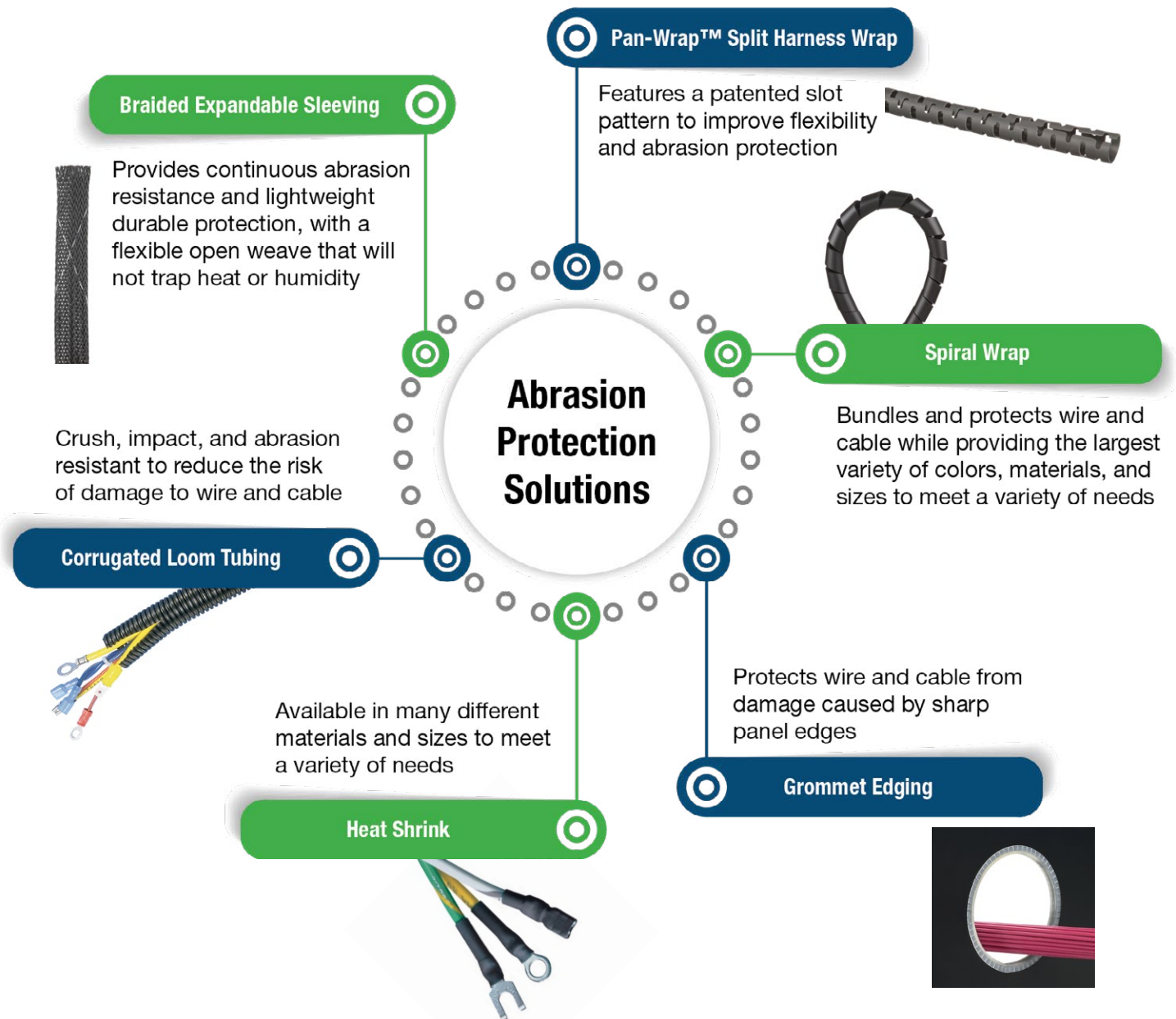


PANDUIT® Wire Abrasion Protection

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.

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.



| Feature | Spiral Wrap | Pan-Wrap Split Harness Wrap | Braided Sleeving | Corrugated Tubing | Heat Shrink |
|---|-------------|-----------------------------|------------------|-------------------|-------------|
| Weather Resistant Options | Yes | No | Yes | Yes | Yes |
| Fully Enclosed Options | No | No | Yes | Yes | Yes |
| UL Recognized | Yes | Yes | Yes | No | Yes |
| Option to add cables after initial installation | No | Yes | Yes | Yes | No |

| Product | Application |
|---|--|
| <u>Spiral Wrap</u> | <ul style="list-style-type: none"> - General purpose Abrasion Protection product for Wire Harness and bundling applications - Allows breakouts of single/multiple cables - Multiple colors allow for easy identification of cable bundles - Available in multiple materials - Simple installation tool supplied in each package |
| <u>Pan-Wrap™ Split Harness Wrap</u> | <ul style="list-style-type: none"> - Patented slot pattern provides improved flexibility & abrasion protection in any application - Unique wall design provides for easy cable breakouts - Considerably reduces installation time - Large overlap accommodates a wide range of bundle diameters |
| <u>Grommet Edging</u> | <ul style="list-style-type: none"> - Covers sharp edges of panels to protect cables from abrasion - Solid and slotted designs available. Use slotted wall design on radiused surfaces. - Use solid wall design on straight surfaces. - Adhesive lined product is available to encourage product to stay in place on panel edge |
| <u>Corrugated Loom Tubing</u> | <ul style="list-style-type: none"> - Economical protection for cables in wire harness applications - Solid wall product allows complete protection of cable bundle - UV Resistant option available for demanding outdoor applications |
| <u>Braided Sleeving</u> | <ul style="list-style-type: none"> - Provides continuous abrasion protection for wires, cables, hoses & tubing - Highly flexible open weave will not trap heat or humidity - Lightweight, durable protection - Compliant with US and European passenger rail standards |
| <u>Non-Shrink PVC Tubing</u> | <ul style="list-style-type: none"> - Provides insulation and protection for lead wires, wire harness assemblies, soldered joints and components in electrical and electronic equipment - Resistant to heat and moisture |
| <u>Heat Shrink</u> | <ul style="list-style-type: none"> - Applications include insulating, protecting, and color coding wires and cables - Use with terminals and lugs to provide a clean, safe, secure installation |
| <u>Duct Seal</u> | <ul style="list-style-type: none"> - Seals irregular openings from air and dust - Non-hardening sealant that adheres to metal, wood, masonry, and 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 |





