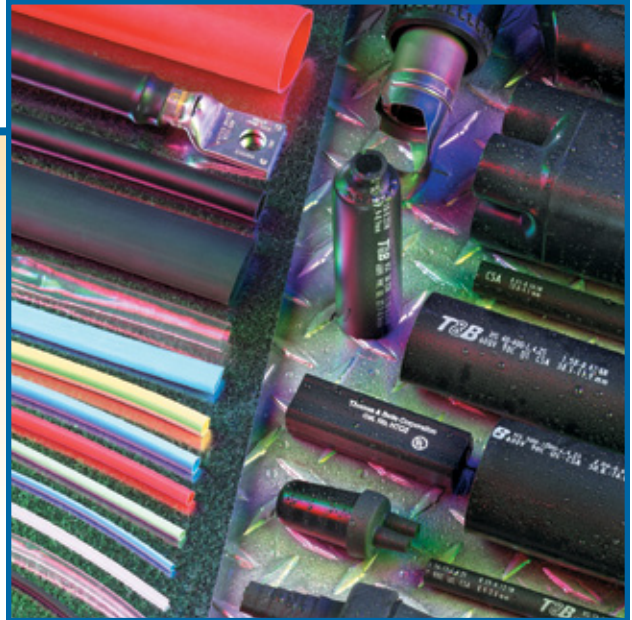


Shrink-Kon® Heat-Shrinkable Tubing

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



Shrink-Kon® Heavy-Wall 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.

Shrink-Kon® Heavy-Wall Heat-Shrinkable End Cap and 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.



T&B Heat-Shrinkable Insulators Offer:

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

Featured Products Include:

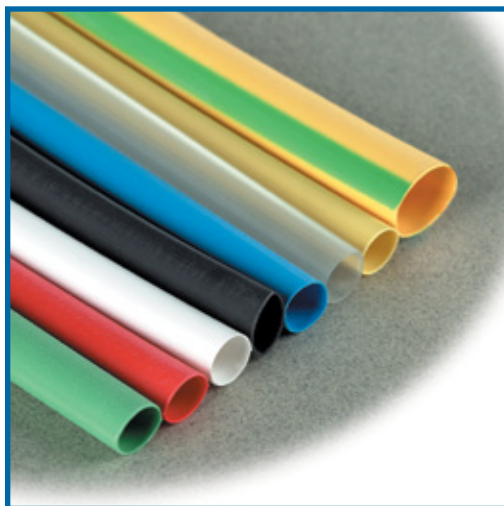
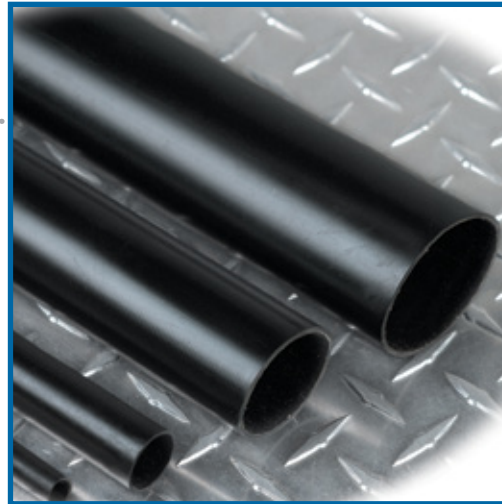
- High Shrink Ratio HSHR series with 6:1 shrink ratio designed for applications with extreme differences between cable, connector and back shell sizes
- Flame Retardant HSFR series provides maximum flame retardancy

Shrink-Kon® Heat-Shrinkable Tubing

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® Thin Wall Tubing

Manufactured from stabilized Polyolefin, these insulators are used to insulate bare Sta-Kon® and Blackburn® 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 kcmil in the main and #12 AWG – 500 kcmil in the branch.

