

Thin-wall heat-shrinkable tubing

CPO Series



2:1 Shrink ratio

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 and CSA standards; MIL-DTL-23053/ 5 Class 1 and 2; AMS 3636 and 3637; DEF STAN 59-97, Issue 3, Type 2a
- Shelf life 5 years from date of manufacture
- UV rated (ASTM G53)

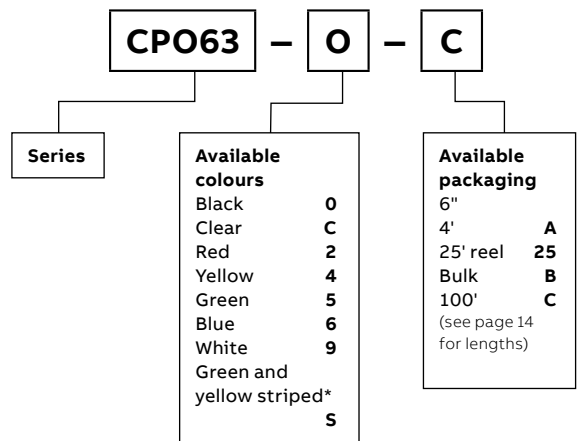
Thin-wall heat-shrinkable tubing

Cat. no.*	Min. expanded I.D. (in.)	Max. recovered I.D. (in.)	Nom. recovered wall thickness (in.)	Code cable size (AWG) or kcmil
CPO63-_-_-	0.06	0.03	0.02	-
CPO93-_-_-	0.09	0.05	0.02	-
CPO125-_-_-	0.13	0.06	0.02	#24-#30
CPO187-_-_-	0.18	0.09	0.02	#14-#22
CPO250-_-_-	0.25	0.13	0.03	#10-#16
CPO375-_-_-	0.38	0.19	0.03	#6-#12
CPO500-_-_-	0.50	0.25	0.03	#1-#6
CPO750-_-_-	0.75	0.38	0.03	4/0-#2
CPO1000-_-_-	1.00	0.50	0.04	350-2/0
CPO1250-_-_-	1.25	0.625	0.04	1/0-350
CPO1500-_-_-	1.50	0.75	0.04	2/0-500
CPO2000-_-_-	2.00	1.00	0.045	250-1,000

*See catalogue construction to complete.
 UL Recognized and CSA Certified. (NOTE: Clear material not UL Recognized).
 When ordering standard package, order by package not feet.
 Larger diameters available upon special request; contact your regional sales office.
 Order multiple for 4' sticks is 25 sticks.
 Order multiple for reels is 1 reel.

Series	Bulk length (ft)	Series	Bulk reel length (ft)
CPO63 = 1/16 in.	1,000	CPO500 = 1/2 in.	500
CPO93 = 3/32 in.	1,000	CPO750 = 3/4 in.	200
CPO125 = 1/8 in.	1,000	CPO1000 = 1 in.	100
CPO187 = 3/16 in.	1,000	CPO1250 = 1 1/4 in.	100
CPO250 = 1/4 in.	500	CPO1500 = 1 1/2 in.	100
CPO375 = 3/8 in.	500	CPO2000 = 2 in.	100

Catalogue number construction



Final order no.
 CPO63-0-C

* Contact your regional sales office for bulk reel quantity

Cat. no.	Min. expanded I.D. (in.)	Max. recovered I.D. (in.)	Nom. recovered wall thickness (in.)	Std. pkg. qty.
CPO63-0-6	0.06	0.03	0.02	20
CPO93-0-6	0.09	0.05	0.02	20
CPO125-0-6	0.13	0.06	0.02	20
CPO187-0-6	0.19	0.09	0.02	20
CPO250-0-6	0.25	0.13	0.03	20
CPO375-0-6	0.38	0.19	0.03	20
CPO500-0-6	0.50	0.25	0.03	10
CPO750-0-6	0.75	0.38	0.03	10
CPO1000-0-6	1.00	0.50	0.04	5

Order multiple is std. pkg.
 Catalogue numbers listed are black colour;
 other colours available upon request.
 Contact your regional sales office.

Thin-wall heat-shrinkable tubing



Shrink-Kon thin-wall heat-shrink kits feature useful colours and sizes in a convenient resealable storage box.

Now brought to you in colour! Shrink-Kon's thin-wall heat-shrink kit features a large assortment of practical colours and sizes for your demanding jobs. Great for identification and adding a professional finishing touch on wire termination projects.