Spiral Wrap - Standard Package Quantity: 1

| | Part Number | Color | Length per Reel | | Bundle Diameter Range | | Outside Diameter | | Temperature Range | Wall Thickness | | |
|---------------------------------------|----------------------------|---------|-----------------|-------|-----------------------|--------------|------------------|-------------|---------------------------------|---------------------------------|---------------------------------|-------|
| | | | Ft. | m | In. | mm | In. | mm | | In. | mm | |
| Polyethylene | | | | | | | | | | | | |
| | T25F-C | Natural | 100 | 30.5 | 0.187-2.0 | 4.8 – 50.8 | 0.25 | 6.4 | -40°F – 122°F (-40°C – 50°C) | 0.040 | 1.02 | |
| | T25F-C10 | White | | | | | | | | | | |
| | T25F-C3Y | Orange | | | | | | | | | | |
| | T25F-M | | 1,000 | 304.8 | | | | | | | | |
| | T38F-C | Natural | 100 | 30.5 | 0.312 - 3.0 | 7.9 – 76.2 | 0.38 | 9.5 | | -40°F – 122°F (-40°C – 50°C) | 0.055 | 1.40 |
| | T38F-TL | | 250 | 76.2 | | | | | | | | |
| | T50F-C | | 100 | 30.5 | 0.375 - 4.0 | 9.5 – 101.6 | 0.50 | 12.7 | | | -40°F – 122°F (-40°C – 50°C) | 0.060 |
| | T50F-C4Y | Yellow | | | | | | | | | | |
| | T50F-TL | Natural | | | | | | | | | | |
| | T50F-TL4Y | Yellow | 250 | 76.2 | | | | | | | | |
| | T62F-C | | 100 | 30.5 | 0.5 - 4.5 | 12.7 – 114.3 | 0.62 | 15.9 | | -40°F – 122°F (-40°C – 50°C) | 0.062 | 1.57 |
| | T75F-C | Natural | | | 0.625 - 5.0 | 15.9 – 127.0 | 0.75 | 19.1 | | | 0.065 | 1.65 |
| | T100F-C | | | | 0.875 - 6.0 | 22.2 – 152.4 | 1.00 | 25.4 | 0.070 | | 1.78 | |
| | | | | | | | | | | | | |
| Weather Resistant Polyethylene | | | | | | | | | | | | |
| | T25F-C0 | | 100 | 30.5 | 0.187-2.0 | 4.8 – 50.8 | 0.25 | 6.4 | -40°F – 122°F (-40°C – 50°C) | 0.040 | 1.02 | |
| | T38F-C0 | | | | 0.312 - 3.0 | 7.9 – 76.2 | 0.38 | 9.5 | | 0.055 | 1.40 | |
| | T50F-C0 | Black | | | 250 | 76.2 | 0.375 - 4.0 | 9.5 – 101.6 | | 0.50 | 12.7 | 0.060 |
| | T50F-X0 | | 10 | 3.1 | | | | | | | | |
| | T75F-C0 | | | 100 | 30.5 | 0.625 - 5.0 | 15.9 – 127.0 | 0.75 | | 19.1 | 0.065 | 1.65 |
| | T100F-C0 | | 0.875 - 6.0 | | | 22.2 – 152.4 | 1.00 | 25.4 | | 0.070 | 1.78 | |
| Fire Resistant Polyethylene | | | | | | | | | | | | |
| | T25R-CY | Natural | 100 | 30.5 | 0.187-2.0 | 4.8 – 50.8 | 0.25 | 6.4 | -40°F – 122°F (-40°C – 50°C) | 0.040 | 1.02 | |
| | T50R-CY | | | | 0.375 - 4.0 | 9.5 – 101.6 | 0.50 | 12.7 | | 0.060 | 1.52 | |
| | T50R-TLY | | | | 250 | 76.2 | | | | | | |
| Flame Retardant Polyethylene | | | | | | | | | | | | |
| | T12FR-CY | Natural | 100 | 30.5 | 0.0625 - 0.50 | 1.6 – 12.7 | 0.12 | 3.2 | -4°F – 122°F (-20°C – 50°C) | 0.030 | 0.76 | |
| | T25FR-C20Y | Black | | | 0.187-2.0 | 4.8 – 50.8 | 0.25 | 6.4 | | 0.040 | 1.02 | |
| | T25FR-CY | Natural | | | | | | | | | | |
| | T38FR-C20Y | Black | | | 0.312 - 3.0 | 7.9 – 76.2 | 0.38 | 9.5 | | 0.055 | 1.40 | |



