

# Heat Shrink Tubing

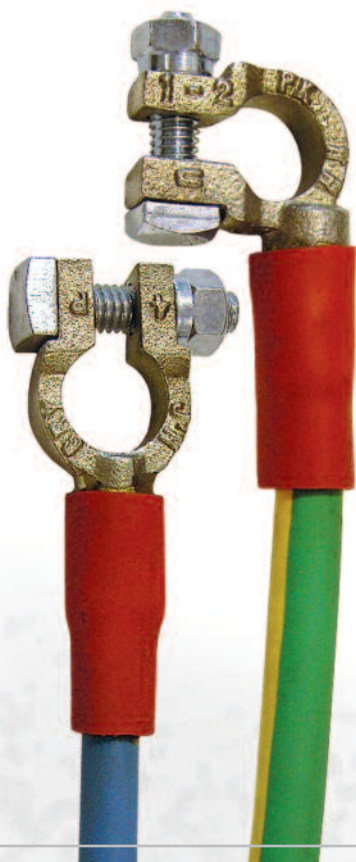
HEAT SHRINK

## Precut Heat Shrink Tubing

ORDER ONLINE



Precut to 1.5" in length. 3 to 1 shrink ratio is ideal for sealing battery cable ends.



### Medium Duty

Part Number	Description	Outside Diameter	Wire Sizes
HSRED	Red connection tubing	.75"	#1 - #8
HSBLK	Black connection tubing	.75"	#1 - #8
HSRED-1	Red connection tubing	1.0"	4/0 - 1/0
HSBLK-1	Black connection tubing	1.0"	4/0 - 1/0

### Heavy Duty

Part Number	Description	Outside Diameter	Wire Sizes
HSREDHD	Red connection tubing	.75"	#1 - #8
HSBLKHD	Black connection tubing	.75"	#1 - #8
HSREDHD-1	Red connection tubing	1.0"	4/0 - 1/0
HSBLKHD-1	Black connection tubing	1.0"	4/0 - 1/0

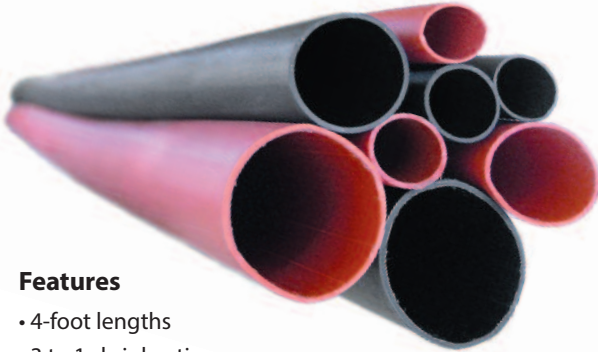


3 to 1  
shrink  
ratio



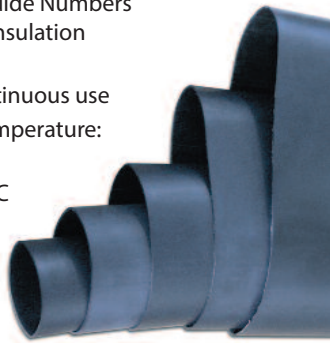
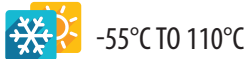
# Heavy Wall Heat Shrink Tubing

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## Features

- 4-foot lengths
- 3 to 1 shrink ratio
- High impact, abrasion, corrosion, and chemical resistance capable of withstanding the severe mechanical requirements of submersible and direct burial installations
- 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
- Rated for 600 V, 90°C continuous use
- Continuous operating temperature: -55°C to 110°C
- Shrink temperature: 120°C



