

## In This Section...

### **Shrink-Kon®**

|                                                   |           |
|---------------------------------------------------|-----------|
| Overview .....                                    | J-2-J-3   |
| Heavy-Wall Heat-Shrinkable Tubing .....           | J-4-J-9   |
| Medium-Wall Heat-Shrinkable Tubing .....          | J-10      |
| Thin-Wall Heat-Shrinkable Tubing .....            | J-11-J-14 |
| Splice Insulators & Insulating Covers .....       | J-15-J-20 |
| Installation Tools .....                          | J-21      |
| Installation Guidelines and Cross Reference ..... | J-22      |

**Shrink-Kon®**

# **Thomas & Betts**

**United States**  
Tel: 901.252.8000  
800.816.7809  
Fax: 901.252.1354

**Technical Services**  
Tel: 888.862.3289

[www.tnb.com](http://www.tnb.com)

# Shrink-Kon®

## Overview

Protect against moisture, corrosion and abrasion!

*T&B has you covered when it comes to insulation!*

- Easy to use
- Heat shrinkable
- Products for heavy, medium, and thin walls
- Covers available for H-type taps and splices



### Heavy-Wall Shrink-Kon® Heat-Shrinkable End Cap & Boots

#### *Redesigned for superior durability and performance!*

Seals and insulates cable ends at a 600V rating. Installs fast, while providing insulation resistance to moisture, corrosion, and abrasion. The extra thickness at the tip of the end cap prevents sharp ends of the cable from puncturing the seal.

Seals and insulates multiconductor cables and conduit with the same cost savings and superior properties of T&B's heat-shrinkable tubing. These boots replace time-consuming tapes, epoxies, encapsulations, and dips. The boots are internally coated with sealant.



### Heavy-Wall Shrink-Kon® Heat-Shrinkable Insulators

When it comes to moisture-proofing connections and terminations, T&B's heat-shrinkable tubing, boots, and end caps have proven themselves over years of service to the industry. Made of thermally stabilized cross-linked polyolefin, these heat-shrinkable insulators can be used over lead, steel, aluminum, copper, standard plastic, and elastomeric insulating materials.

T&B heat-shrinkable insulators are designed to be easy to use. They provide an appropriate level of insulation and abrasion protection.

Where applicable, T&B heat-shrink insulators are UL Listed. Also, all standard size insulators have an internally applied adhesive sealant.

#### **T&B Heat-Shrinkable Insulators Offer:**

- Heavy-duty protection
- A full range of sizes from #14 to 2500 MCM
- Field-proven reliability
- Internal sealant provides protection against moisture

#### **Featured Products Include:**

- High Shrink Ratio HSHR series with 6:1 shrink ratio designed for applications with extreme differences between cable, connector, and back shell sizes
- Flame Retardant HSFR series provides maximum flame retardancy



**Thomas & Betts**

[www.tnb.com](http://www.tnb.com)

**United States**

Tel: 901.252.8000

800.816.7809

Fax: 901.252.1354

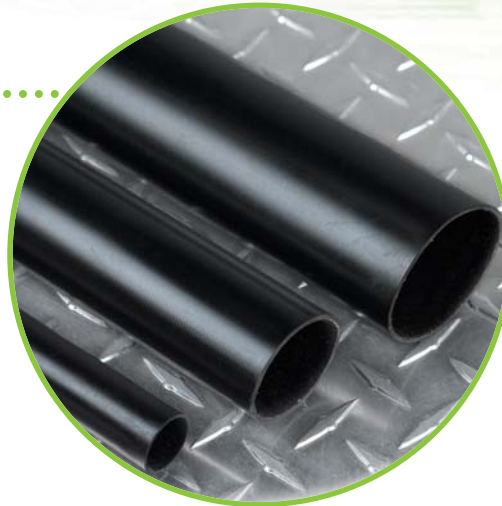
**Technical Services**

Tel: 888.862.3289

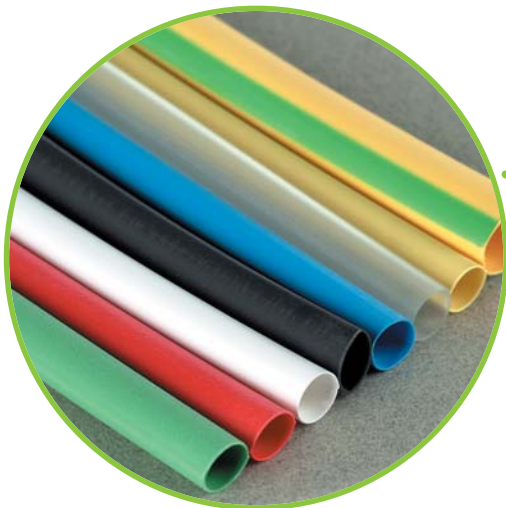
### Shrink-Kon® Medium Wall Tubing

More flexible than heavy-wall products, with excellent resistance to impact and abrasion.

- Seals and protects cable splices and terminations
- Thermoplastic adhesive liner guarantees complete environmental protection and insulation



Shrink-Kon®



### Shrink-Kon® Thin Wall Tubing

Manufactured from stabilized Polyolefin, these insulators are used to insulate bare Sta-Kon® and Color Keyed® connectors and splices. They also provide a degree of strain relief and may be used to harness wires. Available in cut pieces or reels.

#### **Featured Products Include:**

- Standard non-lined 2:1 thin wall tubing
- 3:1 adhesive lined thin-wall CPO-A series provides excellent flexibility with environmental sealing capability
- Extra clear heat shrink for use on power connections and data connections

### Covers

These new insulating covers provide hard-shell insulated protection for "H" type compression taps and splices, and, because there is no taping required, you get uniform quality and appearance each time. The exclusive locking design provides the range-taking capability. Only six H-tap insulating catalog numbers accommodate the range of 6 AWG — 1000 MCM in the main and 12 AWG—500 MCM in the branch.

- Hard-shell outer covers guard against impact... inner seal keeps out dust
- Installs quickly and easily without special tools... simply snaps together
- Eliminates time-consuming taping
- Provides high-quality, neat, uniform installations
- Range-taking design reduces inventory



# Shrink-Kon®

## Heavy-Wall Heat-Shrinkable Tubing

### HS Series

**3:1 Shrink Ratio**

Shrink-Kon®



- Made of thermally stabilized cross-linked polyolefin, enabling a recovered wall thickness greater than that of the cable jacket replaced
- Withstands severe mechanical requirements of U.R.D., submersible, and direct burial installations
- Tubing, featuring an internally applied sealant, offers protection against moisture, and may be used over lead, steel, aluminum, copper, standard plastic and elastomeric insulating materials
- Shrink temperature of 120° C
- High-impact, abrasion, corrosion and chemical resistance
- Rated for 600V, 90° C continuous use
- Thermoplastic adhesive liner provides complete environmental protection and insulation
- Meets: UL® 486D, CSA C22.2 No. 198.2, ANSI C119.1, Western Underground Guide Numbers 2.4, 2.5, ICEA and NEMA insulation thickness requirements
- Continuous operating temperature: -55° C to 110° C



### HS Series Specifications

| PROPERTY                                              | TEST METHOD       | TYPICAL PERFORMANCES                       | PROPERTY                                       | TEST METHOD   | TYPICAL PERFORMANCES                                  |
|-------------------------------------------------------|-------------------|--------------------------------------------|------------------------------------------------|---------------|-------------------------------------------------------|
| <b>Physical</b>                                       |                   |                                            | <b>Chemical</b>                                |               |                                                       |
| • Tensile Strength                                    | ASTM D412, ISO 37 | 2100 psi (14.5MPa)                         | • Fluid Resistance                             | MIL-DTL-23053 | Good to Excellent                                     |
| • Elongation                                          | ASTM D412, ISO 37 | 600%                                       | • Fungus Resistance                            | ASTM G21      | No Growth                                             |
| • Elongation after Heat Aging (168 hrs. at 150° C)    | ASTM D2671        | 500%                                       | • Copper Corrosion                             | ASTM D2671    | No Corrosion                                          |
| • Heat Shock (4 hrs. at 225° C)                       | ASTM D2671        | No cracking or flowing                     | • Water Absorption                             | ASTM D570     | 0.1%                                                  |
| • Longitudinal Change                                 | ASTM D2671        | +1%, -10%                                  | <b>Adhesive</b>                                |               |                                                       |
| • Low Temperature Flexibility (4 hrs. at -55° C)      | ASTM D2671        | No cracking                                | • Adhesive Lap Shear (1 in./min. at 23° C)     | ASTM D1002    | 125 psi (.875 MPa)                                    |
| • Specific Gravity                                    | ASTM D792         | 1.1                                        | • Adhesive Softening Point                     | ASTM E28      | 92° C ±5° C                                           |
| • Hardness (Shore D)                                  | ASTM D2240        | 50D                                        | • Adhesive Peel Strength (300mm/min. at 23° C) | ASTM D1000    |                                                       |
| <b>Electrical</b>                                     |                   |                                            | — to steel, aluminum, P.E.                     |               | 35 pli                                                |
| • Dielectric Strength                                 | ASTM D149         | 500 V/Mil (20kV/mm)                        | — PVC                                          |               | 20 pli                                                |
| • Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.) | UL 486D           | No Breakdown, 24kV – 1 min., 15kV – 4 hrs. | • Water Penetration                            | STM 706       | No penetration after 236 hrs. of continuous immersion |
| • Volume Resistivity                                  | ASTM D257         | 1016 ohm-cm                                |                                                |               |                                                       |

**Thomas & Betts**

[www.tnb.com](http://www.tnb.com)

**United States**  
Tel: 901.252.8000  
800.816.7809  
Fax: 901.252.1354

**Technical Services**  
Tel: 888.862.3289

## Heavy-Wall Heat-Shrinkable Tubing

### HS Series Heavy-Wall Heat-Shrinkable Tubing — Black

| CAT. NO.     | MIN.<br>EXPANDED<br>I.D. (IN.) | MAX.<br>RECOVERED<br>I.D. (IN.) | NOM.<br>RECOVERED<br>WALL<br>(IN.) | STD.<br>LENGTH<br>(IN.) | FITS ANY LISTED OR CERTIFIED<br>AL OR CU SPLICE WITH DIM<br>NO LARGER THAN |                 |                | STD.<br>PKG.<br>QTY. |
|--------------|--------------------------------|---------------------------------|------------------------------------|-------------------------|----------------------------------------------------------------------------|-----------------|----------------|----------------------|
|              |                                |                                 |                                    |                         | O.D.<br>(IN.)                                                              | LENGTH<br>(IN.) | CABLE<br>RANGE |                      |
| HS16-12      | .35                            | .12                             | .07                                | 3                       | .27                                                                        | 1.00            | #14 to #10 AWG | 25                   |
| HS16-12L     | .35                            | .12                             | .07                                | 6                       | .27                                                                        | 1.00            | #14 to #10 AWG | 25                   |
| HS16-12-4    | .35                            | .12                             | .07                                | 48                      | .27                                                                        | 1.00            | #14 to #10 AWG | 5                    |
| HS12-6       | .51                            | .16                             | .09                                | 3                       | .38                                                                        | 1.75            | #8 to #6 AWG   | 25                   |
| HS12-6L      | .51                            | .16                             | .09                                | 6                       | .38                                                                        | 1.75            | #8 to #6 AWG   | 25                   |
| HS12-6-4     | .51                            | .16                             | .09                                | 48                      | .38                                                                        | 1.75            | #8 to #6 AWG   | 5                    |
| HS6-1        | .75                            | .24                             | .09                                | 4                       | .63                                                                        | 2.50            | #6 to #2 AWG   | 25                   |
| HS6-1L       | .75                            | .24                             | .09                                | 8                       | .63                                                                        | 2.50            | #6 to #2 AWG   | 25                   |
| HS6-1-4      | .75                            | .24                             | .09                                | 48                      | .63                                                                        | 2.50            | #6 to #2 AWG   | 5                    |
| HS4-30       | 1.10                           | .35                             | .12                                | 5                       | .75                                                                        | 3.25            | #1 to 3/0 AWG  | 20                   |
| HS4-30L      | 1.10                           | .35                             | .12                                | 9                       | .75                                                                        | 3.25            | #1 to 3/0 AWG  | 10                   |
| HS4-30-4     | 1.10                           | .35                             | .12                                | 48                      | .75                                                                        | 3.25            | #1 to 3/0 AWG  | 5                    |
| HS40-400     | 1.50                           | .47                             | .16                                | 8                       | —                                                                          | —               | 2/0 to 350 MCM | 10                   |
| HS40-400L    | 1.50                           | .47                             | .16                                | 12                      | —                                                                          | —               | 2/0 to 350 MCM | 10                   |
| HS40-400-4   | 1.50                           | .47                             | .16                                | 48                      | —                                                                          | —               | 2/0 to 350 MCM | 5                    |
| HS500-1000   | 2.00                           | .63                             | .16                                | 9                       | —                                                                          | —               | 250-500 MCM    | 5                    |
| HS500-1000L  | 2.00                           | .63                             | .16                                | 15                      | —                                                                          | —               | 250-500 MCM    | 2                    |
| HS500-1000-4 | 2.00                           | .63                             | .16                                | 48                      | —                                                                          | —               | 250-500 MCM    | 2                    |
| HS12-30**    | 3.54                           | 1.18                            | .16                                | 12                      | —                                                                          | —               | 800-1250 MCM   | 2                    |
| HS30-30**    | 3.54                           | 1.18                            | .16                                | 30                      | —                                                                          | —               | 800-1250 MCM   | 2                    |
| HS30-4**     | 3.54                           | 1.18                            | .16                                | 48                      | —                                                                          | —               | 800-1250 MCM   | 1                    |
| HS12-40**    | 4.72                           | 1.57                            | .17                                | 12                      | —                                                                          | —               | 1500-2500 MCM  | 1                    |
| HS30-40**    | 4.72                           | 1.57                            | .17                                | 30                      | —                                                                          | —               | 1500-2500 MCM  | 1                    |
| HS40-4-TB**  | 4.72                           | 1.57                            | .17                                | 48                      | —                                                                          | —               | 1500-2500 MCM  | 1                    |