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



Shrink-Kon® Heat-Shrinkable Tubing

HS Series

- Made of thermally stabilized cross-linked polyolefin, enabling a recovered wall thickness greater than 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. Maximum rating 1kV at 90° C
- 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

3:1 Shrink Ratio



HS Series Specifications

PROPERTY	TEST METHOD	TYPICAL PERFORMANCES	PROPERTY	TEST METHOD	TYPICAL PERFORMANCES
Physical			Chemical		
• 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%	Adhesive		
• 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	35 pli 20 pli
Electrical			— to steel, aluminum, P.E.		
• Dielectric Strength	ASTM D149	500V/Mil (20kV/mm)	— PVC		
• Dielectric Voltage Withstand	UL 486D	No Breakdown, (2500V, 60 Hz, 1 Min.)	• Water Penetration	STM 706	No penetration after 236 hrs. of continuous immersion
• Volume Resistivity	ASTM D257	1016 ohm-cm			

Shrink-Kon® Heat-Shrinkable Tubing

HS Series Heavy-Wall Heat-Shrinkable Tubing — Black

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

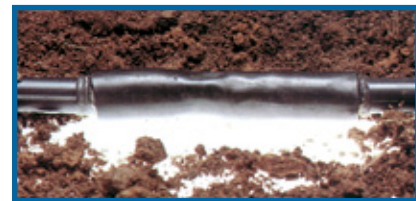
CAT. NO.	MIN. EXPANDED I.D. (IN.)	MAX. RECOVERED I.D. (IN.)	LENGTH (IN.)	FOR 2-WAY CONNECTOR CABLE SIZES	STD. PKG. QTY.
HS12-6LR	.51	.16	6	#8–#6 AWG	25
HS6-1LR	.75	.24	8	#6–#2 AWG	25
HS4-30LR	1.10	.35	9	#1–3/0 AWG	10

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. EXPANDED I.D. (IN.)	MAX. RECOVERED I.D. (IN.)	NOMINAL RECOVERED WALL (IN.)	CODE CABLE SIZE	STD. PKG. (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 AWG–350 kcmil	1
HS500-1000-25	2.00	.63	.16	250–500 kcmil	1

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



Wire Termination — Sta-Kon® Wire Termination & Insulation



Shrink-Kon® Heat-Shrinkable Tubing

HSHR Series — High Shrink Ratio

- 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

6:1 Shrink Ratio



HSHR Series Heavy-Wall Heat-Shrinkable Tubing

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

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

HSHR Series Specifications

PROPERTY	TEST METHOD	TYPICAL PERFORMANCE
Physical		
• 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
Electrical		
• Dielectric Strength	ASTM D149, IEC 243	500V/Mil (20kV/mm)
• Dielectric Voltage Withstand	UL 486D	No Breakdown
• Volume Resistivity	ASTM D257	1016 ohm-cm

PROPERTY	TEST METHOD	TYPICAL PERFORMANCE
Chemical		
• 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%
Adhesive		
• 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) — to steel, aluminum, P.E. — PVC	ASTM D1000	35 pli 20 pli
• Adhesive Blocking (30° C)	ASTM D1146	No Blocking
• Water Penetration	STM 706	No penetration after 236 hrs. of continuous immersion

Shrink-Kon® Heat-Shrinkable Tubing

HSFR Series — Flame-Retardant Heavy Wall

- 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. EXPANDED I.D. (IN.)	MAX RECOVERED I.D. (IN.)	NOMINAL RECOVERED WALLED (IN.)	CODE CABLE SIZE	STANDARD LENGTH (IN.)	STD. 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 AWG-350 kcmil	48	25
HSFR500-1000-4	2.00	.63	.16	250-500 kcmil	48	25

Custom lengths available, subject to factory quotations.
Minimum quantities may apply.