## Technical Data

PHYSICAL PROPERTY	Test Method	Typical Performance
Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5 MPa)
Elongation	ASTM D412, ISO 37	600%
Elongation after heat aging (168 hours at 175°C)	ASTM D2671, ISO 37	500% (250%)
Longitudinal change on recovery	ASTM D2671	+1%, -10%
Specific Gravity	ASTM D792	1.1
Heat shock (4 hours at 255°C)	ASTM D2671	No cracking or flowing
Low temperature flexibility (4 hours 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 PROPERTY</b>		
Dielectric Strength	ASTM D149	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500V, 60Hz, 1 min.)	UL 486D	No breakdown, 24kV - 1 Min. 15kV - 4 hrs.
Volume Resistivity	ASTM D257	1016 ohm-cm
<b>CHEMICAL PROPERTY</b>		
Fluid Resistance	MIL-DTL-23053/15	Good to excellent
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.2%
Fungus Resistance	ASTM G21	No growth
<b>ADHESIVE PROPERTY</b>		
Adhesive softening point	ASTM E28	92°C +/- 5°C
Adhesive peel strength (300mm/min at 23°C)		
- to steel, aluminum, P.E.	ASTM D1000	35 pli
- to PVC	ASTM D1000	20 pli
Adhesive lap shear (1in./min at 23°C)	ASTM D1002	125 psi (0.875 MPa)
Adhesive Blocking (30°C)	ASTM D1146	No blocking
Adhesive water absorption	ASTM D570	less than 0.3%
Water penetration	STM 706	No penetration after 236 hrs of continuous immersion.

## CFW - Heavy Wall Adhesive Lined Crosslinked Polyolefin

Part Number	Expanded Min. Internal Diameter (D)		Recovered Max. Internal Diameter (d)		Recovered Nominal Wall Thickness (w)		General use Application Range		600/1000V Single Conductor Size AWG/MCM	Standard Lengths	
	mm	IN	mm	IN	mm	IN	mm	IN		M	IN
CFW-0350-BK	8.9	0.35	3.0	0.12	1.8	0.07	3.5-8	.15-.3	14 - 10	1.2	48
CFW-0350-RD	8.9	0.35	3.0	0.12	1.8	0.07	3.5-8	.15-.3	14 - 10	1.2	48
CFW-0500-BK	13.0	0.51	4.1	0.16	2.4	0.09	4.5-11	.2-.45	8 - 6	1.2	48
CFW-0500-RD	13.0	0.51	4.1	0.16	2.4	0.09	4.5-11	.2-.45	8 - 6	1.2	48
CFW-0750-BK	19.1	0.75	6.1	0.24	2.4	0.09	6.5-16.5	.25-.65	6 - 2	1.2	48
CFW-0750-RD	19.1	0.75	6.1	0.24	2.4	0.09	6.5-16.5	.25-.65	6 - 2	1.2	48
CFW-1100-BK	27.9	1.10	8.9	0.35	3.0	0.12	10-24	.4-.95	1 - 4/0	1.2	48
CFW-1100-RD	27.9	1.10	8.9	0.35	3.0	0.12	10-24	.4-.95	1 - 4/0	1.2	48
CFW-1500-BK	38.1	1.50	11.9	0.47	4.1	0.16	13-35	.5-1.4	2/0 - 350	1.2	48
CFW-1500-RD	38.1	1.50	11.9	0.47	4.1	0.16	13-35	.5-1.4	2/0 - 350	1.2	48
CFW-2000-BK	50.8	2.00	16.0	0.63	4.1	0.16	17.5-.44	.7-1.75	250 - 500	1.2	48
CFW-2700-BK	68.1	2.70	22.1	0.87	4.1	0.16	24-59	.95-.23	600 - 100	1.2	48
CFW-3500-BK*	89.9	3.54	30.0	1.18	4.1	0.16	33-80	1.3-3.1	800 - 125	1.2	48
CFW-4700-BK*	119.9	4.72	39.9	1.57	4.2	0.17	44-104	1.75-4.1	1500 - 2500	1.2	48

\*CFW 3500 and CFW 4700 are not UL or CSA Listed



## Ordering Guidelines

Select a dimension which will shrink snugly over the component to be covered. If recovery is restricted the resultant wall thickness will be less than specified.

CFW Heat Shrink Tubing is available in Black (BK) and Red (RD).

# Heat Shrink Tubing Heat Shrink Variety Packages

HEAT SHRINK

## Dual Wall Heat Shrink Tubing

Dual wall adhesive lined heat shrink tubing with environmental sealing capability is ideal for a variety of applications including automotive and marine wire harness bundles, industrial splices, breakouts, and connector to cable transitions.