Order multiple is std. pkg.  
All lengths have factory-applied sealant.  
UL File No. E9809, UL 486D.  
\*\* Not UL Listed.



### HS Series Heavy-Wall Heat-Shrinkable Tubing — Red

| CAT. NO. | MIN.<br>EXPANDED<br>I.D. (IN.) | MAX.<br>RECOVERED<br>I.D. (IN.) | LENGTH<br>(IN.) | FOR 2-WAY<br>CONNECTOR<br>CABLE SIZES | STD.<br>PKG.<br>QTY. |
|----------|--------------------------------|---------------------------------|-----------------|---------------------------------------|----------------------|
| HS12-6LR | .51                            | .16                             | 6               | #8-6 AWG                              | 25                   |
| HS6-1LR  | .75                            | .24                             | 8               | #6-2 AWG                              | 25                   |
| HS4-30LR | 1.10                           | .35                             | 9               | #1-3/0 AWG                            | 10                   |

Order multiple is std. pkg.  
All lengths have factory-applied sealant.  
UL File No. E9809, UL 486D



### Heavy-Wall Tubing (25' rolls) — Black

| CAT. NO.      | MIN.<br>EXPANDED<br>I.D. (IN.) | MAX.<br>RECOVERED<br>I.D. (IN.) | NOMINAL<br>RECOVERED WALL<br>(IN.) | CODE CABLE<br>SIZE | STD. PKG.<br>(ROLLS) |
|---------------|--------------------------------|---------------------------------|------------------------------------|--------------------|----------------------|
| HS16-12-25    | .35                            | .12                             | .07                                | #14-#10 AWG        | 1                    |
| HS12-6-25     | .51                            | .16                             | .09                                | #8-#6 AWG          | 1                    |
| HS6-1-25      | .75                            | .24                             | .09                                | #6-#2 AWG          | 1                    |
| HS4-30-25     | 1.10                           | .35                             | .12                                | #1-3/0 AWG         | 1                    |
| HS40-400-25   | 1.50                           | .47                             | .16                                | 2/0-350 MCM        | 1                    |
| HS500-1000-25 | 2.00                           | .63                             | .16                                | 250-500 MCM        | 1                    |

Order by reel, not by feet. 25' reels **not** supplied with factory applied sealant.



# Shrink-Kon®

## Heavy-Wall Heat-Shrinkable Tubing

### HSHR Series — High Shrink Ratio

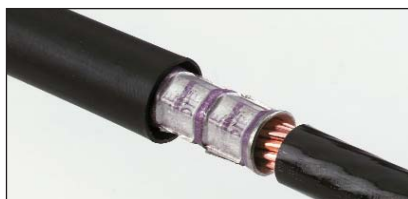
**6:1 Shrink Ratio**

Shrink-Kon®



- Accommodates a wide variety of connector shapes and configurations.
- Thermoplastic Adhesive Liner for complete environmental protection and insulation
- Continuous operating temperature: -55° C to 110° C
- Shrink temperature: 120° C
- Flame retardant: UL94 – V0

### HSHR Series Heavy-Wall Heat-Shrinkable Tubing



| CAT. NO.   | MIN.<br>EXPANDED<br>I.D. (IN.) | MAX.<br>RECOVERED<br>I.D. (IN.) | NOMINAL<br>RECOVERED<br>WALL (IN.) | CODE CABLE<br>SIZE | STANDARD<br>LENGTH (IN.) | STD.<br>PKG. QTY. |
|------------|--------------------------------|---------------------------------|------------------------------------|--------------------|--------------------------|-------------------|
| HSHR750-4  | .75                            | .13                             | .10                                | #22-#46 AWG        | 48                       | 25                |
| HSHR1300-4 | 1.30                           | .22                             | .12                                | #8-700 AWG         | 48                       | 25                |
| HSHR1750-4 | 1.75                           | .29                             | .13                                | #4-1000 AWG        | 48                       | 25                |
| HSHR2000-4 | 2.00                           | .33                             | .13                                | #2-1250 AWG        | 48                       | 25                |
| HSHR2750-4 | 2.75                           | .46                             | .14                                | 1/0-1500 MCM       | 48                       | 15                |
| HSHR3500-4 | 3.50                           | .58                             | .15                                | 3/0-1750 MCM       | 48                       | 10                |
| HSHR4700-4 | 4.70                           | .78                             | .15                                | 300-2000 MCM       | 48                       | 5                 |

Order multiple is std. pkg.  
Standard color: black.

### HSHR Series Specifications

| PROPERTY                                           | TEST METHOD                    | TYPICAL PERFORMANCES       |
|----------------------------------------------------|--------------------------------|----------------------------|
| <b>Physical</b>                                    |                                |                            |
| • Tensile Strength                                 | ASTM D412, ISO 37              | 2100 psi (14.5MPa)         |
| • Elongation                                       | ASTM D412, ISO 37              | 600%                       |
| • Elongation after Heat Aging (168 hrs. at 175° C) | ASTM D2671                     | 500%                       |
| • Heat Shock (4 hrs. at 225° C)                    | ASTM D2671                     | No cracking or flowing     |
| • Longitudinal Change                              | ASTM D2671                     | +1%, -10%                  |
| • Low Temperature Flexibility (4 hrs. at -55° C)   | ASTM D2671                     | No cracking                |
| • Specific Gravity                                 | ASTM D792                      | 1.10                       |
| • Hardness (Shore D)                               | ASTM D2240                     | 50D                        |
| <b>Electrical</b>                                  |                                |                            |
| • Dielectric Strength                              | ASTM D149, IEC 243             | 500 V/Mil (20kV/mm)        |
| • Dielectric Voltage Withstand                     | UL 486D (2500 V, 60Hz, 1 Min.) | No Breakdown 15kV — 4 hrs. |
| • Volume Resistivity                               | ASTM D257                      | 1016 ohm-cm                |

| PROPERTY                                       | TEST METHOD      | TYPICAL PERFORMANCES                                  |
|------------------------------------------------|------------------|-------------------------------------------------------|
| <b>Chemical</b>                                |                  |                                                       |
| • Fluid Resistance                             | MIL-DTL-23053/15 | Good to Excellent                                     |
| • Fungus Resistance                            | ASTM G21         | No Growth                                             |
| • Copper Corrosion                             | ASTM D2671       | No Corrosion                                          |
| • Water Absorption                             | ASTM D570        | 0.1%                                                  |
| <b>Adhesive</b>                                |                  |                                                       |
| • Adhesive Lap Shear (1 in./min. at 23° C)     | ASTM D1002       | 125 psi (.875 MPa)                                    |
| • Adhesive Softening Point                     | ASTM E28         | 92° C/-5° C                                           |
| • Adhesive Peel Strength (300mm/min. at 23° C) | ASTM D1000       | 35 pli<br>20 pli                                      |
| — to steel, aluminum, P.E.<br>— PVC            |                  |                                                       |
| • Adhesive Blocking (30° C)                    | ASTM D1146       | No Blocking                                           |
| • Water Penetration                            | STM 706          | No penetration after 236 hrs. of continuous immersion |

**Thomas & Betts**

[www.tnb.com](http://www.tnb.com)

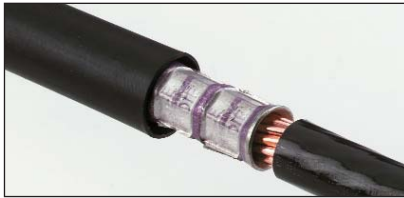
United States  
Tel: 901.252.8000  
800.816.7809  
Fax: 901.252.1354

Technical Services  
Tel: 888.862.3289

## Heavy-Wall Heat-Shrinkable Tubing

### HSFR Series — Flame-Retardant Heavy Wall

**3:1 Shrink Ratio**



- Insulates and protects electrical splices and terminations
- High-impact and abrasion resistance
- Thermoplastic adhesive liner
- Rated for 600V, 90° C continuous use. Continuous operating temperature: -55° C to 110° C
- Shrink temperature of 120° C
- Meets: UL 486D, CSA 22.2 No. 198.2, ANSI C119.1, Western Underground Guide Nos. 2.4, 2.5, MIL-DTL-23053/15, IEEE 383 Vertical Flame Test, ANSI C37.20.2, ICEA S-19-8 and NEMA insulation thickness requirements

### HSFR Series Heavy-Wall Heat-Shrinkable Tubing

| CAT. NO.       | MIN.<br>EXPANDED<br>I.D. (IN.) | MAX.<br>RECOVERED<br>I.D. (IN.) | NOMINAL<br>RECOVERED<br>WALL (IN.) | CODE CABLE<br>SIZE | STANDARD<br>LENGTH (IN.) | STD.<br>PKG. QTY. |
|----------------|--------------------------------|---------------------------------|------------------------------------|--------------------|--------------------------|-------------------|
| HSFR16-12-4    | .35                            | .12                             | .07                                | #14-#10 AWG        | 48                       | 25                |
| HSFR12-6-4     | .51                            | .16                             | .09                                | #8-#6 AWG          | 48                       | 25                |
| HSFR6-1-4      | .75                            | .24                             | .09                                | #6-#2 AWG          | 48                       | 25                |
| HSFR4-30-4     | 1.10                           | .35                             | .12                                | #1-3/0 AWG         | 48                       | 25                |
| HSFR40-400-4   | 1.50                           | .47                             | .16                                | 2/0-350 MCM        | 48                       | 25                |
| HSFR500-1000-4 | 2.00                           | .63                             | .16                                | 250-500 MCM        | 48                       | 25                |

Order multiple is std. pkg.  
Standard color: black.