Spiral Wrap - Standard Package Quantity: 1

| Part Number | Color | Length per Reel | | Bundle Diameter Range | | Outside Diameter | | Temperature Range | Wall Thickness | | |
|--|---------|-----------------|------|-----------------------|--------------|------------------|--------------|------------------------------------|----------------|------|------|
| | | Ft. | m | In. | mm | In. | mm | | In. | mm | |
| Flame Retardant Polyethylene (continued) | | | | | | | | | | | |
| T50FR-C20Y | Black | 100 | 30.5 | 0.375 - 4.0 | 9.5 - 101.6 | 0.50 | 12.7 | -4°F - 122°F (-20°C - 50°C) | 0.060 | 1.52 | |
| T50FR-CY | Natural | | | | | | | | | | |
| T50FR-TLY | Natural | 250 | 76.2 | | | | | | | | |
| T75FR-C20Y | Black | 100 | 30.5 | 0.625 - 5.0 | 15.9 - 127.0 | 0.75 | 19.1 | | 0.065 | 1.65 | |
| T75FR-CY | Natural | | | | | | | | | | |
| Nylon | | | | | | | | | | | |
| T25N-C | Natural | 100 | 30.5 | 0.187 - 2.0 | 4.8 - 50.8 | 0.25 | 6.4 | -40°F - 149°F (-40°C - 65°C) | 0.023 | 0.58 | |
| T38N-TL | | 250 | 76.2 | 0.312 - 3.0 | 5/16 - 3 | 0.38 | 9.5 | | 0.030 | 0.76 | |
| Weather Resistant Nylon | | | | | | | | | | | |
| T25N-C0 | Black | 100 | 30.5 | 0.187 - 2.0 | 4.8 - 50.8 | 0.25 | 6.4 | -40°F - 149°F (-40°C - 65°C) | 0.023 | 0.58 | |
| T38N-C0 | | | | 0.312 - 3.0 | 7.9 - 76.2 | 0.38 | 9.5 | | 0.030 | 0.76 | |
| T50N-TL0 | | 250 | 76.2 | 0.375 - 4.0 | 9.5 - 101.6 | 0.50 | 12.7 | | 0.032 | 0.81 | |
| T62N-C0 | | 100 | 30.5 | 0.50 - 4.5 | 12.7 - 114.3 | 0.62 | 15.9 | | 0.035 | 0.89 | |
| T100N-C0 | | | | 0.875 - 6.0 | 22.2 - 152.4 | 1.00 | 25.4 | | 0.045 | 1.14 | |
| Weather Resistant Polypropylene | | | | | | | | | | | |
| T38P-C0 | Black | 100 | 30.5 | 0.312 - 3.0 | 7.9 - 76.2 | 0.38 | 9.5 | -40°F - 239°F (-40°C - 115°C) | 0.030 | 0.76 | |
| T50P-C0 | | | | 0.375 - 4.0 | 9.5 - 101.6 | 0.50 | 12.7 | | | | |
| T100P-C0 | | | | 0.875 - 6.0 | 22.2 - 152.4 | 1.00 | 25.4 | | | | |
| TFE | | | | | | | | | | | |
| T12T-C | Natural | 100 | 30.5 | 0.0625 - 0.50 | 1.6 - 12.7 | 0.12 | 3.2 | -454°F - 356°F (-270°C - 180°C) | 0.020 | 0.51 | |
|  T25T-L | | 50 | 15.2 | 0.187 - 2.0 | 4.8 - 50.8 | 0.25 | 6.4 | | 0.030 | 0.76 | |
| T38T-L | | | | 0.312 - 3.0 | 7.9 - 76.2 | 0.38 | 9.5 | | | | |
|  T50T-Q | | 25 | 7.6 | 0.375 - 4.0 | 9.5 - 101.6 | 0.50 | 12.7 | | | | |
| T62T-Q | | | | 0.50 - 4.5 | 12.7 - 114.3 | 0.62 | 15.9 | | | | |
| T75T-X | | | | 10 | 3.1 | 0.625 - 5.0 | 15.9 - 127.0 | | | | 0.75 |

Pan-Wrap™ Split Harness Wrap* - Standard Package Quantity: 1



| Part Number | Color | Length per Reel | | Max. Bundle Diameter | | Min. Bundle Diameter | | Temperature Range | Nominal Diameter | | |
|-------------------------------------|---------|-----------------|------|----------------------|------|----------------------|------|---------------------------------|------------------|------|--|
| | | Ft. | m | In. | mm | In. | mm | | In. | mm | |
| Polyethylene | | | | | | | | | | | |
| PW50F-T | Natural | 200 | 61.0 | 0.55 | 14.0 | 0.43 | 10.9 | -40°F – 122°F (-40°C – 50°C) | 0.50 | 12.7 | |
| PW50F-T20 | Black | | | | | | | | | | |
| PW75F-C | Natural | 100 | 30.5 | 0.81 | 20.6 | 0.55 | 14.0 | | 0.75 | 19.1 | |
| PW75F-C20 | Black | | | | | | | | | | |
| PW100F-C | Natural | | | | | | | | | | |
| PW100F-C20 | Black | | | | | | | | | | |
| PW100F-C4 | Yellow | 50 | 15.2 | 1.63 | 41.3 | 1.13 | 28.6 | | 1.00 | 25.4 | |
| PW150F-L | Natural | | | | | | | | | | |
| Flame Retardant Polyethylene | | | | | | | | | | | |
| PW50FR-TY | Natural | 200 | 61.0 | 0.55 | 14.0 | 0.43 | 10.9 | -4°F – 122°F (-20°C – 50°C) | 0.50 | 12.7 | |
| PW50FR-T20Y | Black | | | | | | | | | | |
| PW75FR-CY | Natural | 100 | 30.5 | 0.81 | 20.6 | 0.55 | 14.0 | | 0.75 | 19.1 | |
| PW75FR-C20Y | Black | | | | | | | | | | |
| PW100FR-CY | Natural | | | | | | | | | | |
| PW100FR-C20Y | Black | | | | | | | | | | |
| PW150FR-L20Y | Black | 50 | 15.2 | 1.63 | 41.3 | 1.13 | 28.6 | | 1.50 | 38.1 | |

*Pan-Wrap™ Installation Tool required for proper installation.

Pan-Wrap™ Installation Tool - Standard Package Quantity: 1



| Part Number | For Use With |
|------------------------|----------------|
| PWT50 | PW50F- Series |
| PWT75 | PW75F- Series |
| PWT100 | PW100F- Series |
| PWT150 | PW150F- Series |

Installation Instructions



Open Pan-Wrap™ Tool and insert bundle.



Close tool to contain bundle.



Slide Pan-Wrap™ Split Harness Wrap onto end of tool until approximately 3" of it covers the bundle.



Grasp end of Pan-Wrap™ Split Harness Wrap and bundle while pulling the tool along the bundle length.

