.47               | 11.9 | 0.18                | 4.6  | 0.09                             | 2.2 | 1.5        | 37.6  | 10             | 100            |
| HSEC0.8-X   | 0.79               | 20.1 | 0.30                | 7.6  | 0.10                             | 2.4 | 1.8        | 45.5  | 10             | 100            |
| HSEC1.0-X   | 1.15               | 29.2 | 0.45                | 11.4 | 0.11                             | 2.8 | 2.8        | 71.1  | 10             | 100            |
| HSEC1.5-5   | 1.58               | 40.1 | 0.68                | 17.3 | 0.14                             | 3.6 | 3.2        | 82.0  | 5              | 50             |
| HSEC2.0-5   | 2.25               | 57.2 | 0.98                | 24.9 | 0.15                             | 3.8 | 4.3        | 109.0 | 5              | 50             |
| HSEC4.0-2   | 3.92               | 99.6 | 1.78                | 45.2 | 0.15                             | 3.8 | 5.4        | 136.4 | 2              | 10             |

### Heat Shrink End Caps – Flame Retardant

|              |      |      |      |      |      |     |     |      |    |     |
|--------------|------|------|------|------|------|-----|-----|------|----|-----|
| HSECFR0.5-XY | 0.51 | 13.0 | 0.16 | 4.1  | 0.09 | 2.3 | 2.5 | 63.5 | 10 | 100 |
| HSECFR0.8-XY | 0.75 | 19.1 | 0.24 | 6.1  | 0.09 | 2.3 | 2.5 | 63.5 | 10 | 100 |
| HSECFR1.0-XY | 1.10 | 27.9 | 0.35 | 8.9  | 0.12 | 3.0 | 3.0 | 76.2 | 10 | 100 |
| HSECFR1.5-5Y | 1.50 | 38.1 | 0.47 | 11.9 | 0.16 | 4.1 | 3.5 | 88.9 | 5  | 50  |
| HSECFR2.0-5Y | 2.00 | 50.8 | 0.63 | 16.0 | 0.16 | 4.1 | 3.5 | 88.9 | 5  | 50  |

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

A.  
System  
Overview

## Plastic Heat Shrink Tubing Kit Boxes – For Dry Locations

B1.  
Cable Ties



B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

| Part Number | Part Description                                                              | Contents                                                                                               | Std. Pkg. Qty. |
|-------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------|
| KP-HSTT1    | Heat shrink kit box – plastic case, various sizes. Black only.                | 35 ea. of 3/32", 1/8"<br>21 ea. of 3/16", 1/4"<br>7 ea. of 3/8", 1/2"                                  | 1              |
| KP-HSTT2    | Heat shrink kit box – plastic case, various sizes, various colors.            | 35 ea. (5 ea. color) 3/32", 1/8"<br>21 ea. (3 ea. color) 3/16", 1/4"<br>7 ea. (1 ea. color) 3/8", 1/2" | 1              |
| KP-HSTTA    | Dual Wall Adhesive Lined Thin Wall Heat Shrink: Plastic Kit Box – Black only. | 14 ea. 3/16"<br>12 ea. 1/4"<br>10 ea. 3/8"<br>6 ea. 1/2"<br>3 ea. 3/4"<br>2 ea. 1"                     | 1              |



## Heat Shrink Tools and Accessories



| Part Number  | Part Description                                                                                                          | Std. Pkg. Qty. | Std. Ctn. Qty. |
|--------------|---------------------------------------------------------------------------------------------------------------------------|----------------|----------------|
| HSG-115V-650 | Heat gun with stand. Temperature range of 650°F (343°C) to 900°F (482°C) plus stand. (Case and accessories not included). | 1              | –              |
| HSG-A1       | Shrink tube reflector for tubing up to 3/4" inside diameter. Directs heat around tubing to reduce shrink time.            | 1              | 10             |
| HSG-A2       | Shrink tube reflector for tubing up to 1 1/2" inside diameter. Directs heat around tubing to reduce shrink time.          | 1              | 10             |
| HSG-A4       | Black polyethylene case stores heat gun, stand, and both accessories.                                                     | 1              | –              |
| HSG-P1       | Replacement brush / spring kit.                                                                                           | 1              | 5              |
| HSG-P2       | Replacement switch 20 Amp.                                                                                                | 1              | 5              |
| HSG-P3       | Replacement bearing kit.                                                                                                  | 1              | 5              |
| HSG-P7       | Replacement heat element 650°F.                                                                                           | 1              | –              |

## Heat Shrink Process Defined

### Extrusion/Material

Various thermoplastic materials that will repeatedly melt and flow, such as polyolefin, PVC, etc., are extruded into tube form. If examined at a molecular level, the material would resemble long thin strands weakly connected at various points by crystalline structure. If left in this state, the performance of the tube would be limited to that of the base material.