### HSFR Series Specifications

| PROPERTY                                              | TEST METHOD        | TYPICAL PERFORMANCES                            |
|-------------------------------------------------------|--------------------|-------------------------------------------------|
| <b>Physical</b>                                       |                    |                                                 |
| • Tensile Strength                                    | ASTM D412, ISO 37  | 2100 psi (14.5MPa)                              |
| • Elongation                                          | ASTM D412, ISO 37  | 600%                                            |
| • Longitudinal Change                                 | ASTM D2671         | +1%, -10%                                       |
| • Specific Gravity                                    | ASTM D792          | 1.2                                             |
| • Elongation after Heat Aging (168 hrs. at 175°C)     | ASTM D2671, ISO 37 | 500%                                            |
| • Heat Shock (4 hrs. at 225°C)                        | ASTM D2671         | No cracking or flowing                          |
| • Low Temperature Flexibility (4 hrs. at -55°C)       | ASTM D2671         | No cracking or splitting                        |
| • Hardness (Shore D)                                  | ASTM D2240         | 50D                                             |
| • Oxygen Index                                        | ASTM D2863         | 27.00                                           |
| • Flammability                                        | ASTM D2671         | Flame Retardant                                 |
| <b>Electrical</b>                                     |                    |                                                 |
| • Dielectric Strength                                 | ASTM D149          | 500 V/Mil (20kV/mm)                             |
| • Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.) | UL 486D            | No Breakdown<br>24kV — 1 min.,<br>15kV — 4 hrs. |
| • Volume Resistivity                                  | ASTM D257          | 1016 ohm-cm                                     |

| PROPERTY                                                                              | TEST METHOD     | TYPICAL PERFORMANCES                                  |
|---------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------|
| <b>Chemical</b>                                                                       |                 |                                                       |
| • Fluid Resistance                                                                    | MIL-DTL-23053/5 | Good to Excellent                                     |
| • Copper Corrosion                                                                    | ASTM D2671      | No Corrosion                                          |
| • Fungus Resistance                                                                   | ASTM G21        | No Growth                                             |
| • Water Absorption                                                                    | ASTM D570       | 0.2%                                                  |
| <b>Adhesive</b>                                                                       |                 |                                                       |
| • Adhesive Lap Shear (1 in./min. at 23° C)                                            | ASTM D1002      | 125 psi (.875 MPa)                                    |
| • Adhesive Softening Point                                                            | ASTM E28        | 92° C ±5° C                                           |
| • Adhesive Peel Strength (300mm/min. at 23° C)<br>— to steel, aluminum, P.E.<br>— PVC | ASTM D1000      | 35 pli<br>20 pli                                      |
| • Adhesive Blocking (30° C)                                                           | ASTM D1146      | No Blocking                                           |
| • Adhesive Water Absorption                                                           | ASTM D570       | Less than 0.3%                                        |
| • Water Penetration                                                                   | STM 706         | No penetration after 286 hrs. of continuous immersion |

### HSC Series End Caps

Shrink-Kon®

- Provides effective method for sealing cable ends, pipe conduit, etc.
- Extra thickness at the tip of the end cap prevents sharp ends of the cable from puncturing the seal
- Flame retardant
- Rated from 600/1000V, 90° continuous use
- Shrink temperature of 120° C
- Resistant to common fluids and solvents
- Adhesive liner provides complete environmental protection and insulation
- Heat indicating lines. Continuous operating temperature: -55° C to 110° C

### HSC Series Heat-Shrinkable End Caps

| CAT. NO.    | MIN. EXPANDED I.D. (IN.) | MAX. RECOVERED I.D. (IN.) | RECOVERED WALL (IN.) | CODE CABLE SIZE | NOM. LENGTH (IN.) | STD. PKG. QTY. |
|-------------|--------------------------|---------------------------|----------------------|-----------------|-------------------|----------------|
| HSC8-4      | .51                      | .16                       | .09                  | #8-#6 AWG       | 2.50              | 100            |
| HSC2-20     | .75                      | .24                       | .09                  | #6-#2 AWG       | 2.50              | 100            |
| HSC30-250   | 1.10                     | .35                       | .12                  | #1-3/0 AWG      | 3.00              | 50             |
| HSC300-600  | 1.50                     | .47                       | .16                  | 2/0-350 MCM     | 3.25              | 50             |
| HSC700-1000 | 2.00                     | .63                       | .16                  | 250-500 MCM     | 3.50              | 50             |
| HSC750      | 2.70                     | .87                       | .16                  | 600-1,000 MCM   | 4.00              | 10             |
| HSC300*     | 3.50                     | 1.18                      | .16                  | 800-1,250 MCM   | 4.50              | 5              |
| HSC500*     | 4.70                     | 1.57                      | .17                  | 1,500-2,500 MCM | 5.50              | 5              |

Order multiple is std. pkg.  
\*Not UL Listed or CSA Certified.

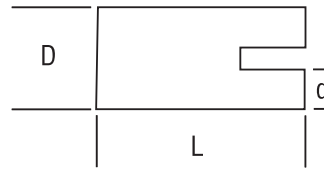
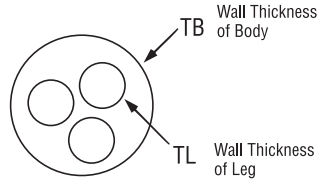


### HSC Series Specifications

| PROPERTY                                              | TEST METHOD       | TYPICAL PERFORMANCES   |
|-------------------------------------------------------|-------------------|------------------------|
| <b>Physical</b>                                       |                   |                        |
| • Tensile Strength                                    | ASTM D412, ISO 37 | 2100 psi (14.5MPa)     |
| • Elongation                                          | ASTM D412, ISO 37 | 550%                   |
| • Elongation after Heat Aging (168 hrs. at 150° C)    | ASTM D2671        | 500%                   |
| • Heat Shock (4 hrs. at 225° C)                       | ASTM D2671        | No cracking or flowing |
| • Longitudinal Change on Recovery                     | ASTM D2671        | +1%, -10%              |
| • Low Temperature Flexibility (4 hrs. at -55° C)      | ASTM D2671        | No cracking            |
| • Specific Gravity                                    | ASTM D792         | 1.10                   |
| • Hardness (Shore D)                                  | ASTM D2240        | 50D                    |
| <b>Electrical</b>                                     |                   |                        |
| • Dielectric Strength                                 | ASTM D149         | 500 V/Mil (20kV/mm)    |
| • Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.) | UL 486D           | No Breakdown           |
| • Volume Resistivity                                  | ASTM D257         | 1016 ohm-cm            |

| PROPERTY                                       | TEST METHOD       | TYPICAL PERFORMANCES                                  |
|------------------------------------------------|-------------------|-------------------------------------------------------|
| <b>Chemical</b>                                |                   |                                                       |
| • Fluid Resistance                             | MIL-DTL-23053     | Good to Excellent                                     |
| • Fungus Resistance                            | ASTM G21          | No Growth                                             |
| • Copper Corrosion                             | ASTM D2671        | No Corrosion                                          |
| • Water Absorption                             | ASTM D570         | 0.1%                                                  |
| <b>Seal Integrity</b>                          |                   |                                                       |
| • Adhesive Lap Shear (1 in./min. at 23° C)     | ASTM D1002        | 130 psi (.91 MPa)                                     |
| • Adhesive Softening Point                     | ASTM E28          | 92° C ±5° C                                           |
| • Adhesive Peel Strength (300mm/min. at 23° C) | ASTM D1000 (mod.) |                                                       |
| — to steel, aluminum, P.E.                     |                   | 35 pli                                                |
| — PVC                                          |                   | 20 pli                                                |
| • Adhesive Blocking (30° C)                    | ASTM D1146        | No Blocking                                           |
| • Water Penetration                            | STM 706           | No penetration after 236 hrs. of continuous immersion |
| • Room Temperature                             | 168 hrs./40 psi   | No leaks                                              |
| • Temp. Cycling (-40° C to 60° C)              | 50 cycles/15 psi  | No leaks                                              |
| • Burst Pressure                               |                   | 100 psi (0.70 MPa)                                    |

### HSB Series — Heat-Shrinkable Breakout Boots



Shrink-Kon®

- Boots for 2-, 3- and 4-way cable breakouts
- Thermoplastic adhesive liner provides complete environmental protection and insulation
- Meets ESI 09-11
- Strain relief and mechanical protection
- Continuous operating temperature: -55° C to 100° C
- Shrink temperature of 135° C

#### HSB Series Heat-Shrinkable Breakout Boots

| CAT. NO.     | NO. LEGS | D                                   |                                      | d                                   |                                      | L     | TB   | TL   | APPLICATION<br>LEGS 600V<br>CONDUCTOR<br>AWG/MCM | STD.<br>PKG. QTY. |
|--------------|----------|-------------------------------------|--------------------------------------|-------------------------------------|--------------------------------------|-------|------|------|--------------------------------------------------|-------------------|
|              |          | EXPANDED<br>DIA.<br>(MIN.)<br>(IN.) | RECOVERED<br>DIA.<br>(MIN.)<br>(IN.) | EXPANDED<br>DIA.<br>(MAX.)<br>(IN.) | RECOVERED<br>DIA.<br>(MAX.)<br>(IN.) |       |      |      |                                                  |                   |
| HSB200-75-2  | 2        | 1.97                                | 0.83                                 | 0.90                                | 0.30                                 | 4.69  | 0.13 | 0.13 | #3-300                                           | 10                |
| HSB120-50-3  | 3        | 1.50                                | 0.65                                 | 0.50                                | 0.16                                 | 4.47  | 0.11 | 0.11 | #8-3/0                                           | 10                |
| HSB170-82-3  | 3        | 2.20                                | 1.20                                 | 0.89                                | 0.35                                 | 7.09  | 0.12 | 0.12 | #1-600                                           | 10                |
| HSB240-112-3 | 3        | 2.83                                | 1.46                                 | 1.38                                | 0.69                                 | 7.01  | 0.16 | 0.12 | 300-1,000                                        | 10                |
| HSB125-50-4  | 4        | 1.38                                | 0.59                                 | 0.47                                | 0.12                                 | 3.74  | 0.10 | 0.08 | #12-2/0                                          | 10                |
| HSB175-82-4  | 4        | 2.36                                | 1.18                                 | 0.90                                | 0.25                                 | 7.95  | 0.16 | 0.13 | #4-600                                           | 10                |
| HSB265-120-4 | 4        | 3.10                                | 1.50                                 | 1.40                                | 0.49                                 | 9.45  | 0.13 | 0.13 | 3/0-1,000                                        | 10                |
| HSB350-138-3 | 3        | 3.54                                | 1.38                                 | 1.34                                | 0.55                                 | 7.87  | 0.12 | 0.08 | 4/0-1,000                                        | 5                 |
| HSB430-157-3 | 3        | 4.33                                | 1.57                                 | 1.38                                | 0.69                                 | 7.01  | 0.16 | 0.12 | 300-1,000                                        | 5                 |
| HSB490-200-3 | 3        | 4.92                                | 2.00                                 | 2.32                                | 1.00                                 | 11.14 | 0.15 | 0.15 | 450-1,000                                        | 5                 |
| HSB520-135-4 | 4        | 5.25                                | 1.35                                 | 3.00                                | 0.55                                 | 10.02 | 0.13 | 0.16 | 4/0-1,000                                        | 5                 |

Order multiple is std. pkg.