- Over 43 ft. (13 m) of multi-coloured polyolefin thin-wall heat-shrink tubing
- Convenient plastic kit for single storage location
- Individual 6 in. (15 cm) pieces for easy installation
- 2:1 shrink ratio
- UL recognized and CSA certified
- Wide range of sizes – $\frac{3}{16}$ in. (9 mm) to 1 in. (25 mm)

CHS-KIT thin-wall insulation kit

Cat. no.	Description	Weight each kit	UPC code
CHS-KIT	43' (13 m) Assorted colours, sizes – thin-wall heat-shrink tubing in plastic reusable case	1 lb / 0.45 kg	76821092835

Products included in CHS-KIT

Cat. no.	Size in. (mm)	Qty/kit	Colour quantity per kit						
			Black	Clear	Blue	Yellow	Red	Green	White
CPO187+	$\frac{3}{16}$ (5)	36	6	6	4	4	6	4	6
CPO250+	$\frac{1}{4}$ (6)	24	6	4	2	2	4	2	4
CPO375+	$\frac{3}{8}$ (9)	12	2	2	2	–	2	2	2
CPO500+	$\frac{1}{2}$ (12)	6	1	1	1	–	1	1	1
CPO750+	$\frac{3}{4}$ (19)	4	1	1	–	–	1	–	1
CPO1000+	1 (25)	4	1	1	–	–	1	–	1

+Actual catalogue numbers require suffix for appropriate colour

Thin-wall heat-shrinkable tubing



The original black version HS-KIT

- Over 37 ft. (11 m) of black polyolefin thin-wall heat-shrink tubing
- Convenient plastic kit for single storage location
- Individual 6 in. (15 cm) pieces for easy installation
- 2:1 shrink ratio
- UL recognized and CSA certified

HS-KIT thin-wall insulation kit

Cat. no.	Description	Weight each kit	UPC code
HS-KIT	37' (11 m) assorted sizes – black colour thin-wall heat-shrink tubing in plastic reusable case	1 lb /0.45 kg	76821093898

Products included in HS-KIT

Cat. no.	Size in. (mm)	Qty./kit
CPO187-0-6	$\frac{3}{16}$ (5)	32
CPO250-0-6	$\frac{1}{4}$ (6)	20
CPO375-0-6	$\frac{3}{8}$ (9)	8
CPO500-0-6	$\frac{1}{2}$ (12)	6
CPO750-0-6	$\frac{3}{4}$ (19)	4
CPO1000-0-6	1 (25)	4

Thin-wall heat-shrinkable tubing

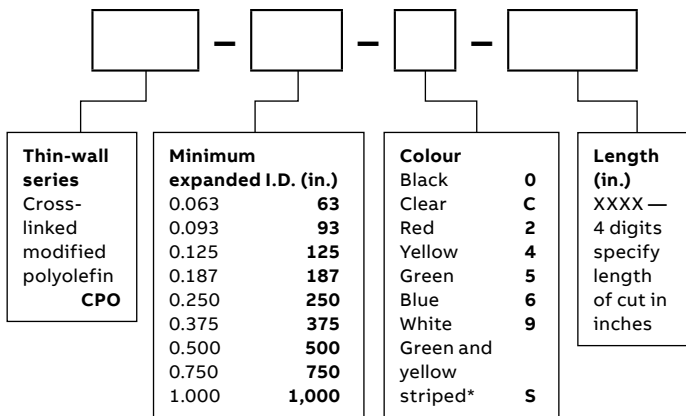


2:1 Shrink ratio
Custom order lengths for those special jobs.
Custom-cut length of bulk packaging –
Thin-wall tubing

To best meet your requirements for thin-wall heat-shrinkable tubing, ABB 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 ½ in. 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.

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 Cut piece catalogue no. construction



Example 1

If a bulk length of tubing is 1,000 ft. and the desired length of each individual piece is 6 in., 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 2,000 ÷ 6
 Total number of 6 in. pieces in a 1,000' reel (minimum order) 2,000

Example 2

If a bulk reel of tubing is 400 ft. and the desired length of each individual piece is 2 in., 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 in. pieces in a 400' reel (minimum order) 2,400

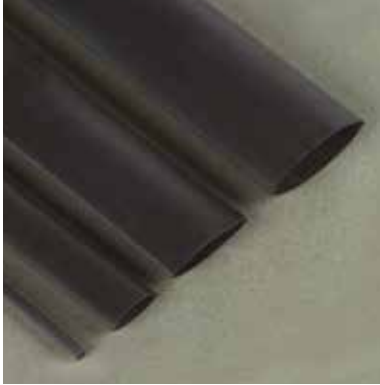
Contact your regional sales office for pricing and availability on cut pieces.

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 CPO Series specifications

Property	Test method	Typical performances
Physical		
Tensile strength	ASTM D412, ISO 37	2,200 psi (15.0 MPa)
Elongation		400%
Longitudinal change	ASTM D2671	+1%, -10%
2% Secant modulus		16,000 psi (110 MPa)
Specific gravity	ASTM D792, ISO/R1183	1.3 in. (colours) 0.95 in. (clear)
Restricted shrinkage	ASTMD2671	No cracking
Elongation after heat aging (168 hrs. at 175 °C)		350%
Heat shock (4 hrs. at 250 °C)		No cracking or flowing
Low temperature flexibility (4 hrs. at -55 °C)		No cracking or splitting
Flammability		Flame-retardant (except clear)
Electrical		
Dielectric strength	ASTM D2671, IEC 243	600 V/mil (24 kV/mm)
Volume resistivity	ASTM D2671	1,016 ohm-cm
Chemical		
Fluid resistance	MIL-DTL-23053/5, ISO 1817, ISO 37	Good to excellent
Fungus resistance	ASTM G21	No growth
Copper corrosion	ASTM D2671	No corrosion
Water absorption	ASTM D570	0.2%