### Cross Linking

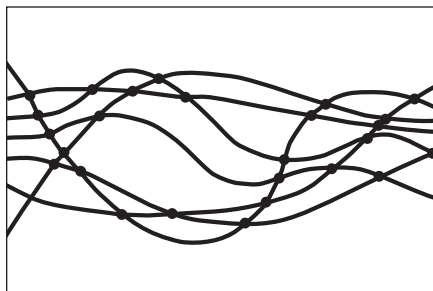
Cross-linking creates high strength bonds between the molecular strands, in addition to the crystalline bonds. This is done with a high voltage or chemical treatment of the material. The cross-link bonds will not break down with heat; this transforms the material from a thermoplastic to a thermoset material that will not melt and flow. The result is a material with superior electrical and mechanical properties.

### Expansion

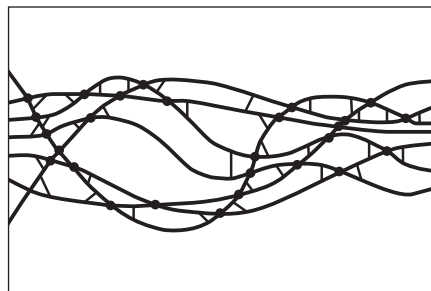
The cross-linked tube is heated and the crystalline bonds dissolve, however, the cross-link bonds remain. The tube now is softer and can be expanded. This causes the cross-link bonds to stretch when cooled quickly, the crystalline bonds reform, freezing the tube in the expanded size. The tubing has now completed the manufacturing process.

### Recovery

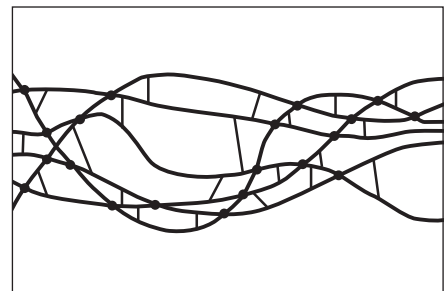
With the proper type and size of tube selected, the tube is placed over the object to be covered. Heat is now applied. This causes the crystalline bonds to dissolve again and the tube softens. The stretched cross-link bonds now return to their original length and the tube shrinks to the diameter it had when cross-linked, unless it encounters an object larger than this diameter. In this case, it conforms tightly to this object.



Extrusion



Cross-Link



Expansion

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index

## Heat Shrink Installation Instructions

### General Instructions

Position heat shrink over the object to be covered. Using a heat gun, soft yellow flame torch, infrared heat source or oven, evenly heat the tubing until it has fully recovered and conforms to the object. Use caution not to char or burn the tubing.

### Special Instructions for HSTTT

TFE Heat Shrink is the most difficult to recover due to its high shrink temperature. TFE shrink tubing must be heated to the gel state 621°F (327°C) to completely recover. This can be recognized when the tubing changes from milky white to clear. Because of the unique characteristics of this material, a controlled temperature oven will achieve the most reliable results – it is difficult to consistently recover this product using a high-temp heat gun or similar heat source. These methods have a tendency to overheat the tube in one area while other areas remain cool.

When recovering onto objects, use a temperature controlled oven set at 660°F – 680°F (349°C – 360°C) for approximately 10 minutes is recommended. It is best to place the product on a fiberglass mat or suspend as opposed to contacting the oven rack. Do NOT heat the product above 700°F (371°C), or degradation damage to the TFE polymer will occur.

### Size Selection for Heat Shrink Tubing

Generally, the largest tube that shrinks down tightly onto an object should be chosen. This allows the heat shrink tubing maximum stress relief and this will yield the longest service life.