3:1 Shrink Ratio



Wire Termination — Sta-Kon® Wire Termination & Insulation

HSFR Series Specifications

PROPERTY	TEST METHOD	TYPICAL PERFORMANCE	PROPERTY	TEST METHOD	TYPICAL PERFORMANCE
Physical			Chemical		
• Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5MPa)	• Fluid Resistance	MIL-DTL-23053/5	Good to Excellent
• Elongation	ASTM D412, ISO 37	600%	• Copper Corrosion	ASTM D2671	No Corrosion
• Longitudinal Change	ASTM D2671	+1%, -10%	• Fungus Resistance	ASTM G21	No Growth
• Specific Gravity	ASTM D792	1.2	• Water Absorption	ASTM D570	0.2%
• Elongation after Heat Aging (168 hrs. at 175° C)	ASTM D2671, ISO 37	500%	Adhesive		
• Heat Shock (4 hrs. at 225° C)	ASTM D2671	No cracking or flowing	• Adhesive Lap Shear (1 in./min. at 23° C)	ASTM D1002	125 psi (.875 MPa)
• Low Temperature Flexibility (4 hrs. at -55° C)	ASTM D2671	No cracking or splitting	• Adhesive Softening Point	ASTM E28	92° C ±5° C
• Hardness (Shore D)	ASTM D2240	50D	• Adhesive Peel Strength (300mm/min. at 23° C) — to steel, aluminum, P.E. — PVC	ASTM D1000	35 pli 20 pli
• Oxygen Index	ASTM D2863	27.00	• Adhesive Blocking (30° C)	ASTM D1146	No Blocking
• Flamibility	ASTM D2671	Flame Retardant	• Adhesive Water Absorption	ASTM D570	Less than 0.3%
Electrical			• Water Penetration	STM 706	No penetration after 286 hrs. of continuous immersion
• Dielectric Strength	ASTM D149	500 V/Mil (20kV/mm)			
• Dielectric Voltage Withstand (2500V, 60 Hz, 1 Min.)	UL 486D	No Breakdown 24kV — 1 min., 15kV — 4 hrs.			
• Volume Resistivity	ASTM D257	1016 ohm-cm			

Shrink-Kon® Heat-Shrinkable Tubing

HSC Series End Caps

- 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 WALLED (IN.)	CODE CABLE SIZE	STANDARD LENGTH (IN.)	STD. PKG. QTY.
HSC8-4	.51	.16	.09	#8-#6 AWG	2.50	10
HSC2-20	.75	.24	.09	#6-#2 AWG	2.50	10
HSC30-250	1.10	.35	.12	#1-3/0 AWG	3.00	5
HSC300-600	1.50	.47	.16	2/0 AWG-350 kcmil	3.50	5
HSC700-1000	2.00	.63	.16	250-500 kcmil	3.50	5
HSC750	2.70	.87	.16	600-1000 kcmil	4.00	10
HSC300*	3.50	1.18	.16	800-1250 kcmil	4.50	5
HSC500*	4.70	1.57	.17	1500-2500 kcmil	5.50	5

Order multiple is std. pkg.

*Not UL Listed or CSA Certified.

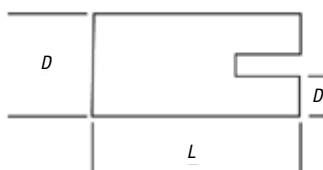
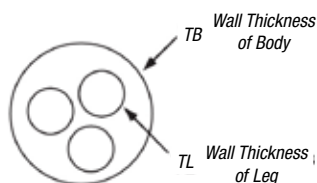
HSC Series Specifications

PROPERTY	TEST METHOD	TYPICAL PERFORMANCE
Physical		
• 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% on Recovery
• Low-Temperature Flexibility (4 hrs. at -55° C)	ASTM D2671	No cracking
• Specific Gravity	ASTM D792	1.10
• Hardness (Shore D)	ASTM D2240	50D
Electrical		
• Dielectric Strength	ASTM D149	500V/Mil (20kV/mm)
• Dielectric Voltage Withstand	UL 486D	No Breakdown (2500V, 60 Hz, 1 Min.)
• Volume Resistivity	ASTM D257	1016 ohm-cm