Corrugated Loom Tubing - Standard Package Quantity: 1

| | Part Number | Color | Length per Reel | | Inside Diameter | | Outside Diameter | | Temperature Range |
|---|-----------------------------|--------|-----------------|-------|-----------------|-------|------------------|-------|---------------------------------|
| | | | Ft. | m | In. | mm | In. | mm | |
| UV Resistant Polypropylene – Slit Wall | | | | | | | | | |
| NEW | CLT75PUV-0 | Black | 4,265 | 1300 | 0.811 | 20.6 | 0.984 | 25 | -40°F – 185°F (-40°C – 85°C) |
| NEW | CLT100PUV-0 | | 2,329 | 710 | 1.142 | 29.01 | 1.358 | 34.49 | |
| NEW | CLT150PUV-0 | | 1,542 | 470 | 1.417 | 36 | 1.673 | 42.49 | |
| NEW | CLT188PUV-0 | | 885 | 270 | 1.89 | 48.01 | 2.146 | 54.51 | |
| Polyethylene - Slit Wall | | | | | | | | | |
| | CLT25F-C20 | Black | 100 | 30.5 | 0.28 | 7.2 | 0.40 | 10.1 | -40°F – 122°F (-40°C – 50°C) |
| | CLT38F-C20 | | | | 0.39 | 10.0 | 0.52 | 13.3 | |
| BEST SELLER | CLT50F-C20 | Orange | 100 | 30.5 | 0.51 | 13.0 | 0.65 | 16.6 | |
| | CLT50F-C4 | | | | | | | | |
| | CLT62F-C20 | Black | 200 | 609.6 | 0.66 | 16.9 | 0.85 | 21.1 | |
| BEST SELLER | CLT75F-C20 | | | | | | | | |
| | CLT75F-C3 | | | | | | | | |
| | CLT75F-C4 | | | | | | | | |
| BEST SELLER | CLT100F-C20 | Black | 100 | 30.5 | 0.91 | 23.2 | 1.10 | 28.0 | |
| | CLT100F-C3 | | | | | | | | |
| | CLT100F-C4 | | | | | | | | |
| BEST SELLER | CLT125F-L20 | Black | 50 | 15.2 | 1.28 | 32.5 | 1.54 | 39.0 | |
| | CLT150F-T20 | | 200 | 61.0 | 1.58 | 40.0 | 1.85 | 47.0 | |
| | CLT150F-X20 | Yellow | 10 | 3.1 | | | | | |
| | CLT150F-X4 | | | | | | | | |
| | CLT188F-C20 | Black | 100 | 30.5 | 1.85 | 47.0 | 2.19 | 55.7 | |
| Polyethylene - Solid Wall | | | | | | | | | |
| | CLTS25F-C | Black | 100 | 30.5 | 0.28 | 7.2 | 0.40 | 10.1 | -40°F – 122°F (-40°C – 50°C) |

Corrugated Loom Tubing - Standard Package Quantity: 1

| Part Number | Color | Length per Reel | | Inside Diameter | | Outside Diameter | | Temperature Range | |
|---------------------------------|-------|-----------------|--------|-----------------|------|------------------|------|----------------------------------|--|
| | | Ft. | m | In. | mm | In. | mm | | |
| Nylon - Slit Wall | | | | | | | | | |
| CLT25N-C630 | Black | 100 | 30.5 | 0.28 | 7.2 | 0.40 | 10.1 | -40°F – 230°F (-40°C – 110°C) | |
| CLT38N-C630 | | | | 0.39 | 10.0 | 0.52 | 13.3 | | |
| CLT50N-4M630 | | 4,000 | 1219.2 | 0.51 | 13.0 | 0.65 | 16.6 | | |
| CLT50N-C630 | | 100 | 30.5 | 0.77 | 19.5 | 0.94 | 23.9 | | |
| CLT75N-C630 | | | | 0.91 | 23.2 | 1.10 | 28.0 | | |
| CLT100N-125M630 | | 1,250 | 381.0 | | | | | | |
| CLT100N-C630 | | 100 | 30.5 | | | | | | |
| Nylon - Solid Wall | | | | | | | | | |
| CLTS25N-C | Black | 100 | 30.5 | 0.28 | 7.2 | 0.40 | 10.1 | -40°F – 230°F (-40°C – 110°C) | |

Braided Sleeving - Standard Package Quantity: 1

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

BEST SELLER

BEST SELLER

Braided Sleeving (continued) - Standard Package Quantity: 1

| Part Number | Color | Nominal Diameter | | Nominal Diameter Range | | Length per Reel | | Std. Ctn. Qty. | |
|-------------------------------------|-------|------------------|------|------------------------|---------------|-----------------|-------|----------------|---|
| | | In. | mm | In. | mm | Ft. | m | | |
| Flame Retardant PET Material | | | | | | | | | |
| SE12PFR-MR0 | Black | 0.12 | 3.2 | 0.094 – 0.250 | 2.4 – 6.4 | 1000 | 304.8 | 2 | |
| SE12PFR-TR0 | Black | | | | | 200 | 61.0 | 4 | |
| SE25PFR-MR0 | | Black | 0.25 | 6.4 | 0.125 – 0.375 | 3.2 – 9.5 | 1000 | 304.8 | 2 |
| SE25PFR-TR0 | 200 | | | | | | 61.0 | 4 | |
| SE25PFR-TR8 | Gray | | | | | | | | |
| SE38PFR-MR0 | Black | 0.38 | 9.5 | 0.188 – 0.500 | 4.8 – 12.7 | 1000 | 304.8 | 2 | |
| SE38PFR-TR0 | | | | | | 200 | 61.0 | 4 | |
| SE50PFR-CR0 | Black | 0.50 | 12.7 | 0.250 – 0.750 | 6.4 – 19.1 | 100 | 30.5 | 2 | |
| SE50PFR-DR0 | | | | | | 500 | 152.4 | | |
| SE75PFR-CR0 | Black | 0.75 | 19.1 | 0.500 – 1.25 | 12.7 – 31.8 | 100 | 30.5 | 4 | |
| SE75PFR-DR0 | | | | | | 500 | 152.4 | 2 | |
| SE125PFR-TR0 | | 1.25 | 31.8 | 0.750 – 1.50 | 19.1 – 38.1 | 200 | 61.0 | | 2 |
| SE150PFR-TR0 | | 1.50 | 38.1 | 1.00 – 2.13 | 25.4 – 54.0 | | | | |

BEST SELLER



Pan-Wrap Braided Sleeving (PET)

| | | | | | | | | | |
|-----|-----------------------------|-------|-------|------|-------|-----|-----|------|---|
| NEW | SE38PS-TR0 | Black | 0.375 | 9.5 | 0.027 | 0.7 | 200 | 61.0 | 2 |
| | SE50PS-CLR0 | | 0.50 | 12.7 | | | 150 | 45.7 | |
| | SE75PS-CR0 | | 0.75 | 19.1 | | | 100 | 30.5 | |
| | SE100PS-CR0 | | 1.00 | 25.4 | | | | | |
| NEW | SE125PS-CR0 | | 1.25 | 31.8 | | | 50 | 15.2 | |
| NEW | SE200PS-LR0 | | 2.0 | 50.8 | | | | | |

Pan-Wrap Braided Sleeving (Flame Retardant PET)

| | | | | | | | | | |
|-----|-------------------------------|-------|-------|------|-------|-----|-----|------|---|
| NEW | SE38PSFR-TR0 | Black | 0.375 | 9.5 | 0.027 | 0.7 | 200 | 61.0 | 2 |
| NEW | SE125PSFR-CR0 | | 1.25 | 31.8 | | | 100 | 30.5 | |
| NEW | SE200PSFR-LR0 | | 2.0 | 50.8 | | | 50 | 15.2 | |