#### Example:

A multi-conductor cable needs to be covered with HSTT Type Dry-Shrink™ Heat Shrink. The area to be covered has a measured outside diameter of .700" (17.8mm). The two possibilities are HSTT75-48-5 and HSTT100-48-5.

| Part Number  | Expanded I.D.<br>In. (mm) | Recovered I.D.<br>In. (mm) |
|--------------|---------------------------|----------------------------|
| HSTT75-48-5  | .750 (19.1)               | .375 (9.5)                 |
| HSTT100-48-5 | 1.00 (25.4)               | .500 (12.7)                |

The proper choice is HSTT100-48-5 since the tube will recover more than HSTT75-48-5. The HSTT75-48-5 will fit over the .700 inch (17.8mm) outside diameter; however, this is not the proper choice since it is smaller than the HSTT100-48-5. In general, heat shrink should recover at least 10% – 20% to reduce stress and yield the longest service life.

## Recommended Tubing Size for Common Wire Types Based on Location

For Insulated Wire, Non-Insulated Wire, and Insulated Wire with Copper Connectors

### Instructions for Tube Selection:

1) Determine location type.

#### LOCATION:

**DRY:** A location not normally subject to dampness or wetness. A location classified as dry may be temporarily subject to dampness or wetness, as in the case of a building under construction.

**DAMP:** Partially protected locations under canopies, marquees, roofed open porches and like locations, and interior locations subject to moderate degrees of moisture, such as some basements, barns, and cold-storage warehouses.

**WET:** Installations underground or in concrete slabs or masonry in direct contact with the earth, and locations subject to saturation with water or other liquids, such as vehicle washing areas, and locations exposed to weather and unprotected.

- 2) Match wire size to location type under required application – insulated wire, non-insulated wire, or insulated wire with copper connectors.
- 3) Read corresponding part number.
- 4) Part numbers with “-Y” are packages containing 6 inch pieces. Part numbers with “-48” are 48 inch pieces.
- 5) Part numbers shown below are for black heat shrink.