### Features

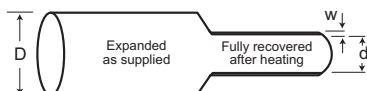
- Flame retardant
- Superior sealing against water and contaminants
- High 3 to 1 shrink ratio allows for coverage of irregularly shaped connectors and components
- Inner adhesive bonds to plastics, rubber, copper, steel, neoprene, and polyethylene
- Continuous operating temperature: -55°C to 110°C
- Shrink temperature: 120°C
- Flexible



-55°C TO 110°C

### Applications

- Industrial, electronic, and automotive OEM approvals
- Environmental sealing and strain relief of connectors and terminals
- Moisture sealing and electrical insulation of simple inline splices
- Abrasion resistance for tubes and pipes
- Repair of damaged wire harnesses



### Ordering Guidelines

Select a dimension which will shrink snugly over the component to be covered. If recovery is restricted the resultant wall thickness will be less than specified.

### CPA 100 - Dual Wall Adhesive Lined Crosslinked Polyolefin

Base Part Number	Expanded Minimum Internal Diameter (D)		Recovered Maximum Internal Diameter (d)		Recovered Total Nominal Wall Thickness (w)		Recovered Melttable Nominal Wall Thickness		Standard Lengths
	mm	IN	mm	IN	mm	IN	mm	IN	
CPA-0125	3.2	1/8	1.0	0.040	1.0	0.040	0.5	0.020	12, 48
CPA-0187	4.7	3/16	1.5	0.060	1.0	0.040	0.5	0.020	12, 48
CPA-0250	6.4	1/4	2.0	0.080	1.0	0.040	0.5	0.020	12, 48
CPA-0375	9.5	3/8	3.2	0.125	1.5	0.060	0.7	0.027	12, 48
CPA-0500	12.7	1/2	4.1	0.160	1.8	0.070	0.8	0.030	12, 48
CPA-0750	19.1	3/4	6.4	0.250	1.8	0.070	0.8	0.030	12, 48
CPA-1000	25.4	1	8.1	0.320	2.5	0.100	1.0	0.040	12, 48
CPA-1250	31.8	1 1/4	10.6	0.416	2.5	0.100	1.0	0.040	48
CPA-1500	39.9	1 1/2	13.0	0.510	2.5	0.100	1.0	0.040	48

ORDER ONLINE

### 48" Cut Length

Part Number	Diameter	Color
CPA-0125-BK-48	1/8"	Black
CPA-0125-CL-48	1/8"	Clear
CPA-0125-RD-48	1/8"	Red
CPA-0187-BK-48	3/16"	Black
CPA-0187-BL-48	3/16"	Blue
CPA-0187-CL-48	3/16"	Clear
CPA-0187-GR-48	3/16"	Green
CPA-0187-RD-48	3/16"	Red
CPA-0187-WT-48	3/16"	White
CPA-0187-YL-48	3/16"	Yellow
CPA-0250-BK-48	1/4"	Black
CPA-0250-BN-48	1/4"	Brown*
CPA-0250-OR-48	1/4"	Orange*
CPA-0250-BL-48	1/4"	Blue
CPA-0250-CL-48	1/4"	Clear
CPA-0250-GR-48	1/4"	Green
CPA-0250-RD-48	1/4"	Red
CPA-0250-WT-48	1/4"	White
CPA-0250-YL-48	1/4"	Yellow
CPA-0375-BK-48	3/8"	Black
CPA-0375-BL-48	3/8"	Blue
CPA-0375-CL-48	3/8"	Clear
CPA-0375-GR-48	3/8"	Green
CPA-0375-RD-48	3/8"	Red
CPA-0375-WT-48	3/8"	White
CPA-0375-YL-48	3/8"	Yellow
CPA-0500-BK-48	1/2"	Black
CPA-0500-BL-48	1/2"	Blue
CPA-0500-CL-48	1/2"	Clear
CPA-0500-GR-48	1/2"	Green
CPA-0500-RD-48	1/2"	Red
CPA-0500-WT-48	1/2"	White
CPA-0500-YL-48	1/2"	Yellow
CPA-0750-BK-48	3/4"	Black
CPA-0750-BL-48	3/4"	Blue
CPA-0750-CL-48	3/4"	Clear
CPA-0750-GR-48	3/4"	Green
CPA-0750-RD-48	3/4"	Red
CPA-0750-WT-48	3/4"	White
CPA-0750-YL-48	3/4"	Yellow
CPA-1000-BK-48	1"	Black
CPA-1000-BL-48	1"	Blue
CPA-1000-CL-48	1"	Clear
CPA-1000-GR-48	1"	Green
CPA-1000-RD-48	1"	Red
CPA-1000-WT-48	1"	White
CPA-1000-YL-48	1"	Yellow
CPA-1250-BK-48	1 1/4"	Black
CPA-1250-RD-48	1 1/4"	Red
CPA-1500-BK-48	1 1/2"	Black
CPA-1500-BL-48	1 1/2"	Blue
CPA-1500-CL-48	1 1/2"	Clear
CPA-1500-GR-48	1 1/2"	Green
CPA-1500-RD-48	1 1/2"	Red
CPA-1500-WT-48	1 1/2"	White
CPA-1500-YL-48	1 1/2"	Yellow