Thin-wall heat-shrinkable tubing

CPO-A Series



3:1 Shrink ratio

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
- UV rated (ASTM G53)

Thin-wall heat-shrinkable tubing

Cat. no.	Min. expanded I.D. (in.)	Max. expanded I.D. (in.)	Nom. recovered wall (in.)	Code cable size (AWG)	Standard length (in.)	Std. pkg. qty.
CPO-A-125-48	0.13	0.02	0.04	#24-#30	48	25
CPO-A-187-48	0.18	0.06	0.05	#14-#22	48	25
CPO-A-250-48	0.25	0.08	0.05	#10-#22	48	25
CPO-A-375-48	0.38	0.14	0.05	#6-#16	48	25
CPO-A-500-48	0.50	0.19	0.07	#2-#12	48	25
CPO-A-750-48	0.75	0.31	0.07	3/0-#4	48	25

Note: Non-standard colours, sizes and lengths available subject to your regional sales office quotation.
Standard colour: Black

CPO-A Series specifications

Property	Test method	Typical performances
Physical		
Tensile strength	ASTM D412, ISO 37	2,200 psi (15.0 MPa)
Elongation	ASTM D412, ISO 37	400%
Heat shock (4 hrs. at 250 °C)	ASTM D2671	No cracking or flowing
Longitudinal change	ASTM D2671	±5%
Low temperature flexibility (4 hrs. at -55 °C)	ASTM D2671	No cracking
Specific gravity	ASTM D792, ISO/R1183	1.1
2% Secant modulus	ASTM D2671	1600 psi (110 MPa)
Heat-resistant properties (168 hrs. at 175 °C)	MIL-DTL-23053/4	240%
Flammability	ASTM D2671	Moderately flame retardant
Electrical		
Dielectric strength	ASTM D2671, IEC 243	600 V/mil (24 kV/mm)
Volume resistivity	ASTM D2671	1016 ohm-cm
Chemical		
Fluid resistance	MIL-DTL-23053/5, ISO 1817, ISO 37	Good to excellent
Fungus resistance	ASTM G21	No growth
Copper corrosion	ASTM D2671	No corrosion
Water absorption	ASTM D570	0.2%

Thin-wall heat-shrinkable tubing

CHS Series – Clear thin-wall PVC heat shrink



Thin-wall heat-shrinkable tubing

- Clear shrink enables user to inspect die and crimp details after installation
- Flexible PVC tubing is suitable for industrial and electronic applications
- UL Listed, VW-1 rated
- CSA certified
- Flame-retardant
- Low shrink temperature of 110 °C
- Dielectric strength — 600 V/mil



	Cat. no.	Min. expanded I.D. (in.)	Max. recovered I.D. (in.)	Nominal recovered wall (in.)	Code cable size (AWG) or kcmil	Std. length (ft.)	Std. pkg. qty.
	CHS18	0.13	0.06	0.02	#22-#18	50	1
	CHS18B	0.13	0.06	0.02	#22-#18	250	1
	CHS14	0.25	0.13	0.03	#16-#10	50	1
	CHS14B	0.25	0.13	0.03	#16-#10	250	1
	CHS38	0.38	0.19	0.03	#8-#6	50	1
	CHS38B	0.38	0.19	0.03	#8-#6	250	1
	CHS12	0.50	0.25	0.03	#4-#2	50	1
	CHS12B	0.50	0.25	0.03	#4-#2	250	1
	CHS34	0.75	0.38	0.04	#1-3/0	50	1
	CHS34B	0.75	0.38	0.04	#1-3/0	250	1
	CHS100	1.00	0.50	0.04	4/0-300	25	1
	CHS100B	1.00	0.50	0.04	4/0-300	100	1
	CHS112	1.50	0.75	0.04	350-700	25	1
	CHS112B	1.50	0.75	0.04	350-700	100	1
CHS200	2.00	1.00	0.04	750-1,000	25	1	
CHS200B	2.00	1.00	0.05	750-1,000	100	1	

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

CHS Series specifications

Property	Test method	Typical performances
Physical		
Tensile strength	ASTM D412, ISO 37	3,300 psi (23.0 MPa)
Elongation	ASTM D412, 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 hrs. at 10 °C)	ASTM D2671	No cracking or slitting
Flammability	ASTM D2671	Self-extinguishing
Electrical		
Dielectric strength	ASTM D2671, IEC 243	600 V/mil (24 kV/mm)
Volume resistivity	ASTM D2671	1,016 ohm-cm
Chemical		
Fluid resistance	MIL-DTL-23053/5, ISO 1817, ISO 37	Good to excellent
Fungus resistance	ASTM G21	No growth
Copper corrosion	ASTM D2671	No corrosion
Water absorption	ASTM D570	0.3%