PROPERTY	TEST METHOD	TYPICAL PERFORMANCE
Chemical		
• Fluid Resistance	MIL-DTL-23053	Good to Excellent
• Fungus Resistance	ASTM G21	No Growth
• Copper Corrosion	ASTM D2671	No Corrosion
• Water Absorption	ASTM D570	.1%
Seal Integrity		
• 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.)	35 pli 20 pli No Blocking
— to steel, aluminum, P.E.		
— PVC		
• 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)

Shrink-Kon® Heat-Shrinkable Tubing

HSB Series — Heat-Shrinkable Breakout Boots



- 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 LEGS 600V CONDUCTOR AWG/KCMIL	STD. PKG. QTY.
		MIN. EXPANDED I.D. (IN.)	MAX. RECOVERED I.D. (IN.)	EXPANDED DIA. (MAX.) (IN.)	RECOVERED DIA. (MAX.) (IN.)					
HSB200-75-2	2	1.97	.83	.90	.20	4.69	.13	.13	#3-300	10
HSB120-50-3	3	1.50	.65	.50	.16	4.47	.11	.11	#8-3/0	10
HSB170-82-3	3	2.20	1.20	.89	.35	7.09	.12	.12	#1-600	10
HSB240-112-3	3	2.83	1.46	1.38	.69	7.01	.16	.12	300-1000	10
HSB125-50-4	4	1.38	.59	.47	.12	3.74	.10	.08	#12-2/0	10
HSB175-82-4	4	2.36	1.18	.90	.25	7.95	.16	.13	#4-600	10
HSB265-120-4	4	3.10	1.50	1.40	.49	9.45	.13	.13	3/0-1000	10
HSB350-138-3	3	3.54	1.38	1.34	.55	7.87	.12	.08	4/0-1000	5
HSB430-157-3	3	4.33	1.57	1.38	.69	7.01	.16	.12	300-1000	5
HSB490-200-3	3	4.92	2.00	2.32	1.00	11.14	.15	.15	750-1000	5
HSB520-135-4	4	5.25	1.35	3.00	.55	10.02	.13	.16	4/0-1000	5

Order multiple is std. pkg.

Heat-Shrinkable Breakout Boots Specifications

PROPERTY	TEST METHOD	TYPICAL PERFORMANCE	PROPERTY	TEST METHOD	TYPICAL PERFORMANCE
Physical			Electrical		
• Tensile Strength	ASTM D412, IEC 540	2120 psi (14.6 MPa)	• Dielectric Strength	ASTM D2671	280V/Mil (11kV/mm)
• Ultimate Elongation	ASTM D412, IEC 540	600%	Chemical		
• Elongation after Heat Aging (168 hrs. at 175° C)	ASTM D412, IEC 540	520%	• Water Absorption	ASTM D570	.03%
• 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® Heat-Shrinkable Tubing

HSMW Series — Medium-Wall Tubing

- 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

3:1 Shrink Ratio



HSMW Series Medium-Wall Heat-Shrinkable Tubing

CAT. NO.	MIN. EXPANDED I.D. (IN.)	MAX RECOVERED I.D. (IN.)	NOMINAL RECOVERED WALLED (IN.)	CODE CABLE SIZE	STANDARD LENGTH (IN.)	STD. PKG. QTY.
HSMW400-48	.40	.15	.080	#4-#14 AWG	48	25
HSMW750-48	.75	.22	.080	4/0-#8 AWG	48	25
HSMW1100-48	1.10	.40	.095	400 kcmil-#1 AWG	48	25
HSMW1300-48	1.30	.40	.095	600 kcmil-#1 AWG	48	25
HSMW1500-48	1.50	.50	.095	750 kcmil-3/0 AWG	48	25
HSMW1700-48	1.70	.50	.100	1000 kcmil-2/0 AWG	48	25
HSMW2050-48	2.05	.75	.100	250-600 kcmil	48	25
HSMW2750-48	2.75	1.00	.100	500-1000 kcmil	48	15
HSMW3500-48	3.50	1.18	.100	750-1250 kcmil	48	10
HSMW4700-48	4.70	1.57	.110	1500-2500 kcmil	48	5
HSMW6700-48	6.70	2.30	.120	—	48	5
HSMW9000-48	9.00	3.00	.130	—	48	5