Fray Resistant (PET)

| Part Number | Color | Nominal Diameter | | Nominal Diameter Range | | Length per Reel | | Std. Ctn. Qty. |
|-----------------------------|-------|------------------|------|------------------------|-------------|-----------------|------|----------------|
| | | In. | mm | In. | mm | Ft. | m | |
| SE38PSC-TR0 | Black | 0.38 | 9.5 | 0.19 – 0.63 | 4.8 – 15.9 | 200 | 61.0 | 4 |
| SE50PSC-CR0 | | 0.50 | 12.7 | 0.25 – 0.75 | 6.4 – 19.1 | 100 | 30.5 | |
| SE75PSC-CR0 | | 0.75 | 19.1 | 0.63 – 1.0 | 15.9 – 25.4 | | | |

Braided Sleeving (continued) - Standard Package Quantity: 1

Tinned Copper Braided Sleeving



| | Part Number | Color | Nominal Diameter | | Current Capacity | Length per Roll | |
|------------|---------------------------|--------|------------------|------|------------------|-----------------|------|
| | | | In. | mm | | Ft. | m |
| NEW | SE12TC-C | Silver | 0.125 | 3.2 | 25 | 100 | 30.5 |
| NEW | SE25TC-C | | 0.25 | 6.4 | 53 | | |
| NEW | SE38TC-C | | 0.375 | 9.5 | 53 | | |
| NEW | SE50TC-L | | 0.50 | 12.7 | 62 | 50 | 15.2 |
| NEW | SE88TC-L | | 0.875 | 22.2 | 100 | | |
| NEW | SE100TC-L | | 1.0 | 25.4 | 120 | | |
| NEW | SE125TC-L | | 1.25 | 31.8 | 145 | | |
| NEW | SE150TC-L | | 1.50 | 38 | 165 | | |
| NEW | SE200TC-L | | 2.0 | 50.8 | 180 | | |

Heavy Duty Nylon Braided Sleeving



| | Part Number | Color | Nominal Diameter | | Minimum Diameter | | Maximum Diameter | | Length per Roll | |
|------------|--------------------------|-------|------------------|------|------------------|------|------------------|------|-----------------|------|
| | | | In. | mm | In. | mm | In. | mm | Ft. | m |
| NEW | SE38N-C | Black | 0.375 | 9.5 | 0.25 | 6.4 | 0.50 | 12.7 | 100 | 30.5 |
| NEW | SE50N-C | | 0.50 | 12.7 | 0.375 | 9.5 | 0.625 | 15.9 | | |
| NEW | SE75N-L | | 0.75 | 19.1 | 0.625 | 15.9 | 1.00 | 25.4 | | |
| NEW | SE100N-L | | 1.0 | 25.4 | 0.875 | 22.2 | 1.25 | 31.8 | 50 | 15.2 |
| NEW | SE125N-L | | 1.25 | 31.8 | 1.00 | 25.4 | 1.50 | 38 | | |
| NEW | SE150N-Q | | 1.50 | 38 | 1.25 | 31.8 | 1.75 | 44.5 | | |
| NEW | SE175N-Q | | 1.75 | 44.5 | 1.50 | 38 | 2.00 | 50.8 | 25 | 7.62 |
| NEW | SE200N-Q | | 2.0 | 50.8 | 1.75 | 44.5 | 2.75 | 69.9 | | |
| NEW | SE300N-Q | | 3.0 | 76.2 | 2.25 | 57.2 | 3.50 | 88.9 | | |

Insulating Fiberglass Tubing



| | Part Number | Color | Nominal Diameter | | Wall Thickness | | Length per Roll | |
|------------|-------------------------|--------|------------------|------|----------------|-----|-----------------|------|
| | | | In. | mm | In. | mm | Ft. | m |
| NEW | FT38-C | Silver | 0.375 | 9.5 | 0.025 | 0.6 | 100 | 30.5 |
| NEW | FT50-C | | 0.5 | 12.7 | | | | |
| NEW | FT62-C | | 0.625 | 15.9 | | | | |
| NEW | FT75-C | | 0.75 | 19.1 | | | | |
| NEW | FT100-C | | 1.0 | 25.4 | | | | |
| NEW | FT125-C | | 1.25 | 31.8 | | | | |
| NEW | FT150-C | | 1.5 | 38 | | | | |
| NEW | FT200-L | | 2.0 | 50.8 | | | 50 | 15.2 |
| NEW | FT300-L | | 3.0 | 76.2 | | | | |

Heat Shrink



Thin Wall Heat Shrink

| Part Number | Color | 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 | |
| HSTT06-CC | Clear | 0.063 | 1.6 | 0.063 | 1.6 | .031 | 0.80 | 0.017 | 0.4 | 100 | 30.5 | 1 roll |
| HSTT09-48-Q | Black | 0.093 | 2.4 | 0.093 | 2.4 | 0.046 | 1.2 | 0.02 | 0.5 | 4 | 1.2 | 25 pcs. |
| HSTT12-CC | Clear | 0.125 | 3.2 | 0.125 | 3.2 | 0.062 | 1.6 | | | 100 | 30.5 | 1 roll |
| HSTT19-48-Q | Black | 0.187 | 4.8 | 0.187 | 4.8 | 0.093 | 2.4 | 0.025 | 0.6 | 4 | 1.2 | 25 pcs. |
| HSTT19-48-Q45 | Yellow Green | | | | | | | | | | | |
| HSTT25-48-Q | Black | 0.250 | 6.4 | 0.250 | 6.4 | 0.125 | 3.2 | 0.025 | 0.6 | 100 | 30.5 | 1 roll |
| HSTT25-48-QC | Clear | | | | | | | | | | | |
| HSTT25-C | Black | 0.375 | 9.5 | 0.375 | 9.5 | 0.187 | 4.8 | 0.025 | 0.6 | 4 | 1.2 | 25 pcs. |
| HSTT38-48-Q | | | | | | | | | | 100 | 30.5 | 1 roll |
| HSTT38-C | | | | | | | | | | 4 | 1.2 | 25 pcs. |
| HSTT50-48-5 | | | | | | | | | | 100 | 30.5 | 1 roll |
| HSTT50-C | Clear | 0.500 | 12.7 | 0.500 | 12.7 | 0.250 | 6.4 | 0.035 | 0.9 | 4 | 1.2 | 25 pcs. |
| HSTT50-CC | | | | | | | | | | 100 | 30.5 | 1 roll |
| HSTT75-48-5 | Black | 0.750 | 19.1 | 0.750 | 19.1 | 0.375 | 9.5 | 0.030 | 0.8 | 4 | 1.2 | 25 pcs. |
| HSTT75-C | | | | | | | | | | 100 | 30.5 | 1 roll |
| HSTT100-48-5 | Black | 1.00 | 25.4 | 1.00 | 25.4 | 0.500 | 12.7 | 0.035 | 0.9 | 4 | 1.2 | 25 pcs. |
| HSTT100-C | | | | | | | | | | 100 | 30.5 | 1 roll |
| HSTT100-CC | Clear | | | | | | | | | | | |
| HSTT150-48-5 | Black | 1.50 | 38.1 | 1.5 | 38.1 | 0.75 | 19.1 | 0.04 | 1 | 4 | 1.2 | 5 pcs. |
| HSTT150-48-5C | Clear | | | | | | | | | 100 | 30.5 | 1 roll |
| HSTT150-C | Black | 2 | 50.8 | 2 | 50.8 | 1.0 | 25.4 | 0.045 | 1.1 | 4 | 1.2 | 5 pcs. |
| HSTT200-48-5 | | | | | | | | | | 50 | 15.2 | 1 roll |
| HSTT200-L | | | | | | | | | | | | |
| HSTT300-L | | 3 | 76.2 | 3 | 76.2 | 1.5 | 38.1 | 0.05 | 1.3 | | | |