#### Heat-Shrinkable Breakout Boots Specifications

| PROPERTY                                           | TEST METHOD        | TYPICAL PERFORMANCES           | PROPERTY            | TEST METHOD | TYPICAL PERFORMANCES |
|----------------------------------------------------|--------------------|--------------------------------|---------------------|-------------|----------------------|
| <b>Physical</b>                                    |                    |                                | <b>Electrical</b>   |             |                      |
| • Tensile Strength                                 | ASTM D412, IEC 540 | 2120 psi (14.6 MPa)            | Dielectric Strength | ASTM D2671  | 280 V/Mil (11kV/mm)  |
| • Ultimate Elongation                              | ASTM D412, IEC 540 | 600%                           | <b>Chemical</b>     | ASTM D570   | 0.03%                |
| • Elongation after Heat Aging (168 hrs. at 175° C) | ASTM D412, IEC 540 | 520%                           |                     |             |                      |
| • Heat Shock (4 hrs. at 225° C)                    | ASTM D2671         | No dripping, cracking, flowing |                     |             |                      |
| • Low Temperature Flexibility (-55° C)             | ASTM D2671         | No cracking                    |                     |             |                      |
| • Flammability                                     | ASTM D630          | Self ext. within 1.97"         |                     |             |                      |

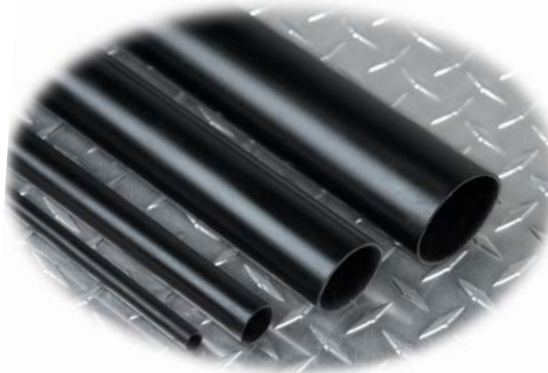
# Shrink-Kon®

## Medium-Wall Heat-Shrinkable Tubing

### HSMW Series — Medium-Wall Tubing

**3:1 Shrink Ratio**

Shrink-Kon®



- More flexible than heavy-wall products
- Seals and protects cable splices and terminations
- High resistance to impact and abrasion
- Shrink temperature of 120° C
- Continuous operating temperature: -55° C to 110° C
- Thermoplastic adhesive liner guarantees complete environmental protection and insulation

#### HSMW Series Medium-Wall Heat-Shrinkable Tubing

| CAT. NO.    | MIN.<br>EXPANDED<br>I.D. (IN.) | MAX.<br>RECOVERED<br>I.D. (IN.) | NOMINAL<br>RECOVERED<br>WALL (IN.) | CODE CABLE<br>SIZE | STANDARD<br>LENGTH<br>(IN.) | STD.<br>PKG. QTY. |
|-------------|--------------------------------|---------------------------------|------------------------------------|--------------------|-----------------------------|-------------------|
| HSMW400-48  | .40                            | .15                             | .08                                | #4-#14 AWG         | 48                          | 25                |
| HSMW750-48  | .75                            | .22                             | .08                                | 4/0-#8 AWG         | 48                          | 25                |
| HSMW1100-48 | 1.10                           | .40                             | .08                                | 400-#1 AWG         | 48                          | 25                |
| HSMW1300-48 | 1.30                           | .40                             | .08                                | 600-#1 AWG         | 48                          | 25                |
| HSMW1500-48 | 1.50                           | .50                             | .08                                | 750-3/0 MCM        | 48                          | 25                |
| HSMW1700-48 | 1.70                           | .50                             | .08                                | 1000-2/0 MCM       | 48                          | 25                |
| HSMW2050-48 | 2.05                           | .75                             | .08                                | 250-600 MCM        | 48                          | 25                |
| HSMW2750-48 | 2.75                           | 1.00                            | .08                                | 500-1000 MCM       | 48                          | 15                |
| HSMW3500-48 | 3.50                           | 1.18                            | .10                                | 750-1250 MCM       | 48                          | 10                |
| HSMW4700-48 | 4.70                           | 1.57                            | .11                                | 1500-2500 MCM      | 48                          | 5                 |
| HSMW6700-48 | 6.70                           | 2.30                            | .11                                | —                  | 48                          | 5                 |
| HSMW9000-48 | 9.00                           | 3.00                            | .12                                | —                  | 48                          | 5                 |

Order multiple is std. pkg.



#### HSMW Series Specifications

| PROPERTY                                             | TEST METHOD          | TYPICAL PERFORMANCES    |
|------------------------------------------------------|----------------------|-------------------------|
| <b>Physical</b>                                      |                      |                         |
| • Tensile Strength                                   | ASTM D412, ISO 37    | 2100 psi (14.5MPa)      |
| • Elongation                                         | ASTM D412, ISO 37    | 550%                    |
| • Longitudinal Change                                | ASTM D2671           | +1%, -10%               |
| • Specific Gravity                                   | ASTM D792, ISO/R1183 | 1.1                     |
| • Elongation after Heat Aging (168 hrs. at 150° C)   | ASTM D2671, ISO 37   | 500%                    |
| • Heat Shock (4 hrs. at 225° C)                      | ASTM D2671           | No Cracking or Flowing  |
| • Low Temperature Flexibility (4 hrs. at -55° C)     | ASTM D2671           | No Cracking             |
| • Hardness (Shore D)                                 | ASTM D2240           | 50D                     |
| <b>Electrical</b>                                    |                      |                         |
| • Dielectric Strength                                | ASTM D149, IEC 243   | 500 V/Mil (20kV/mm)     |
| • Dielectric Voltage Withstand (2500V, 60Hz, 1 Min.) | UL 486D              | No Breakdown            |
| • Volume Resistivity                                 | ASTM D257            | 10 <sup>16</sup> ohm-cm |

| PROPERTY                                       | TEST METHOD                       | TYPICAL PERFORMANCES                                  |
|------------------------------------------------|-----------------------------------|-------------------------------------------------------|
| <b>Chemical</b>                                |                                   |                                                       |
| • Fluid Resistance                             | MIL-DTL-23053/5, ISO 1817, ISO 37 | Good to Excellent                                     |
| • Copper Corrosion                             | ASTM D2671                        | No Corrosion                                          |
| • Fungus Resistance                            | ASTM G21                          | No Growth                                             |
| • Water Absorption                             | ASTM D570                         | 0.1%                                                  |
| <b>Adhesive</b>                                |                                   |                                                       |
| • Adhesive Lap Shear (1 in./min. at 23° C)     | ASTM D1002 (mod)                  | 125 psi (.875 MPa)                                    |
| • Adhesive Softening Point                     | ASTM E28                          | 92° C/-5° C                                           |
| • Adhesive Peel Strength (300mm/min. at 23° C) | ASTM D1000                        |                                                       |
| — to steel, aluminum, P.E.                     |                                   | 35 pli                                                |
| — PVC                                          |                                   | 20 pli                                                |
| • Adhesive Blocking (30° C)                    | ASTM D1146                        | No Blocking                                           |
| • Water Penetration                            | STM 706                           | No penetration after 286 hrs. of continuous immersion |

**Thomas & Betts**[www.tnb.com](http://www.tnb.com)

United States  
Tel: 901.252.8000  
800.816.7809  
Fax: 901.252.1354

Technical Services  
Tel: 888.862.3289

## Thin Wall Heat-Shrinkable Tubing

**2:1 Shrink Ratio**

### CPO Series — Thin-Wall Tubing, Non-Lined

- Flame-retardant, cross-linked polyolefin
- Continuous operating temperature: -55° C to 135° C
- Shrink temperature of 120° C
- Meets UL 224, 125° C; CSA C22.2 No. 198.1, 125° C; MIL-DTL-23053/5 Class 1&2; AMS 3636 & 3637; DEF STAN 59-97, Issue 3, Type 2a



Shrink-Kon®

### CPO Series Thin-Wall Heat-Shrinkable Tubing

| CAT. NO.*  | MINIMUM<br>EXPANDED I.D.<br>(IN.) | MAXIMUM<br>REDUCED I.D.<br>(IN.) | NOM. RECOVERED<br>WALL THICKNESS<br>(IN.) | CODE CABLE<br>SIZE |
|------------|-----------------------------------|----------------------------------|-------------------------------------------|--------------------|
| CP063-_-   | .06                               | .03                              | .02                                       | —                  |
| CP093-_-   | .09                               | .05                              | .02                                       | —                  |
| CP0125-_-  | .13                               | .06                              | .02                                       | #24 – #30 AWG      |
| CP0187-_-  | .18                               | .09                              | .02                                       | #14 – #22 AWG      |
| CP0250-_-  | .25                               | .13                              | .03                                       | #10 – #16 AWG      |
| CP0375-_-  | .38                               | .19                              | .03                                       | #6 – #12 AWG       |
| CP0500-_-  | .50                               | .25                              | .03                                       | #1 – #6 AWG        |
| CP0750-_-  | .75                               | .38                              | .03                                       | 4/0 – #2 AWG       |
| CP01000-_- | 1.00                              | .50                              | .04                                       | 350 – 2/0 MCM      |

\*See catalog construction to complete.

UL Recognized File Number E137759 and CSA Certified. (NOTE: Clear material not UL Recognized).

When ordering standard package, order by package not feet.

Larger diameters available upon special request; consult Customer Service.

Order multiple for 4' sticks is 25 sticks.

Order multiple for reels is 1 reel.

### CATALOG NUMBER CONSTRUCTION

| SERIES                      | COLOR     | LENGTH<br>FT.              | FINAL<br>ORDER NO. |
|-----------------------------|-----------|----------------------------|--------------------|
| CP063                       | + 0 + C = |                            | CP063-0-C          |
| <b>Available Colors</b>     |           | <b>Available Packaging</b> |                    |
| 0 = Black                   |           | A = 4'                     |                    |
| C = Clear                   |           | 25 = 25' reel              |                    |
| 2 = Red                     |           | C = 100' reel              |                    |
| 4 = Yellow                  |           | B = Bulk reel              |                    |
| 5 = Green                   |           | (See p. J-12 for lengths)  |                    |
| 6 = Blue                    |           |                            |                    |
| 9 = White                   |           |                            |                    |
| S = Green & Yellow Striped* |           |                            |                    |

\*Contact customer service for bulk reel quantity.

### Thin-Wall Heat-Shrinkable Tubing Kit



| CAT. NO. | DESCRIPTION                                                                                                                                                                                | STD. PKG. |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| HS-KIT   | Assortment of six different sizes (from 3/16" to 1") of black thin-wall 1 heat-shrinkable tubing pre-cut to 6" lengths. Exceptional value; also includes handy plastic storage case.       | 1         |
| CHS-KIT  | Assortment of six different sizes (from 3/16" to 1") of multi-colored thin-wall heat-shrinkable tubing pre-cut to 6" lengths. Exceptional value; also includes handy plastic storage case. | 1         |

Order multiple is std. pkg.

### Thin-Wall Heat-Shrinkable Tubing, 6" lengths

| CAT. NO.    | MINIMUM<br>EXPANDED I.D.<br>(IN.) | MAXIMUM<br>REDUCED I.D.<br>(IN.) | NOMINAL RECOVERED<br>WALL THICKNESS<br>(IN.) | STD.<br>PKG. QTY. |
|-------------|-----------------------------------|----------------------------------|----------------------------------------------|-------------------|
| CP063-0-6   | .06                               | .03                              | .02                                          | 20                |
| CP093-0-6   | .09                               | .05                              | .02                                          | 20                |
| CP0125-0-6  | .13                               | .06                              | .02                                          | 20                |
| CP0187-0-6  | .19                               | .09                              | .02                                          | 20                |
| CP0250-0-6  | .25                               | .13                              | .03                                          | 20                |
| CP0375-0-6  | .38                               | .19                              | .03                                          | 20                |
| CP0500-0-6  | .50/                              | .25                              | .03                                          | 10                |
| CP0750-0-6  | .75/                              | .38                              | .03                                          | 10                |
| CP01000-0-6 | 1.00                              | .50                              | .04                                          | 5                 |

Order multiple is std. pkg.

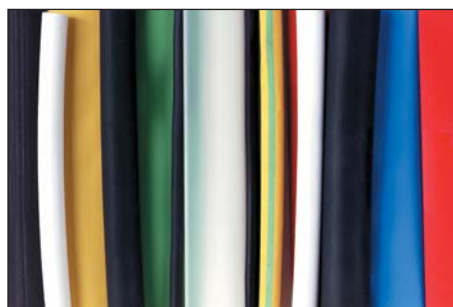
Catalog numbers listed are Black color, other colors available upon request.

Contact customer service.

Custom order lengths for those special jobs!

**2:1 Shrink Ratio**

Shrink-Kon®



### Custom-Cut Length of Bulk Packaging — Thin-Wall Tubing

To best meet your requirements for thin-wall heat-shrinkable tubing, Thomas & Betts welcomes the opportunity to cut bulk reels of tubing. Minimum order requirement is one standard bulk reel, and multiples thereof. See table for bulk reel length by size. Tubing cannot be cut smaller than 1/2".