\*Special Order

### 12" Cut Length

Part Number	Diameter	Color
CPA-0125-BK-12	1/8"	Black
CPA-0125-CL-12	1/8"	Clear
CPA-0125-RD-12	1/8"	Red
CPA-0187-BK-12	3/16"	Black
CPA-0187-CL-12	3/16"	Clear
CPA-0187-RD-12	3/16"	Red
CPA-0250-BK-12	1/4"	Black
CPA-0250-CL-12	1/4"	Clear
CPA-0250-RD-12	1/4"	Red
CPA-0375-BK-12	3/8"	Black
CPA-0375-CL-12	3/8"	Clear
CPA-0375-RD-12	3/8"	Red
CPA-0500-BK-12	1/2"	Black
CPA-0500-CL-12	1/2"	Clear
CPA-0500-RD-12	1/2"	Red
CPA-0750-BK-12	3/4"	Black
CPA-0750-CL-12	3/4"	Clear
CPA-0750-RD-12	3/4"	Red
CPA-1000-BK-12	1"	Black
CPA-1000-CL-12	1"	Clear
CPA-1000-RD-12	1"	Red

## CPA Heat Shrink Size Variety Packs



**CALL TO ORDER**

- 10 pieces in 12" lengths
- 2 each of 0.125 (1/8"), 0.25 (1/4"), 0.375 (3/8"), 0.50 (1/2"), and 0.75 (3/4")
- Shrinks 3:1 ratio
- Adhesive lined
- Dual wall

**CPA Various Sizes**

Part Number	Diameter	Color
HS-CPA-BK-PKG	1/8" to 3/4"	● Black
HS-CPA-RD-PKG	1/8" to 3/4"	● Red

## CPA Heat Shrink Color Variety Packs

**CALL TO ORDER**

- 10 pieces in 12" lengths
- 2 each of black, red, and clear
- 1 each of white, green, blue, yellow
- Shrinks 3:1 ratio
- Adhesive lined
- Dual wall



**1/4" CPA Various Colors**

Part Number	Diameter	Colors
HS-CPA-250-PKG	1/4"	● Black ○ White ● Red ● Green ○ Clear ● Blue ● Yellow

**3/8" CPA Various Colors**

Part Number	Diameter	Colors
HS-CPA-375-PKG	3/8"	● Black ○ White ● Red ● Green ○ Clear ● Blue ● Yellow

**1/2" CPA Various Colors**

Part Number	Diameter	Colors
HS-CPA-500-PKG	1/2"	● Black ○ White ● Red ● Green ○ Clear ● Blue ● Yellow



**Heat Shrink Service Kits available**  
See page 84

## CFW Heavy Wall Heat Shrink Size Variety Packs

**CALL TO ORDER**



- 10 pieces in 12" lengths
- 3 each of 0.350" (~3/8"), 0.50" (1/2"), and 0.75" (3/4")
- 1 of 1.1" (~1")
- Shrinks 3:1 ratio
- Adhesive lined
- Heavy Duty

**CFW Various Sizes**

Part Number	Diameter	Color
HS-CFW-BK-PKG	3/8" to 1"	● Black
HS-CFW-RD-PKG	3/8" to 1"	● Red

**Custom Heat Shrink Packs**

*Need specific types, colors, or sizes?  
We configure custom variety packs with the shrinks you use most. Give us a call!*