TFE

| | | | | | | | | | | | | |
|------------------------------|-------|--------|-----|-------|-----|-------|-----|-------|-----|---|-----|---------|
| HSTTT08-48-Q | Clear | 18 AWG | 1.9 | 0.076 | 1.9 | 0.049 | 1.2 | 0.012 | 0.3 | 4 | 1.2 | 25 pcs. |
| HSTTT30-48-Q | | 6 AWG | 7.7 | 0.302 | 7.7 | 0.178 | 4.5 | 0.015 | 0.4 | | | |

Medium Wall - Adhesive Lined

| | | | | | | | | | | | | |
|-------------------------------|-------|------|------|------|------|------|------|-------|-----|---|-----|----------|
| HSTTA25-48-TL | Black | 0.25 | 6.4 | 0.25 | 6.4 | 0.08 | 2.0 | 0.04 | 1 | 4 | 1.2 | 250 pcs. |
| HSTTA50-48-5 | | 0.50 | 12.7 | 0.50 | 12.7 | 0.16 | 4.1 | 0.07 | 1.8 | | | 5 pcs. |
| HSTTA75-48-5 | | 0.75 | 19.1 | 0.75 | 19.1 | 0.25 | 6.4 | 0.085 | 2.2 | | | |
| HSTTA100-48-5 | | 1 | 25.4 | 1 | 25.4 | 0.32 | 8.1 | 0.10 | 2.5 | | | |
| HSTTA150-48-5 | | 1.5 | 38.1 | 1.5 | 38.1 | 0.51 | 12.9 | | | | | |
| HSTTA150-48-Q | | | | | | | | | | | | 25 pcs. |

Heat Shrink (continued)



| Part Number | Color | Nominal Diameter | | Min. Expanded Nominal I.D. | | Max. Recovered Nominal I.D. | | Nominal Recovered Wall Thickness | | Length | | Std. Pkg. Qty. |
|-------------|-------|------------------|----|----------------------------|----|-----------------------------|----|----------------------------------|----|--------|---|----------------|
| | | In. | mm | In. | mm | In. | mm | In. | mm | Ft. | m | |

Semi-Rigid Adhesive Lined

| | | | | | | | | | | | | |
|-------------------------------|-------|-----|------|-----|------|-------|---|-------|-----|---|-----|--------|
| HSTTRA50-48-5 | Black | 0.5 | 12.7 | 0.5 | 12.7 | 0.195 | 5 | 0.055 | 1.5 | 4 | 1.2 | 5 pcs. |
|-------------------------------|-------|-----|------|-----|------|-------|---|-------|-----|---|-----|--------|

Thick Wall Heat Shrink

| | | | | | | | | | | | | |
|------------------------------|-------|---|---|------|-------|---------|------|------|-----|---|-----|--------|
| HST0.4-48-5Y | Black | — | — | 0.4 | 10.2 | 0.16 | 4.1 | 0.08 | 2 | 4 | 1.2 | 5 pcs. |
| HST0.8-48-5Y | | | | 0.75 | 19.1 | 0.22 | 5.6 | 0.09 | 2.3 | | | |
| HST0.8-6-XY | | | | 6 | 152.4 | 10 pcs. | | | | | | |
| HST1.1-48-5Y | | | | 1.1 | 27.9 | 0.38 | 9.5 | 0.12 | 3 | 4 | 1.2 | 5 pcs. |
| HST1.5-48-5Y | | | | 1.5 | 38.1 | 0.5 | 12.7 | 0.16 | 4.1 | | | |
| HST2.0-48-2Y | | | | 2 | 50.8 | 0.67 | 16.9 | 0.17 | 4.3 | | | |
| HST3.0-48-2 | | | | 3 | 76.2 | 1 | 25.4 | | | | | |

Heat Shrink End Caps



| | | | | | | | | | | | | |
|---------------------------|-------|---|---|------|------|------|-----|------|-----|-----|------|---------|
| HSEC0.5-X | Black | — | — | 0.47 | 11.9 | 0.18 | 4.6 | 0.09 | 2.2 | 1.5 | 37.6 | 10 pcs. |
| HSEC0.8-X | | | | 0.79 | 20.1 | 0.3 | 7.6 | 0.1 | 2.4 | 1.8 | 45.5 | |

Heat Shrink Gun with Stand - Standard Package Quantity: 1

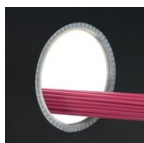


| Part Number | Description |
|------------------------------|---|
| HSG-115V-650 | Heat gun with stand. Temperature range of 700°F (371°C) to 1000°F (538°C) |