When ordering custom-cut lengths of tubing, order by piece, not by length. To determine the minimum number of pieces to order, simply figure how many pieces of a specific length of tubing is required to make use of a complete bulk reel. See examples to convert bulk reels to cut pieces.

| SERIES         | BULK REEL LENGTH (FT.) | SERIES        | BULK REEL LENGTH (FT.) |
|----------------|------------------------|---------------|------------------------|
| CP063 = 1/16"  | 1,000                  | CP0375 = 3/8" | 500                    |
| CP093 = 1/8"   | 1,000                  | CP0500 = 1/2" | 400                    |
| CP0125 = 1/4"  | 1,000                  | CP0750 = 3/4" | 300                    |
| CP0187 = 3/16" | 1,000                  | CP01000 = 1"  | 300                    |
| CP0250 = 1/4"  | 1,000                  |               |                        |

Minimum order quantity for cut pieces.

#### Example 1

If a bulk length of tubing is 1,000' and the desired length of each individual piece is 6", the minimum order requirement is 2,000 pieces.

Given (length of reel) .....1,000'  
 Convert to inches by multiplying by 12 .....12 x 1,000  
 Length of reel in inches .....= 12,000  
 Divide by desired length .....12,000 ÷ 6  
 Total number of 6" pieces  
 in a 1,000' reel (Minimum Order) .....= 2,000

#### Example 2

If a bulk reel of tubing is 400' and the desired length of each individual piece is 2", the minimum order requirement is 2,400 pieces.

Given (length of reel) .....400'  
 Convert to inches by multiplying by 12 .....12 x 400  
 Length of reel in inches .....= 4,800  
 Divide by desired length .....4,800 ÷ 2  
 Total number of 2" pieces  
 in a 400' reel (Minimum Order) .....= 2,400

Contact tech services for pricing and availability on cut pieces.

| THINWALL SERIES | MINIMUM EXPANDED I.D. (IN.)                                                                                                 | CUT PIECE CATALOG NO. COLOR                                                                                          | CONSTRUCTION LENGTH (IN.)                       |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| CP0 =           | 63 = .063<br>93 = .093<br>125 = .125<br>187 = .187<br>250 = .250<br>375 = .375<br>500 = .500<br>750 = .750<br>1,000 = 1.000 | 0 = Black<br>C = Clear<br>2 = Red<br>4 = Yellow<br>5 = Green<br>6 = Blue<br>9 = White<br>S = Green & Yellow Striped* | XXXX — 4 digits specify length of cut in inches |

Example: CP0 + 125 + 2 + 1.500 = CP0125-2-1.500

CP0 Thinwall Shrink, size 125 (.125"), red color, 1.5" long

\*Contact customer service for bulk reel quantity.

### Thin-Wall Tubing Specifications

| PROPERTY                                           | TEST METHOD                       | TYPICAL PERFORMANCES           |
|----------------------------------------------------|-----------------------------------|--------------------------------|
| <b>Physical</b>                                    |                                   |                                |
| • Tensile Strength                                 | ASTM D2671, ISO 37                | 2,200 psi (15.0 MPa)           |
| • Elongation                                       | ASTM D2671, ISO 37                | 400%                           |
| • Longitudinal Change                              | ASTM D2671                        | +1%, -10%                      |
| • 2% Secan Modulus                                 | ASTM D2671                        | 16,000 psi (110 MPa)           |
| • Specific Gravity                                 | ASTM D792, ISO/R1183              | 1.3" (colors) 0.95" (clear)    |
| • Restricted Shrinkage                             | ASTM D2671                        | No Cracking                    |
| • Elongation after Heat Aging (168 hrs. at 175° C) | ASTM D2671                        | 350%                           |
| • Heat Shock (4 hrs. at 250° C)                    | ASTM D2671                        | No Cracking or Flowing         |
| • Low Temperature Flexibility (4 hrs. at -55° C)   | ASTM D2671                        | No Cracking or Splitting       |
| • Flammability                                     | ASTM D2671                        | Flame Retardant (except Clear) |
| <b>Electrical</b>                                  |                                   |                                |
| • Dielectric Strength                              | ASTM D2671, IEC 243               | 600 V/Mil (24kV/mm)            |
| • Volume Resistivity                               | ASTM D2671                        | 1016 OHM-CM                    |
| <b>Chemical</b>                                    |                                   |                                |
| • Fluid Resistance                                 | MIL-DTL-23053/5, ISO 1817, ISO 37 | Good to Excellent              |
| • Copper Corrosion                                 | ASTM D2671                        | No Corrosion                   |
| • Water Absorption                                 | ASTM D570                         | 0.2%                           |
| • Fungus Resistance                                | ASTM G21                          | No Growth                      |

### CPO-A Series — Thin-Wall, Adhesive Lined

**3:1 Shrink Ratio**



- Adhesive lined for moisture-proof environmental seal
- High 3:1 shrink ratio for covering irregularly shaped objects
- Continuous operating temperature: -55° C to 110° C
- Shrink temperature 120° C

#### CPO-A Series Thin Wall Heat Shrinkable Tubing

| CAT. NO.     | MIN.<br>EXPANDED<br>I.D. (IN.) | MAX.<br>RECOVERED<br>I.D. (IN.) | NOMINAL<br>RECOVERED<br>WALL (IN.) | CODE CABLE<br>SIZE | STANDARD<br>LENGTH (IN.) | STD.PKG.<br>QTY. |
|--------------|--------------------------------|---------------------------------|------------------------------------|--------------------|--------------------------|------------------|
| CPO-A-125-48 | .13                            | .02                             | .04                                | #24-#30 AWG        | 48                       | 25               |
| CPO-A-187-48 | .18                            | .06                             | .05                                | #14-#22 AWG        | 48                       | 25               |
| CPO-A-250-48 | .25                            | .08                             | .05                                | #10-#22 AWG        | 48                       | 25               |
| CPO-A-375-48 | .38                            | .14                             | .05                                | #6-#16 AWG         | 48                       | 25               |
| CPO-A-500-48 | .50                            | .19                             | .07                                | #2-#12 AWG         | 48                       | 25               |
| CPO-A-750-48 | .75                            | .31                             | .07                                | 3/0-#4 AWG         | 48                       | 25               |

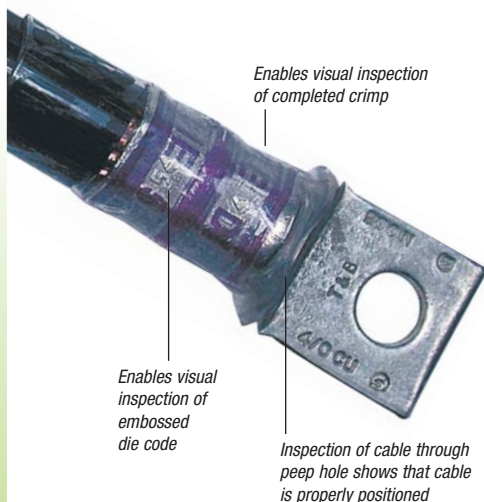
NOTE: Non-standard colors, sizes, and lengths available subject to factory quotation.  
Standard color: Black

#### CPO-A Series Specifications

| PROPERTY                                            | TEST METHOD          | TYPICAL PERFORMANCES       | PROPERTY              | TEST METHOD                          | TYPICAL PERFORMANCES |
|-----------------------------------------------------|----------------------|----------------------------|-----------------------|--------------------------------------|----------------------|
| <b>Physical</b>                                     |                      |                            | <b>Electrical</b>     |                                      |                      |
| • Tensile Strength                                  | ASTM D2671, ISO 37   | 2200 psi (15.0 MPa)        | • Dielectric Strength | ASTM D2671, IEC 243                  | 600 V/Mil (24kV/mm)  |
| • Elongation                                        | ASTM D2671, ISO 37   | 400%                       | • Volume Resistivity  | ASTM D2671                           | 1016 ohm-cm          |
| • Heat Shock (4 hrs. at 250° C)                     | ASTM D2671           | No Cracking or Flowing     | <b>Chemical</b>       |                                      |                      |
| • Longitudinal Change                               | ASTM D2671           | +/-5%                      | • Fluid Resistance    | MIL-DTL-23053/4,<br>ISO 1817, ISO 37 | Good to Excellent    |
| • Low Temperature Flexibility<br>(4 hrs. at -55° C) | ASTM D2671           | No Cracking                | • Fungus Resistance   | ASTM G21                             | No Growth            |
| • Specific Gravity                                  | ASTM D792, ISO R1183 | 1.1                        | • Copper Corrosion    | ASTM D2671                           | No Corrosion         |
| • 2% Secant Modulus                                 | ASTM 2671            | 1600 psi (110 MPa)         | • Water Absorption    | ASTM D570                            | 0.2%                 |
| • Heat-Resistant Properties<br>(168 hrs. at 175° C) | MIL-DTL-23053/4      | 240%                       |                       |                                      |                      |
| • Flammability                                      | ASTM D2671           | Moderately Flame Retardant |                       |                                      |                      |

### CHS Series — Clear Thin-Wall PVC Heat Shrink

Shrink-Kon®



- Clear shrink enables user to inspect die and crimp details after installation
- Flexible PVC tubing is suitable for industrial and electronic applications
- UL standard UL224, VW-1 rated
- CSA standard C22.2 no. 198.1 oft
- Flame retardant
- Low shrink temperature of 110° C
- Dielectric strength — 600V/MIL

**2:1 Shrink Ratio**

#### CHS Series Thin-Wall Heat-Shrinkable Tubing

| CAT. NO. | MIN. EXPANDED I.D. (IN.) | MAX. RECOVERED I.D. (IN.) | NOMINAL RECOVERED WALL (IN.) | CODE CABLE SIZE | STANDARD LENGTH (FT.) | STD. PKG. QTY. |
|----------|--------------------------|---------------------------|------------------------------|-----------------|-----------------------|----------------|
| CHS18    | .13                      | .06                       | .02                          | #22-#18 AWG     | 50                    | 1              |
| CHS18B   | .13                      | .06                       | .02                          | #22-#18 AWG     | 250                   | 1              |
| CHS14    | .25                      | .13                       | .03                          | #16-#10 AWG     | 50                    | 1              |
| CHS14B   | .25                      | .13                       | .03                          | #16-#10 AWG     | 250                   | 1              |
| CHS38    | .38                      | .19                       | .03                          | #8-#6 AWG       | 50                    | 1              |
| CHS38B   | .38                      | .19                       | .03                          | #8-#6 AWG       | 250                   | 1              |
| CHS12    | .50                      | .25                       | .03                          | #4-#2 AWG       | 50                    | 1              |
| CHS12B   | .50                      | .25                       | .03                          | #4-#2 AWG       | 250                   | 1              |
| CHS34    | .75                      | .38                       | .04                          | #1-3/0 MCM      | 50                    | 1              |
| CHS34B   | .75                      | .38                       | .04                          | #1-3/0 MCM      | 250                   | 1              |
| CHS100   | 1.00                     | .50                       | .04                          | 4/0-300 MCM     | 25                    | 1              |
| CHS100B  | 1.00                     | .50                       | .04                          | 4/0-300 MCM     | 100                   | 1              |
| CHS112   | 1.50                     | .75                       | .04                          | 350-700 MCM     | 25                    | 1              |
| CHS112B  | 1.50                     | .75                       | .04                          | 350-700 MCM     | 100                   | 1              |
| CHS200   | 2.00                     | 1.00                      | .05                          | 750-1,000 MCM   | 25                    | 1              |
| CHS200B  | 2.00                     | 1.00                      | .05                          | 750-1,000 MCM   | 100                   | 1              |

Standard package is in reels.  
Order by reel; not by feet.