Order multiple is std. pkg.

HSMW Series Specifications

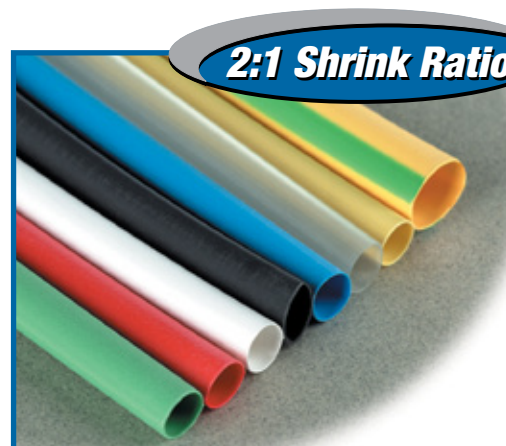
PROPERTY	TEST METHOD	TYPICAL PERFORMANCE
Physical		
• Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5MPa)
• Elongation	ASTM D412, ISO 37	550%
• Longitudinal Change	ASTM D2671	+1%, -10%
• Specific Gravity	ASTM D792, ISO/R1183	1.1
• Elongation after Heat Aging (168 hrs. at 150° C)	ASTM D2671, ISO 37	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
Electrical		
• Dielectric Strength	ASTM D149, IEC 243	500V/Mil (20kV/mm)
• Dielectric Voltage Withstand (2500V, 60 Hz, 1 Min.)	UL 486D	No Breakdown
• Volume Resistivity	ASTM D257	10 ¹⁶ ohm-cm

PROPERTY	TEST METHOD	TYPICAL PERFORMANCE
Chemical		
• 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	.1%
Adhesive		
• 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

Shrink-Kon® Heat-Shrinkable Tubing

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



Wire Termination — Sta-Kon® Wire Termination & Insulation

CPO Series Thin-Wall Heat-Shrinkable Tubing



CAT. NO.	MIN. EXPANDED I.D. (IN.)	MAX RECOVERED I.D. (IN.)	NOM. RECOVERED WALLED (IN.)	CODE CABLE SIZE
CPO63-_-	.06	.03	.02	—
CPO93-_-	.09	.05	.02	—
CPO125-_-	.13	.06	.02	#24-#30 AWG
CPO187-_-	.19	.09	.02	#14-#22 AWG
CPO250-_-	.25	.13	.03	#10-#16 AWG
CPO375-_-	.38	.19	.03	#6-#12 AWG
CPO500-_-	.50	.25	.03	#1-#6 AWG
CPO750-_-	.75	.38	.03	4/0-#2 AWG
CPO1000-_-	1.00	.50	.04	350 kcmil-2/0 AWG

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 Technical Services.

Order multiple for 4' sticks is 25 sticks.

Order multiple for reels is 1 reel.

Catalog Number Construction

SERIES	COLOR	LENGTH FT.	FINAL ORDER NO.
CPO63	+ 0	+ C	= CPO63-0-C

Available Colors

- 0 = Black
- C = Clear
- 2 = Red
- 4 = Yellow
- 5 = Green
- 6 = Blue
- 8 = Gray**
- 9 = White
- S = Green & Yellow Striped*

Available Packaging

- A = 4'
- 25 = 25' reel
- C = 100' reel
- B = Bulk reel

* Contact customer service for bulk reel quantity.