Non-Shrink Tubing - Standard Package Quantity: 1

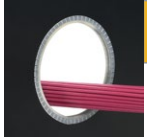


| Part Number | Color | Nominal Diameter | Length per Reel | | Max. I.D. | | Wall Thickness | | Max. Voltage Rating |
|--------------------------------|-------|------------------|-----------------|-------|-----------|-------|----------------|------|---------------------|
| | | | Ft. | m | In. | mm | In. | mm | |
| TV105-3M20Y | Black | 3 AWG | 1000 | 304.8 | 0.249 | 6.32 | 0.020 | 0.51 | 300 V |
| TV105-6M20Y | | 6 AWG | | | 0.178 | 4.52 | | | |
| TV105-.75TL20Y | | 3/4 | 250 | 76.2 | 0.786 | 19.96 | 0.035 | 0.89 | 600 V |
| TV105-1.0C20Y | | 1 | 100 | 30.5 | 1.036 | 26.31 | | | |



Grommet Edging - Standard Package Quantity: 1

| | Part Number | Width A | | Height B | | Panel Thickness Range | | Material | Color | Temperature Range |
|---|------------------------------|---------|-----|----------|-----|-----------------------|-----------|--------------------------------|---------|---------------------------------|
| | | In. | mm | In. | mm | In. | mm | | | |
| Slotted | | | | | | | | | | |
| | GEE62F-C | 0.13 | 3.3 | 0.16 | 4.1 | 0.036 – 0.062 | 0.9 – 1.6 | Polyethylene | Natural | -40°F – 122°F (-40°C – 50°C) |
| | GEE99F-C | 0.17 | 4.3 | 0.19 | 4.7 | 0.062 – 0.099 | 1.6 – 2.5 | | | |
| | GEE144F-C | 0.21 | 5.4 | 0.22 | 5.6 | 0.099 – 0.144 | 2.5 – 3.7 | | | |
| NEW | GEE189F-C | 0.30 | 7.6 | 0.30 | 7.6 | 0.144 - 0.189 | 3.7 - 4.8 | Weather Resistant Polyethylene | Black | |
| NEW | GEE189F-C0 | | | | | | | | | |
| Slotted with Adhesive | | | | | | | | | | |
| BEST SELLER | 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 (-40°C – 50°C) |
| | GEE62F-A-C0 | | | | | | | Weather Resistant Polyethylene | Black | |
| BEST SELLER | GEE99F-A-C | 0.17 | 4.3 | 0.19 | 4.7 | 0.062 – 0.099 | 1.6 – 2.5 | Polyethylene | Natural | |
| | GEE99F-A-C0 | | | | | | | Weather Resistant Polyethylene | Black | |
| BEST SELLER | GEE144F-A-C | 0.21 | 5.4 | 0.22 | 5.6 | 0.099 – 0.144 | 2.5 – 3.7 | Polyethylene | Natural | |
| | GEE144F-A-C0 | | | | | | | Weather Resistant Polyethylene | Black | |
| NEW | GEE189F-A-C | 0.30 | 7.6 | 0.30 | 7.6 | 0.144 - 0.189 | 3.7 - 4.8 | Polyethylene | Natural | |
| NEW | GEE189F-A-C0 | | | | | | | Weather Resistant Polyethylene | Black | |
| Solid with Adhesive – 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 (-40°C – 50°C) |
| | GES62F-A-C0 | | | | | | | Weather Resistant Polyethylene | Black | |
| | GES99F-A-C | 0.17 | 4.3 | 0.19 | 4.7 | 0.062 – 0.099 | 1.6 – 2.5 | Polyethylene | Natural | |
| | GES99F-A-C0 | | | | | | | Weather Resistant Polyethylene | Black | |
| NEW | GES189F-A-C | 0.30 | 7.6 | 0.30 | 7.6 | 0.144 - 0.189 | 3.7 - 4.8 | Polyethylene | Natural | |
| NEW | GES189F-A-C0 | | | | | | | Weather Resistant Polyethylene | Black | |



Grommet Edging (continued) - Standard Package Quantity: 1

| Part Number | Width A | | Height B | | Panel Thickness Range | | Material | Color | Temperature Range |
|---|---------|-----|---------------|-----------|-----------------------|-----------|-----------|---------|---------------------------------|
| | In. | mm | In. | mm | In. | mm | | | |
| Nylon Lengths - Military Standard MS21266 in 12 3/4" Lengths | | | | | | | | | |
| GE85-C | 0.18 | 4.5 | 0.16 | 3.9 | 0.052 - 0.085 | 1.3 - 2.2 | Nylon 6.6 | Natural | -40°F - 149°F (-40°C - 65°C) |
| GE128-C | 0.22 | 5.6 | | | 0.085 - 0.128 | 2.2 - 3.3 | | | |
| GE192-L | 0.33 | 8.3 | 0.128 - 0.192 | 3.3 - 4.9 | | | | | |
| GE255-L | 0.39 | 9.8 | 0.192 - 0.255 | 4.9 - 6.5 | | | | | |

Duct Seal - Standard Package Quantity: 1



BEST SELLER

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

| Abrasion Protection Materials Technical Data | Ratings and Approvals | | | Chemical Resistance | | | | Compliance | | | |
|--|----------------------------------|----------------------|---------------------|---|-----------|-------------------------------------|--|-----------------|-----------|-----------|--------------------|
| | UL Temperature Index | Flammability (UL 94) | Melting Temperature | Organic Solvents | Alkalies | Acids | Petro-Chemicals | UL Recognized | | | |
| Spiral Wrap | | | | | | | | | | | |
| Natural Polyethylene 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) | Resistant below 140°F (60°C) except to chlorinated solvents | Resistant | Resistant except to oxidizing acids | Some Discoloration | UL File E141152 | | | |
| Weather Resistant Polyethylene 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) | | | | Resistant except to halogenated hydrocarbons | | Resistant | Resistant | No Discoloration |
| Fire Resistant Polyethylene* UL94-V-2 Rating. This material is self extinguishing and passes the UL 94 flame retardant test with V-2 rating. | | V-2 | 239°F (115°C) | | | | | | | | Some Discoloration |
| Flame Retardant Polyethylene* 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 122°F (50°C) | V-0 | 270°F (132°C) | Resistant except to halogenated hydrocarbons | Resistant | Resistant | Resistant Some Discoloration | | | | |
| Weather Resistant Polypropylene 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) | | | | Resistant No Discoloration | | | | |
| Nylon 6.6 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) | Resistant except to halogenated hydrocarbons | Resistant | Not recommended | Resistant No Discoloration | | | | |
| Weather Resistant Nylon 6.6 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. | | HB | | | | | | | | | |
| TFE‡* 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 356°F (180°C) | V-0 | 648°F (342°C) | Resistant | Resistant | Resistant | Resistant No Discoloration | | | | |
| Pan-Wrap™ | | | | | | | | | | | |
| Natural Polyethylene Lowest cost material for indoor use up to 122°C. Natural is available in all sizes. | -40°F (-40°C) to 122°F (50°C) | HB | 239°F (115°C) | Resistant below 140°F (60°C) except to chlorinated solvents | Resistant | Resistant except to oxidizing acids | Some Discoloration | UL File E141152 | | | |
| Flame Retardant Polyethylene* 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 122°F (50°C) | V-0 | 270°F (132°C) | Resistant except to halogenated hydrocarbons | Resistant | Resistant | Resistant Some Discoloration | | | | |

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.