#### CHS Series Specifications

| PROPERTY                                           | TEST METHOD          | TYPICAL PERFORMANCES     |
|----------------------------------------------------|----------------------|--------------------------|
| <b>Physical</b>                                    |                      |                          |
| • Tensile Strength                                 | ASTM D2671, ISO 37   | 3300 psi (23.0 MPa)      |
| • Elongation                                       | ASTM D2671, ISO 37   | 300%                     |
| • Longitudinal Change                              | ASTM D2671           | +/-10%                   |
| • 2% Secant Modulus                                | ASTM D2671           | 16,000 psi (110 MPa)     |
| • Specific Gravity                                 | ASTM D792, ISO R1183 | 1.31                     |
| • Elongation after Heat Aging (168 hrs. at 136° C) | ASTM D2671, ISO 37   | 250%                     |
| • Heat Shock (4 hrs. at 250° C)                    | ASTM D2671           | No Cracking or Flowing   |
| • Low-Temperature Flexibility (1 hr. at 10° C)     | ASTM D2671           | No Cracking or Splitting |
| • Flammability                                     | ASTM D2671           | Self Extinguishing       |

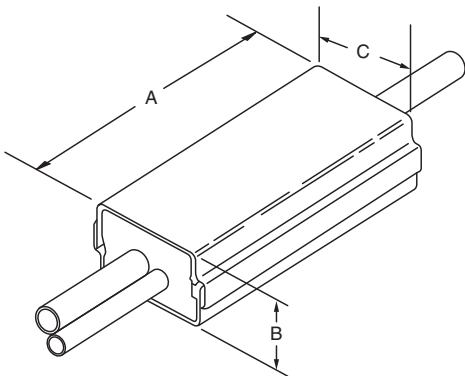
| PROPERTY              | TEST METHOD                     | TYPICAL PERFORMANCES |
|-----------------------|---------------------------------|----------------------|
| <b>Electrical</b>     |                                 |                      |
| • Dielectric Strength | ASTM D2671, IEC 243             | 600V/Mil (24kV/mm)   |
| • Volume Resistivity  | ASTM D2671                      | 1016 ohm-cm          |
| <b>Chemical</b>       |                                 |                      |
| • Fluid Resistance    | MIL-DTL-23053, ISO 1817, ISO 37 | Good to Excellent    |
| • Copper Corrosion    | ASTM D2671                      | No Corrosion         |
| • Water Absorption    | ASTM D570                       | 0.3%                 |
| • Fungus Resistance   | ASTM G21                        | No Growth            |

## Splice Insulators & Insulating Covers



### H-Tap Insulating Covers (Hard Covers)

- Interlocking insulating covers for H-type compression taps
- Easy installation: Place the H-Tap in the cover and snap the cover closed
- Consult factory for flame-retardant version
- Can also be used on C-Taps



| CAT. NO. | NOMINAL DIMENSIONS IN./MM. |               |           | STD. PKG. QTY. |
|----------|----------------------------|---------------|-----------|----------------|
|          | A (LENGTH)                 | B (THICKNESS) | C (WIDTH) |                |
| HTC2S    | 2                          | 1.13          | 1.44      | 15             |
| HTC2     | 3.5                        | 1.13          | 1.44      | 15             |
| HTC40    | 4.25                       | 1.56          | 2         | 2              |
| HTC40L2  | 5.75                       | 1.56          | 2         | 2              |
| HTC500   | 6                          | 1.75          | 2.75      | 8              |
| HTC1000  | 7                          | 2.38          | 3.88      | 2              |
| HTC1000L | 10                         | 2.38          | 3.88      | 3              |

Order multiple is std. pkg.

### Specifications

- HTC2 and HTC2S use insulation wrap instead of end cushions for inner seal.
- Connector Cat. Nos. 54755 through 54790 and 63148 through 63180 require hydraulic crimping tools. Refer to instruction sheets.
- Outer Hard Shell Covers: High-impact black thermoplastic (Noryl) Flammability Class, UL 94V-1
- Inner seal: Black neoprene sponge soft closed cell, oxygen index 28% UL 94 HBF
- Temperature Rating: 90° C Maximum
- Voltage Rating: 600V Maximum
- Uses insulation wrap instead of end cushions for inner seal

**NOTE:** Insulation covers are not reusable

### For H-Tap Applications

| COVER CAT. NO. | AL/CU H-TAP NO. | CU H-TAP               |
|----------------|-----------------|------------------------|
| HTC2           | 63105           | —                      |
| HTC2S          | —               | CHT814-10              |
| HTC40          | 63110           | CHT214-9               |
|                | 63118           | CHT250214-8            |
|                | 63125           | CHT2514-7              |
|                | 63140           | CHT2502-6              |
| HTC500         | 63148           | CHT50010-5/CHT50040-4  |
|                | 63160           | CHT75010-3/CHT750350-2 |
| HTC1000L       | 63170           | —                      |
| HTC1000        | 63180/63169     | CHT750350-1F           |

### For C-Tap Applications

| COVER CAT. NO. | C-TAP NO. | COLOR CODE |
|----------------|-----------|------------|
| HTC40          | 54720     | Brown      |
|                | 54725     | Green      |
|                | 54730     | Pink       |
|                | 54755     | Blue       |
|                | 54760     | Brown      |
| HTC40L2        | 54735     | Black      |
|                | 54740     | Orange     |
|                | 54745     | Purple     |
|                | 54750     | Yellow     |
|                | 54765     | Pink       |
| HTC500         | 54770     | Black      |
|                | 54775     | Yellow     |
|                | 54780     | White      |
|                | 54785     | —          |
|                | 54790     | —          |
| HTC1000        | 54790     | —          |



### H-Tap Insulating Covers (Soft Cover)

- Eliminates taping
- Provided with three positive locking latches and overlapping fringe for maximum cable insulation

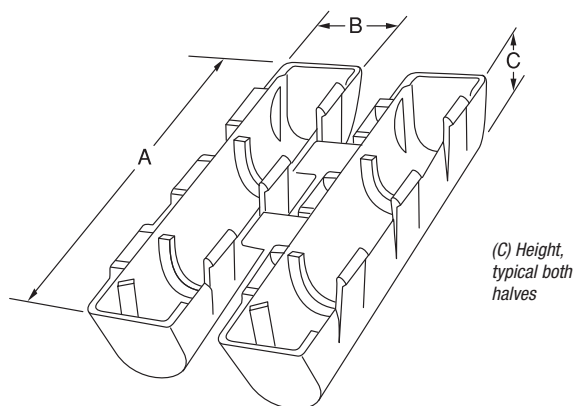
| CAT. NO.  | WIRE RANGE |          | INSTALLS "H" TAP<br>CAT. NO. | STD.<br>PKG. QTY. |
|-----------|------------|----------|------------------------------|-------------------|
|           | MIN.       | MAX.     |                              |                   |
| HT20C     | 6          | 2/0      | 63110 & 63125                | 50                |
| HT40C     | 6          | 4/0      | 63140 & 63148                | 25                |
| HT600C    | 2          | 500 MCM  | 63160 & 63169                | 10                |
| HT1000C   | 1/0        | 750 MCM  | 63180                        | 5                 |
| HT1000C-L | 1/0        | 1000 MCM | 63170                        | 5                 |

Order multiple is std. pkg.



#### Specifications

- Rating: 90° C, 600V. Made of flame-retardant, high-impact polypropylene.
- Material: Polypropylene
- Color: Black
- Voltage Rating: 600V max.
- Temperature: 90° C



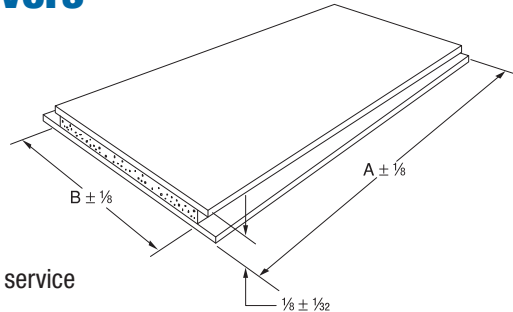
(C) Height,  
typical both  
halves

### H-Tap Splice Insulators and Insulating Covers

| CAT. NO.  | WIRE RANGE             |                       | USE TO INSULATE<br>T&B H-TAPS | IN.  |      |      | "A" DIM.             | "B" DIM.       |
|-----------|------------------------|-----------------------|-------------------------------|------|------|------|----------------------|----------------|
|           | MAX.                   | MIN.                  |                               | A    | B    | C    |                      |                |
| HT20C     | 2/0                    | 6                     | 63110/63115<br>63125/63120    | 4.5  | 1.25 | 1.13 | —                    | —              |
| HT40C     | 4/0                    | 6                     | 63140<br>63148                | 5.61 | 1.41 | 1.19 | —                    | —              |
| HT600C    | 500 MCM                | 2                     | 63160/63169                   | 6.81 | 2.13 | 1.45 | —                    | —              |
| HT1000C   | 1000 MCM<br>to 500 MCM | 250 MCM<br>to 1/0 AWG | 63180                         | —    | —    | —    | [184.15MM]<br>7.250  | 2.330<br>+.060 |
| HT1000C-L | 1000 MCM<br>to 500 MCM | 250 MCM<br>to 250 MCM | 63170                         | —    | —    | —    | [263.40MM]<br>10.374 | 2.330<br>+.060 |

### Adhesive Insulating Covers

- Seals against moisture
- Voltage rating up to 600
- Workable from 14° F to 120° F
- Maximum operating temperature of 176° F
- No installing tools required
- Also available in 10' rolls; consult customer service



Shrink-Kon®

#### Specifications

##### Electrical

- Dielectric Constant: 3.2 ASTM-D150 (60 Hz)
- Power Factor: .007 ASTM-D150 (60 Hz)
- Dielectric Strength: 340 Volts/mil ASTM-D1373

##### Chemical

- Water Absorption: .06% ASTM-570
- Ozone Resistance — Excellent: 03% ASTM-D1373
- Corrosion None Visible: per ASTM-D 69



| CAT. NO.    | A    | B     | STD. PKG. QTY. |
|-------------|------|-------|----------------|
| AC 5 X 3    | 5"   | 3"    | 10             |
| AC 5 X 7    | 5"   | 7"    | 10             |
| AC 85 X 75  | 8.5" | 7.5"  | 5              |
| AC 85 X 105 | 8.5" | 10.5" | 5              |

Order multiple is std. pkg.

\*UL Listed for use with T&B Covers

For "H" Taps, "C" Taps, two-way connectors, mechanical taps, and Color-Keyed lugs and joints.

Material: 6 mil electrical vinyl backing, butyl rubber mastic adhesive thickness 1/8" approx. Polyethylene release sheet.