** Minimum order required.

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 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 EXPANDED I.D. (IN.)	MAXIMUM REDUCED I.D. (IN.)	NOM. RECOVERED WALL THICKNESS (IN.)	STD. PKG. QTY.
CPO63-0-6	.06	.03	.02	20
CPO93-0-6	.09	.05	.02	20
CPO125-0-6	.13	.06	.02	20
CPO187-0-6	.19	.09	.02	20
CPO250-0-6	.25	.13	.03	20
CPO375-0-6	.38	.19	.03	20
CPO500-0-6	.50	.25	.03	10
CPO750-0-6	.75	.38	.03	10
CPO1000-0-6	1.00	.50	.04	5

Order multiple is std. pkg.

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

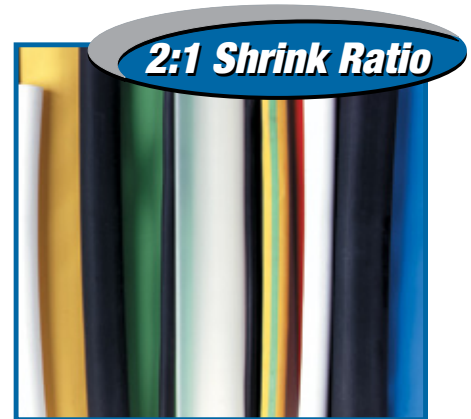
Shrink-Kon® Heat-Shrinkable Tubing

Custom order lengths for those special jobs!

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 are 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 = 3/32"	1,000	CP0500 = 1/2"	400
CP0125 = 1/8"	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	CUT PIECE CATALOG NO. CONSTRUCTION		
	MINIMUM EXPANDED I.D. (IN.)	COLOR	LENGTH (IN.)
CPO =	63 = .063 93 = .093 125 = .125 187 = .187 250 = .250 375 = .375 500 = .500 750 = .750 1,000 = 1.000	0 = Black C = Clear 2 = Red 4 = Yellow 5 = Green 6 = Blue 8 = Gray 9 = White S = Green & Yellow Striped*	XXXX — 4 digits specify length of cut in inches

Example: CPO + 125 + 2 + 1.500 = CP0125-2-1.500
 CPO Thinwall Shrink, size 125 (.125"), red color, 1.5" long
 *Contact customer service for bulk reel quantity.

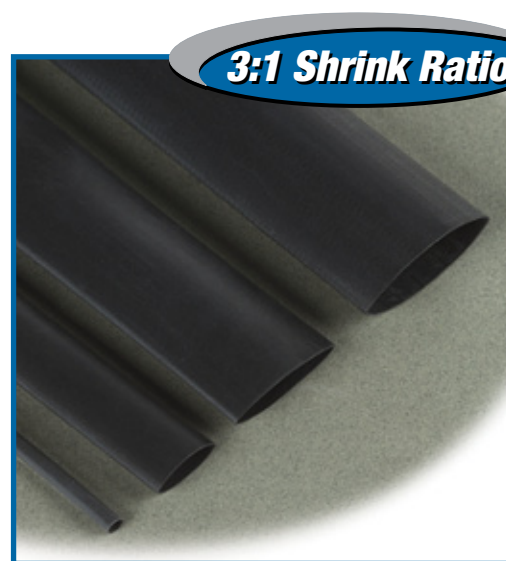
..... Thin-Wall Tubing Specifications

PROPERTY	TEST METHOD	TYPICAL PERFORMANCE
Physical		
• 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) .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)
Electrical		
• Dielectric Strength	ASTM D2671, IEC 243	600V/Mil (24kV/mm)
• Volume Resistivity	ASTM D2671	1016 Ω HM-CM
Chemical		
• Fluid Resistance	MIL-DTL-23053/5, ISO 1817, ISO 37	Good to Excellent
• Copper Corrosion	ASTM D2671	No Corrosion
• Water Absorption	ASTM D570	.2%
• Fungus Resistance	ASTM G21	No Growth