PANDUIT® Wire Abrasion Protection

| Abrasion Protection Materials Technical Data | Ratings and Approvals | | | Chemical Resistance | | | | Compliance |
|--|--------------------------------|-------------------------|------------------------|--|------------------------------|-------------------------------------|------------------------------|-------------------------------------|
| | UL Temperature Index | Flammability (UL 94) | Melting Temperature | Organic Solvents | Alkalies | Acids | Petro- Chemicals | UL Recognized |
| Sleeving | | | | | | | | |
| Polyethylene Terephthalate (PET) 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: Weather Resistant Black, White and Gray. | -94°F (-70°C) to 257°F (125°C) | V-0 | 500°F (260°C) | Resistant to some solvents | Resistant to most weak bases | Resistant | Some Discoloration | UL File E116868 |
| Flame Retardant Polyethylene Terephthalate (PET) 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. | | UL 1441 VW-1 | 469°F (243°C) | | | | Resistant Some Discoloration | |
| Tinned Copper Provides shielding on harnesses and cable, for high end automotive applications, grounding straps, and EMI, RFI, and ESD Protection. Halogen Free. | N/A | Non-Flammable | 1828°F (998°C) | Resistant | Resistant | Not Recommended | Resistant | N/A |
| Heavy Duty Nylon Strong filaments provide extreme cut and abrasion resistance while allowing for a smooth feel and reduced drag. | -40°F (-40°C) to 239°F (65°C) | UL94-HB | N/A | Resistant except to halogenated hydrocarbons | Resistant | Not Recommended | Resistant | N/A |
| Aluminum Covered Fiberglass An engineered lamination of an aluminized metallic heat shield to a layer of strong, tightly braided fiberglass insulation to provide superior protection from radiant heat by reflecting it away from sensitive electronics, wiring and hoses. Halogen Free. | -76°F (-60°C) to 491°F (255°C) | N/A | 2,048°F (1,120°C) | Resistant | Resistant | Resistant | Resistant | N/A |
| CLT | | | | | | | | |
| Black Polyethylene 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 | — | Resistant except to halogenated hydrocarbons | Resistant | Resistant | Resistant No Discoloration | N/A |
| Black Polypropylene Economical material with good impact strength. Suitable for harsh environment applications requiring UV/weather resistance. | -40°F (-40°C) to 185°F (85°C) | | 327°F (164°C) | Not resistant to halogenated hydrocarbons. Varies for others depending on the solvent. | | | | |
| Nylon 6 Nylon is a strong, impact modified, heat stabilized, durable high abrasion resistant material. | -40°F (-40°C) to 230°F (110°C) | | 410°F (211°C) | Resistant except to halogenated hydrocarbons | | | | |
| PVC | | | | | | | | |
| PVC Non-Shrink Tubing* 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 ** | — | Resistant except to aromatic hydrocarbons, ketones and esters | Resistant | Resistant | Resistant No Discoloration | UL File E122770 |
| Grommet Edging | | | | | | | | |
| Natural Polyethylene 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) | Resistant below 140°F (60°C) except to chlorinated solvents | Resistant | Resistant except to oxidizing acids | Some Discoloration | UL File E351393 |
| Weather Resistant Polyethylene 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. | | | | | | | Resistant | Resistant except to oxidizing acids |
| Nylon 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-0 | 491°F (255°C) | Resistant except to phenols and formic acid | Resistant | Resistant to most weak acids | No Discoloration | N/A |

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

*Contains halogens. Other materials are halogen free.

**Limited sizes in Clear

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. The surrounding materials and the material you are shrinking onto must be capable of withstanding the shrink temperatures.

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 and maximize abrasion resistance and electrical insulation.

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 0.700" (17.8mm). The two possibilities are HSTT75-48-5 and HSTT100-48-5.

| Part Number | Expander I.D. In. (mm) | Recovered I.D. In. (mm) |
|------------------------------|---------------------------|----------------------------|
| HSTT75-48-5 | 0.750 (19.1) | 0.375 (9.5) |
| HSTT100-48-5 | 1.00 (25.4) | 0/500 (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 0.700 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%.

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 location 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 | HST2.0-48-5Y |
| 700 | HSTT200-48-5 | HSTTA150-Y | HST2.0-48-2Y | HSTT150-48-5 | HSTTA150-Y | HST2.0-48-5Y |
| 750 | HSTT200-48-5 | HSTTA150-Y | HST3.0-48-2Y | HSTT150-48-5 | HSTTA150-Y | HST2.0-48-5Y |
| 800 | HSTT200-48-5 | HSTTA150-Y | HST3.0-48-2Y | HSTT150-48-5 | HSTTA150-Y | HST2.0-48-5Y |
| 900 | HSTT200-48-5 | — | HST3.0-48-2Y | HSTT150-48-5 | HSTTA150-Y | HST2.0-48-5Y |
| 1000 | HSTT200-48-5 | — | HST3.0-48-2Y | HSTT150-48-5 | HSTTA150-Y | HST2.0-48-5Y |
| 1250 | HSTT200-48-5 | — | HST3.0-48-2Y | HSTT200-48-5 | HSTTA150-Y | HST2.0-48-5Y |
| 1500 | HSTT300-48-5 | — | HST3.0-48-2Y | HSTT200-48-5 | — | HST2.0-48-5Y |
| 1750 | HSTT300-48-5 | — | HST3.0-48-2Y | HSTT200-48-5 | — | HST2.0-48-5Y |
| 2000 | HSTT300-48-5 | — | HST3.0-48-2Y | HSTT200-48-5 | — | HST2.0-48-5Y |

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.

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