| Wire Size | Insulated Wire with Copper Connector |              |              | Uninsulated Wire |              |              |
|-----------|--------------------------------------|--------------|--------------|------------------|--------------|--------------|
|           | Dry-Shrink™                          | Damp-Shrink™ | Wet-Shrink™  | Dry-Shrink™      | Damp-Shrink™ | Wet-Shrink™  |
| 24        | HSTT09-Y                             | HSTTA19-Y    | —            | —                | —            | —            |
| 22        | HSTT09-Y                             | HSTTA19-Y    | —            | HSTT05-Y         | —            | —            |
| 20        | HSTT12-Y                             | HSTTA19-Y    | —            | HSTT05-Y         | —            | —            |
| 18        | HSTT12-Y                             | HSTTA19-Y    | —            | HSTT06-Y         | —            | —            |
| 16        | HSTT19-Y                             | HSTTA25-Y    | —            | HSTT09-Y         | —            | —            |
| 14        | HSTT19-Y                             | HSTTA25-Y    | —            | HSTT09-Y         | HSTTA19-Y    | —            |
| 12        | HSTT25-Y                             | HSTTA38-Y    | —            | HSTT012-Y        | HSTTA19-Y    | —            |
| 10        | HSTT25-Y                             | HSTTA38-Y    | HST0.4-48-5Y | HSTT19-Y         | HSTTA25-Y    | —            |
| 8         | HSTT38-Y                             | HSTTA50-Y    | HST0.4-48-5Y | HSTT19-Y         | HSTTA25-Y    | —            |
| 6         | HSTT50-Y                             | HSTTA50-Y    | HST0.8-48-5Y | HSTT25-Y         | HSTTA38-Y    | HST0.4-48-5Y |
| 4         | HSTT50-Y                             | HSTTA75-Y    | HST0.8-48-5Y | HSTT38-Y         | HSTTA50-Y    | HST0.4-48-5Y |
| 3         | HSTT50-Y                             | HSTTA75-Y    | HST0.8-48-5Y | HSTT38-Y         | HSTTA50-Y    | HST0.4-48-5Y |
| 2         | HSTT75-Y                             | HSTTA100-Y   | HST1.1-48-5Y | HSTT38-Y         | HSTTA50-Y    | HST0.8-48-5Y |
| 1         | HSTT75-Y                             | HSTTA100-Y   | HST1.1-48-5Y | HSTT50-Y         | HSTTA75-Y    | HST0.8-48-5Y |
| 1/0       | HSTT75-Y                             | HSTTA100-Y   | HST1.1-48-5Y | HSTT50-Y         | HSTTA75-Y    | HST0.8-48-5Y |
| 2/0       | HSTT100-Y                            | HSTTA150-Y   | HST1.5-48-5Y | HSTT50-Y         | HSTTA100-Y   | HST0.8-48-5Y |
| 3/0       | HSTT100-Y                            | HSTTA150-Y   | HST1.5-48-5Y | HSTT75-Y         | HSTTA100-Y   | HST1.1-48-5Y |
| 4/0       | HSTT100-Y                            | HSTTA150-Y   | HST1.5-48-5Y | HSTT75-Y         | HSTTA100-Y   | HST1.1-48-5Y |
| 250       | HSTT100-Y                            | HSTTA150-Y   | HST2.0-48-2Y | HSTT100-Y        | HSTTA100-Y   | HST1.1-48-5Y |
| 300       | HSTT150-48-5                         | HSTTA150-Y   | HST2.0-48-2Y | HSTT100-Y        | HSTTA150-Y   | HST1.5-48-5Y |
| 350       | HSTT150-48-5                         | HSTTA150-Y   | HST2.0-48-2Y | HSTT100-Y        | HSTTA150-Y   | HST1.5-48-5Y |
| 400       | HSTT150-48-5                         | HSTTA150-Y   | HST2.0-48-2Y | HSTT100-Y        | HSTTA150-Y   | HST1.5-48-5Y |
| 500       | HSTT150-48-5                         | HSTTA150-Y   | HST2.0-48-2Y | HSTT100-Y        | HSTTA150-Y   | HST1.5-48-5Y |
| 600       | HSTT200-48-5                         | HSTTA150-Y   | HST2.0-48-2Y | HSTT150-48-5     | HSTTA150-Y   | HST2.0-48-2Y |
| 700       | HSTT200-48-5                         | HSTTA150-Y   | HST2.0-48-2Y | HSTT150-48-5     | HSTTA150-Y   | HST2.0-48-2Y |
| 750       | HSTT200-48-5                         | HSTTA150-Y   | HST3.0-48-2Y | HSTT150-48-5     | HSTTA150-Y   | HST2.0-48-2Y |
| 800       | HSTT200-48-5                         | HSTTA150-Y   | HST3.0-48-2Y | HSTT150-48-5     | HSTTA150-Y   | HST2.0-48-2Y |
| 900       | HSTT200-48-5                         | —            | HST3.0-48-2Y | HSTT150-48-5     | HSTTA150-Y   | HST2.0-48-2Y |
| 1000      | HSTT200-48-5                         | —            | HST3.0-48-2Y | HSTT150-48-5     | HSTTA150-Y   | HST2.0-48-2Y |
| 1250      | HSTT200-48-2                         | —            | HST3.0-48-2Y | HSTT200-48-5     | HSTTA150-Y   | HST2.0-48-2Y |
| 1500      | HSTT300-48-2                         | —            | HST3.0-48-2Y | HSTT200-48-5     | —            | HST2.0-48-2Y |
| 1750      | HSTT300-48-2                         | —            | HST3.0-48-2Y | HSTT200-48-5     | —            | HST2.0-48-2Y |
| 2000      | HSTT300-48-2                         | —            | HST3.0-48-2Y | HSTT200-48-5     | —            | HST2.0-48-2Y |

Sizing information is based on the following wire types: MTW, THHN, THWN, TFN, THW, TW, TF, RHW, RH, RHH and UL 1015.

THHN is the most common wire type.

Portions reprinted with permission from NFPA, the National Electrical Code\* Handbook, Copyright 1996, National Fire Protection Association, Quincy, MA 02269.

\*All rights reserved. National Electrical Code and NEC are registered trademarks of the National Fire Protection Association, Inc., Quincy, MA 02269.

A.  
System  
Overview

B1.  
Cable Ties

B2.  
Cable  
Accessories

B3.  
Stainless  
Steel Ties

C1.  
Wiring  
Duct

C2.  
Surface  
Raceway

C3.  
Abrasion  
Protection

C4.  
Cable  
Management

D1.  
Terminals

D2.  
Power  
Connectors

D3.  
Grounding  
Connectors

E1.  
Labeling  
Systems

E2.  
Labels

E3.  
Pre-Printed  
& Write-On  
Markers

E4.  
Permanent  
Identification

E5.  
Lockout/  
Tagout  
& Safety  
Solutions

F.  
Index