Shrink-Kon® Heat-Shrinkable Tubing

CPO-A Series — Thin-Wall, Adhesive Lined

- 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



Wire Termination — Sta-Kon® Wire Termination & Insulation

CPO-A Series Thin-Wall Heat-Shrinkable Tubing

CAT. NO.	MIN. EXPANDED I.D. (IN.)	MAX RECOVERED I.D. (IN.)	NOMINAL RECOVERED WALLED (IN.)	CODE CABLE SIZE	STANDARD LENGTH (IN.)	STD. PKG. 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 PERFORMANCE	PROPERTY	TEST METHOD	TYPICAL PERFORMANCE
Physical			Electrical		
• Tensile Strength	ASTM D2671, ISO 37	2200 psi (15.0 MPa)	• Dielectric Strength	ASTM D2671, IEC 243	600V/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	Chemical		
• Longitudinal Change	ASTM D2671	±5%	• Fluid Resistance	MIL-DTL-23053/4, ISO 1817, ISO 37	Good to Excellent
• Low-Temperature Flexibility (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	.2%
• Heat-Resistant Properties (168 hrs. at 175° C)	MIL-DTL-23053/4	240%			
• Flammability	ASTM D2671	Moderately Flame Retardant			

Shrink-Kon® Heat-Shrinkable Tubing

CHS Series — Clear Thin-Wall PVC Heat Shrink

- 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

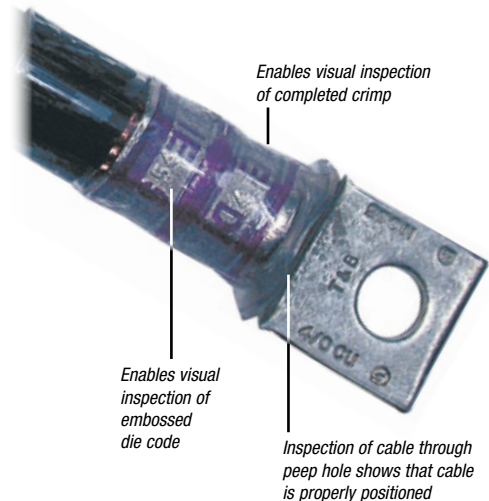


CHS Series Thin-Wall Heat-Shrinkable Tubing



CAT. NO.	MIN. EXPANDED I.D. (IN.)	MAX RECOVERED I.D. (IN.)	NOMINAL RECOVERED WALLED (IN.)	CODE CABLE SIZE	STANDARD LENGTH (IN.)	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 AWG	50	1
CHS34B	.75	.38	.04	#1-3/0 AWG	250	1
CHS100	1.00	.50	.04	4/0 AWG-300 kcmil	25	1
CHS100B	1.00	.50	.04	4/0 AWG-300 kcmil	100	1
CHS112	1.50	.75	.04	350-700 kcmil	25	1
CHS112B	1.50	.75	.04	350-700 kcmil	100	1
CHS200	2.00	1.00	.05	750-1000 kcmil	25	1
CHS200B	2.00	1.00	.05	750-1000 kcmil	100	1

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



CHS Series Specifications

PROPERTY	TEST METHOD	TYPICAL PERFORMANCE
Physical		
• 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 PERFORMANCE
Electrical		
• Dielectric Strength	ASTM D2671, IEC 243	600V/Mil (24kV/mm)
• Volume Resistivity	ASTM D2671	1016 ohm-cm
Chemical		
• Fluid Resistance	MIL-DTL-23053, ISO 1817, ISO 37	Good to Excellent
• Copper Corrosion	ASTM D2671	No Corrosion
• Water Absorption	ASTM D570	.3%
• Fungus Resistance	ASTM G21	No Growth