UL Listed — File No. E9809

Not for submersion in liquid.

| ADHESIVE INSULATOR CAT. NOS. | COMPRESSION LUG CAT. NOS. |       |       |       |       |       |       |       |       |       | COMPRESSION TWO-WAY CONNECTOR CAT. NOS. |       | "H" TAP CAT. NOS. | "C" TAP CAT. NOS. | COMPRESSION CABLE JOINT CAT. NOS. |
|------------------------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------------------------------|-------|-------------------|-------------------|-----------------------------------|
| AC 5 X 3<br>SIZE KEY #2      | 60096                     | 60113 | 60130 | 60150 | 54132 | 54145 | 54160 | 54207 | 54906 | 54860 | 60500                                   | 54806 | 63105             | 54710             | 54610                             |
|                              | 60097                     | 60114 | 60132 | 60151 | 54134 | 54108 | 54162 | 54208 | 54942 | 54862 | 60501                                   | 54807 | —                 | 54715             | 54615                             |
|                              | 60099                     | 60116 | 60134 | 60230 | 54105 | 54147 | 54163 | 54255 | 54947 | 54864 | 60507                                   | 54806 | —                 | 54720             | 54620                             |
|                              | 60101                     | 60117 | 60135 | 60236 | 54135 | 54148 | 54111 | 54209 | 54909 | 54866 | 60512                                   | 54504 | —                 | 54725             | 54625                             |
|                              | 60102                     | 60118 | 60136 | 60238 | 54136 | 54150 | 54165 | 54210 | 54910 | —     | 60516                                   | 54505 | —                 | 54730             | 54630                             |
|                              | 60103                     | 60120 | 60138 | 60242 | 54138 | 54152 | 54167 | 54260 | 54965 | —     | 60905                                   | 54506 | —                 | 54735             | 54635                             |
|                              | 60104                     | 60122 | 60140 | 60244 | 54106 | 54153 | 54168 | 54211 | 54970 | —     | 60910                                   | 54507 | —                 | 54740             | —                                 |
|                              | 60106                     | 60123 | 60141 | 60248 | 54139 | 54109 | 54112 | 54265 | 54850 | —     | 60915                                   | 54506 | —                 | 54745             | —                                 |
|                              | 60107                     | 60124 | 60142 | 60250 | 54140 | 54155 | 54170 | 54212 | 54852 | —     | 60920                                   | 54509 | —                 | 54750             | —                                 |
|                              | 60108                     | 60126 | 60144 | 54104 | 54107 | 54157 | 54204 | 54270 | 54854 | —     | 60925                                   | 54510 | —                 | —                 | —                                 |
|                              | 60109                     | 60128 | 60147 | 54130 | 54142 | 54158 | 54205 | 54930 | 54856 | —     | 54804                                   | 54511 | —                 | —                 | —                                 |
|                              | 60112                     | 60129 | 60148 | 54131 | 54143 | 54110 | 54206 | 54905 | 54858 | —     | 54805                                   | —     | —                 | —                 | —                                 |
|                              | —                         | 60152 | 60169 | 60267 | 54173 | 54115 | 54129 | 54222 | 54920 | —     | 60522                                   | 60945 | 54516             | 63110             | 54755                             |
|                              | —                         | 60153 | 60171 | 60268 | 54174 | 54183 | 54213 | 54291 | 54923 | —     | 60530                                   | 60950 | 54518             | 63115             | 54760                             |
| AC 5 X 7<br>SIZE KEY #4      | —                         | 60154 | 60172 | 60269 | 54113 | 54116 | 54275 | 54223 | 54928 | —     | 60538                                   | 60955 | 54809             | 63120             | 54765                             |
|                              | —                         | 60156 | 60174 | 60271 | 58161 | 54185 | 54214 | 54295 | 54868 | —     | 60542                                   | 60960 | 54810             | 63125             | 54770                             |
|                              | —                         | 60157 | 60176 | 60273 | 58162 | 54118 | 54280 | 54224 | 54870 | —     | 60548                                   | 60965 | 54811             | —                 | 54775                             |
|                              | —                         | 60159 | 60178 | 60274 | 58163 | 54187 | 54215 | 54226 | 54872 | —     | 60554                                   | 60970 | 54812             | —                 | 54780                             |
|                              | —                         | 60160 | 60180 | 60275 | 58165 | 54120 | 54282 | 54228 | 54874 | —     | 60560                                   | 54509 | 54813             | —                 | —                                 |
|                              | —                         | 60162 | 60254 | 60276 | 58166 | 54122 | 54216 | 54913 | 54876 | —     | 60565                                   | 54510 | 54814             | —                 | —                                 |
|                              | —                         | 60163 | 60256 | 60277 | 54178 | 54123 | 54218 | 54914 | 54878 | —     | 60568                                   | 54511 | 54815             | —                 | —                                 |
|                              | —                         | 60165 | 60260 | 60278 | 54179 | 54124 | 54286 | 54915 | 54880 | —     | 60571                                   | 54512 | 54816             | —                 | —                                 |
|                              | —                         | 60166 | 60262 | 60280 | 54114 | 54126 | 54220 | 54916 | 54882 | —     | 60930                                   | 54513 | 54817             | —                 | —                                 |
|                              | —                         | 60168 | 60265 | 54172 | 54181 | 54128 | 54289 | 54918 | —     | —     | 60935                                   | 54514 | —                 | —                 | —                                 |
|                              | —                         | —     | —     | —     | —     | —     | —     | —     | —     | —     | 60940                                   | 54515 | —                 | —                 | —                                 |
|                              | —                         | —     | —     | —     | 60184 | —     | —     | —     | —     | —     | 60574                                   | 54522 | 63130             | —                 | —                                 |
|                              | —                         | —     | —     | —     | 60284 | —     | —     | —     | —     | —     | 60576                                   | 54523 | 63135             | —                 | —                                 |
|                              | —                         | —     | —     | —     | —     | —     | —     | —     | —     | —     | 60578                                   | 54524 | 63140             | —                 | —                                 |
| AC 85 X 75<br>SIZE KEY #6    | —                         | —     | —     | —     | —     | —     | —     | —     | —     | —     | 60580                                   | 54526 | 63145             | —                 | —                                 |
|                              | —                         | —     | —     | —     | —     | —     | —     | —     | —     | —     | 60584                                   | 54528 | 63150             | —                 | —                                 |
|                              | —                         | —     | —     | —     | —     | —     | —     | —     | —     | —     | 60975                                   | 54820 | —                 | —                 | —                                 |
|                              | —                         | —     | —     | —     | —     | —     | —     | —     | —     | —     | 60980                                   | 54823 | —                 | —                 | —                                 |
|                              | —                         | —     | —     | —     | —     | —     | —     | —     | —     | —     | 60985                                   | 54828 | —                 | —                 | —                                 |
|                              | —                         | —     | —     | —     | —     | —     | —     | —     | —     | —     | 54520                                   | —     | —                 | —                 | —                                 |
| AC 85 X 105<br>SIZE KEY #8   | —                         | —     | —     | —     | —     | —     | —     | —     | —     | —     | —                                       | —     | 63155             | —                 | —                                 |
|                              | —                         | —     | —     | —     | —     | —     | —     | —     | —     | —     | —                                       | —     | 63160             | —                 | —                                 |
|                              | —                         | —     | —     | —     | —     | —     | —     | —     | —     | —     | —                                       | —     | 63165             | —                 | —                                 |

Quick and easy insulation — no heat or adhesive required!

**NEW!**

### Self-Fusing Insulation Tape

- Just two layers form a moisture-proof, abrasion-resistant, dielectric seal
- Easy-release, non-static-sensitive liner peels right off
- Creates an immediate, permanent bond even when wet
- Suitable for high and low voltage applications
- Resistant to UV, moisture and saltwater
- Easily removable — just slice with a knife and pull off — leaves no residue
- Smooth filler putty compound available for use under tape when insulating bolted or dimensionally inconsistent splices and terminations



TBFT421-36



#### Typical Applications

- Repair deteriorated insulation on cables and conductors
- Insulate and seal underwater, underground and above-ground bonding installations
- Insulate harnessing, bundling, cabling and wiring in aircraft, automotive, marine and other industrial machinery/equipment



#### Specifications

- Material: Modified silicone rubber compound
- Tensile Strength: 1200 psi
- Dielectric Strength: 20 mil: 600 vpm; 40 mil: 400 vpm
- Abrasion Resistance: 110 lbs./in.
- Water Absorption: < 0.5%
- Temperature Rating: 80° C max.
- Voltage Rating: 600V max.



TBFP9-2

| CAT. NO.                            | WIDTH (IN.) | LENGTH (FT.) | THICKNESS (MILS) | COLOR | STD. PKG. QTY. |
|-------------------------------------|-------------|--------------|------------------|-------|----------------|
| <b>Self-Fusing Insulation Tape</b>  |             |              |                  |       |                |
| TBFT421-36                          | 1           | 36           | 40               | Red   | 10             |
| TBFT201-36                          | 1           | 36           | 20               | Black | 10             |
| <b>Smooth Filler Putty Compound</b> |             |              |                  |       |                |
| TBFP9-2                             | 1           | 2.08         | —                | White | 1              |

Standard package is rolls. Order by rolls; not by feet.

### HSTS25 — Tape Sealant



- Available in a 25-ft. roll
- Used in conjunction with T&B Heat-Shrinkable Insulators for better moisture sealing

#### Specifications

##### Physical

- Description: Butyl Rubber Polymer
- Application Temperature: 40° F to 100° F
- Service Temperature: -40° F to 180° F
- Environmental Resistance: Resists ozone and all normal aging processes

##### Electric

- Dielectric Strength: 250 v/mil minimum
- Volume Resistivity: 1014 ohms/cm

##### Chemical

- Chemical Resistance: Resists acids, bases and alcohols. Passes Fed. Spec. SS-S-00210, section 3.6

#### Installation Guidelines

1. The cable, etc., should be relatively clean and free of greases, oils, and other foreign substances.
2. It is best to overlap each wrap of tape by ¼ to ½ of the width for the best seal.
3. When using heat-shrinkable products, most applications require only 1 or 2 layers of tape prior to sliding tubing in place.
4. Shrink the tubing, cap, boot, etc., following the installation procedure for the applicable heat-shrinkable part.

**To seal the junction or crotch of an application requiring two or more cables, conductors, etc. without a common jacket.**

1. Apply the overlapped 1 or 2 layers around each cable, conductor, etc., at the same distance from the connector, or ball up the sealant and press into crotch or junction of the joint.
2. Apply 2 overlapping wraps over the bundle.
3. Slide the expanded heat-shrinkable part over the joint and shrink.

| CAT. NO. | DESCRIPTION  | WIDTH (IN.) | THICKNESS (IN.) | LENGTH (FT.) | STD. PKG. QTY. |
|----------|--------------|-------------|-----------------|--------------|----------------|
| HSTS25   | Tape Sealant | 1           | .06             | 25           | 1              |

Standard package is reels. Order by reel; not by feet.

Quick and dependable way to insulate and waterproof motor lead connections up to 5KV.

### Medium-Voltage Motor Stub Splice Insulator

- Installs in seconds
- Flame retardant
- Flexible boot and impact-resistant cap
- Long lasting and reusable
- Waterproof and abrasion resistant
- One size fits all hookups — reduces inventory
- Enables easy inspection of connection



This first-generation multi-splice insulator is designed to give you a quick, dependable means of protecting medium-voltage motor stub splice connections up to 5kV. You can install it in seconds simply by pushing the cover and boot together. Once installed, it completely waterproofs the connection and provides excellent protection against abrasion or mechanical abuse.

#### One size reduces inventory

The insulator accommodates wire sizes #8–2/0 AWG having outer diameters of .375" to .840". This range-taking feature should accommodate all of your medium-voltage motor hookups.

#### Inspectable and reusable

The insulator consists of just two parts: an elastomer boot and thermoplastic cap. The boot has two tapered cable entry legs that fit snugly around the cable to form a watertight seal. The legs are designed to be trimmed during installation to fit the required cable size tightly. The cap simply pushes into a groove in the boot — and pulls out easily when you want to inspect the connection. Removal of the cap does not disturb the seal around the cables, nor does it interrupt the bolted splice connection.

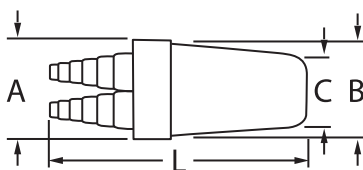
#### Quality engineered

The boot is made of flexible, abrasion-resistant elastomer, and the cap is made of high impact-resistant thermoplastic — high-performance materials you can depend on. Use the insulator for pigtail applications in motor junction boxes, manholes or wherever a waterproof, impact-resistant insulator is required.



#### Specifications

- 5KV Wire Range: #8 AWG–2/0
- Rating: 90° C Applications
- UL Listed to: 600V
- CSA Certified to: 600V
- T&B Recommended to: 5000V@90° C
- Material: Cap — NORYL, U.L. 94V-1  
Boot — EPDM Elastomer, U.L. 94V-2  
Lubricant — Silicone Grease



#### Wide Range Splice



| CAT. NO. | WIRE RANGE | INSULATION O.D. RANGE (IN.) | BOLT MAX. LENGTH (IN.) | LENGTH L (IN.) | DIA. A (IN.) | DIA. B (IN.) | DIA. C (IN.) | STD. PKG. QTY. |
|----------|------------|-----------------------------|------------------------|----------------|--------------|--------------|--------------|----------------|
| MSCV20   | 8-2/0 AWG  | .38–.84                     | 1.25                   | 6.5            | 3            | 22.03        | 2            | 5              |

Order in multiples of std. pkg.

United States  
Tel: 901.252.8000  
800.816.7809  
Fax: 901.252.1354

Technical Services  
Tel: 888.862.3289

Thomas & Betts  
[www.tnb.com](http://www.tnb.com)

## Splice Insulators & Insulating Covers

Shrink-Kon®



### Quick-Seal Multi-Splice Insulators

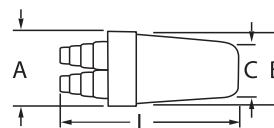
- Fast and easy to use
- Reusable insulator snaps closed and can be opened for inspection
- 600V at 90° C

All-purpose quick-seal multi-splice can be used wherever a watertight insulator is needed in motor junction boxes, manholes, street lighting, bridges, machines, rooftop air conditioning, airport lighting, as well as in marine use. The insulator is a two-piece design, an abrasion-resistant elastomer cable entry boot and a high impact-resistant thermoplastic quick-seal cap. Installs in seconds, completely waterproof, long-lasting, reusable, inspectable, flame-retardant, impact-resistant, range-taking, inexpensive, and totally dependable.

#### ..... Specifications .....

##### Material

- Cap: NORYL, U.L. 94V-1\
- Boot: EPDM Elastomer, UL 94V-2
- Lubricant Silicone Grease



### Quick-Seal Splice Insulators

| CAT. NO. | WIRE RANGE | INSULATION O.D. RANGE (IN.) | LENGTH L (IN.) | DIA. A (IN.) | DIA. B (IN.) | DIA. C (IN.) | BOLT SIZE MAX. DIA. | CONN. SIZE MAX. LG. | MAX. LG. | MAX. WD. | STD. PKG. QTY. |
|----------|------------|-----------------------------|----------------|--------------|--------------|--------------|---------------------|---------------------|----------|----------|----------------|
| MSLT 8   | 14-8       | .15-.28                     | 2.625          | 1.22         | 1.03         | .813         | .25                 | .50                 | 1.25     | .50      | 10             |
| MSLT 1   | 6-1        | .20-.52                     | 3.625          | 1.81         | 1.53         | 1.25         | .38                 | .75                 | 1.75     | .70      | 5              |

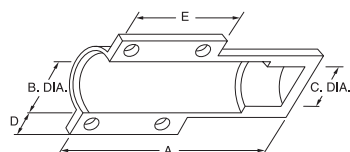
Order multiple is std. pkg.



### Motor Stub Splice Insulators

- Re-enterable motor stub insulator
- Easy installation
- No special tools required

This innovative product has been designed to insulate motor stub splices quickly, easily, and dependably. It consists of a boot-type insulator with integral TY-RAP® cable ties. To install, simply position the insulator over the bolted splice and tighten the cable ties. That's all there is to it. It produces uniform, high-quality installations every time... in about 30 seconds. The completed installation is immediately ready for inspection and use. If required, the insulator can be easily removed. Simply snip the cable ties and slide the insulator off the splice. It leaves no sticky residue.



#### ..... Specifications .....

- \*One Ty-Rap® cable tie only
- UL File E9809. UL and CSA Certified (94V-1 Flammability Class)
- Rated for 600V and 90° C application

##### Material

- Body: Modified Neoprene Elastomer
- Straps: Nylon

### Motor Stub Splice Insulators

| CAT. NO. | WIRE RANGE  | LENGTH (IN.) | BOLT MAX. A (IN.) | B DIA. (IN.) | C DIA. (IN.) | D (IN.) | E (IN.) | STD. PKG. QTY. |
|----------|-------------|--------------|-------------------|--------------|--------------|---------|---------|----------------|
| MSC14*   | #14-#10     | 3.38         | 1.5               | .56          | .50          | .38     | .35     | 15             |
| MSC8     | #12-#8      | 3.38         | 2.39              | .73          | .67          | .38     | 1.20    | 10             |
| MSC2     | #12-#2      | .75          | 3.25              | .95          | .88          | .38     | 1.5     | 10             |
| MSC20    | #2-2/0      | 1.5          | 4.25              | 1.39         | 1.05         | .43     | 1.70    | 4              |
| MSC250   | 3/0-300 MCM | 1.5          | 7.56              | 1.88         | 1.80         | .45     | 1.90    | 2              |
| MSC500   | 350-500 MCM | 1.75         | 8.88              | 2.56         | 2.48         | .45     | 2.10    | 5              |

Order in multiples of std. pkg.



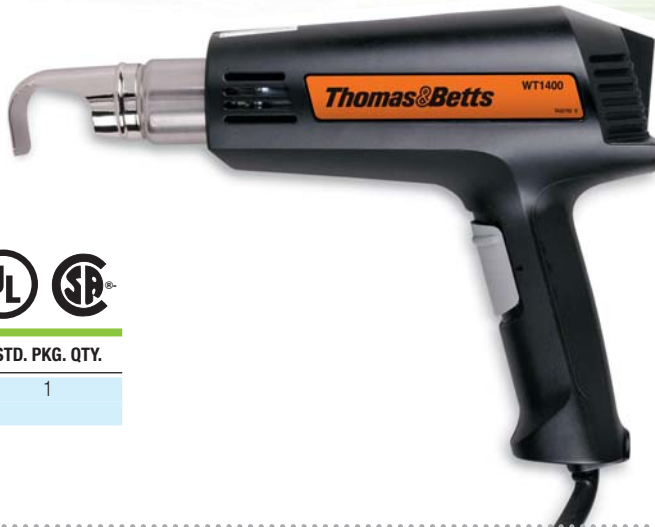
### Electric Heat Gun

- UL/CSA approved
- 450° F to 1,000° F heat range
- 120V 60Hz AC



| CAT. NO. | DESCRIPTION                                             | STD. PKG. QTY. |
|----------|---------------------------------------------------------|----------------|
| WT1400   | Dual Temp. heat gun. 600° F/900° F, 1,300W, 120VAC 60Hz | 1              |

Order multiple is std. pkg.



Shrink-Kon®

Separate fuel- and air-flow controls enable precise adjustment of flame and temperature up to 2,500° F!

### Portable Heat-Shrink Torch

- 2,500° F output capacity satisfies virtually any heat-shrink, brazing or soldering requirement
- Dual fuel- and air-flow controls enable separate adjustment of temperature and flame precision
- Brass and steel construction provides durability



#### Specifications

- Dimensions (without base): 3.9"L x 1.4"W x 5.4"H
- Weight (when filled): 9.88 oz.
- Fuel Tank Capacity: 2.03 fl. oz.
- Operating Time (per full fuel tank): Up to 220 minutes

### Portable Heat-Shrink Torch

| CAT. NO.  | DESCRIPTION                            | STD. PKG. QTY. |
|-----------|----------------------------------------|----------------|
| WT-PTORCH | Shrink-Kon® Portable Heat-Shrink Torch | 1              |

Order multiple is std. pkg.

## Installation Guidelines and Cross Reference

### Installation

#### No Special Installation Skills Required

- 1 Remove any oil, grease, water, dirt, etc., by wiping the cable ends and connector. Remove all sharp edges and burrs from connector.
- 2 Center tubing over splice connector.
- 3 Use the light blue outer portion of the flame when using the SIT-1 torch. Do not hold the torch still in one position or concentrate the hot inner flame of the torch on the tubing; this may cause scorching.
- 4 Begin heating tubing in the center. Recover the central portion of the tubing first by heating around the circumference of the splice. (Keep heat source moving constantly around the circumference of the insulator to ensure uniform shrinkage of the insulator.)
- 5 Continue heating around the tubing and out toward one end. Move torch around the tubing until one end is completely recovered.
- 6 Repeat the above procedure on the opposite end of the splice, again working from the center outward and around the tubing.
- 7 Installation is complete when the tubing conforms to splice and sealant flow is apparent at both ends.

#### Typical Specifications

Insulating and sealing of all 600V, in-line cable splices from #16 AWG through 1000 MCM shall be done in accordance with the instructions provided with the Shrink-Kon® heat-shrinkable insulators, catalog series HS.

The connector insulator must be made of thermally stabilized, homogeneous polyolefin having internally applied sealant. It must have Underwriter's Laboratories Listing (UL® 486, 90° C, 600V) and be approved for the use. It must be usable without additional covering or adhesive both indoors and outdoors, in overhead, direct burial, or submersed applications at rated voltage. It must not be adversely affected by moisture, ozone, oils, fuels, mild acids and alkalies, or ultraviolet light. It must be compatible with all commonly used cable jacket materials, including rubber, plastic, lead, steel, aluminum, and copper.

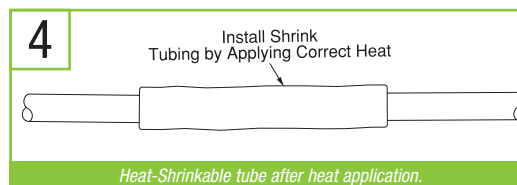
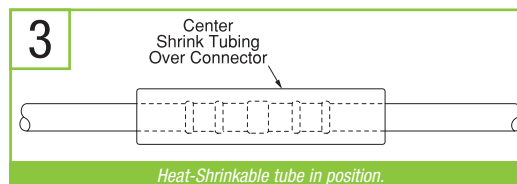
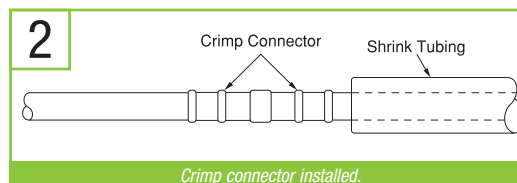
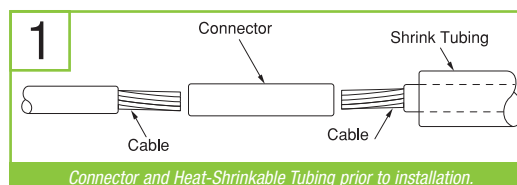
#### Factory-Applied Sealant

A standard sealant is coated on the entire inside surface of most precut sizes. Tubing is also available without sealant — consult factory. The sealant is rated for continuous 90° C operation on non-pressurized cable systems and aids in sealing out moisture and corrosion.

#### Cross Reference

| T&B    | PANDUIT        | 3M               | RAYCHEM                        | SUMITOMO | ALPHA   | COLEFLEX                           | INSULTAB            |
|--------|----------------|------------------|--------------------------------|----------|---------|------------------------------------|---------------------|
| CPO    | HSTT & HSTTM   | FP 301 ( 1 & 2 ) | RNF 100 ( 1 & 2 )              | A2 & B2  | FIT 221 | ST221 / STS221<br>STU221 / STSU221 | HS 101              |
| CPO-A  | HSTTA & HSTTVA | EPS300           | TAT 125<br>ATUM 3:1            | W3B2     | FIT321  | ST303                              | HS101 MW 3:1<br>CTV |
| HSMW   | —              | —                | MWTM (U)<br>BSTS-M / SST-M     | —        | FIT 700 | —                                  | —                   |
| HS     | —              | —                | WSCM / SST                     | —        | —       | —                                  | CTVH                |
| HS FR  | HST            | HDT              | BSTS FR / SSTFR<br>WCSF / FCSM | —        | —       | —                                  | —                   |
| HSC    | HSEC           | ICEC             | S3C/ESC<br>SSC-FR / ESC-FR     | —        | —       | TYT                                | —                   |
| CPO-HF | —              | —                | —                              | NH       | —       | —                                  | —                   |
| HSM-HF | —              | —                | XFFR                           | —        | —       | —                                  | —                   |
| CHS    | —              | —                | —                              | —        | —       | —                                  | —                   |

These competitor names are the property of the respective competitor.



#### Cost and Reliability of Heat-Shrinkable Tubing Compared to Tape

The cost differential in the installation of T&B heat-shrinkable tubing over taping can result in up to a 34% savings in labor and overhead. For example, on a 2/0 aluminum splice, heat-shrinkable tubing can be installed in 3 minutes, versus 10 minutes of taping. In addition to the direct cost reduction, there are the advantages of assured uniformity of wall thickness and moisture sealing.