

HEAT SHRINK PRODUCT

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CB-HFT600- HALOGEN FREE HEAT-SHRINKABLE TUBING



CB-HFT600 is halogen-free, flexible, flame retardant heat-shrinkable tubing. This tubing is free of Pb, Cd, Hg, Cr+6, PBB and PBDE. CB-HFT can be used in any enclosed area where a flame-retardant, halogen-free environment is required, such as Metro, skyscraper, mass transit vehicles and

ships. The product is UL recognized at 600V and the file No is E180908. All are F mark.

SPECIFICATIONS

Item		Specifications
Shrink Temperature(°C)		90
Temperature Range(°C)		-55 ~ 125
Radial Shrinking Ratio(%)		≥50
Longitudinal Change(%)		≤5
Tensile Strength(MPa)		≥10.4
Ultimate Elongation (%)		≥200
Aging in Circulating-air Oven		158.0±1.0°C, 168hrs
After aging	Tensile Strength(MPa)	≥7.3
	Ultimate Elongation (%)	≥100
Volume Resistivity(Ω.cm)		≥10 ¹⁴ sup>
Dielectric Strength(@1 min, AC2500V)		No Breakdown
Flammability		VW-1
Concentricity(%)		≥65

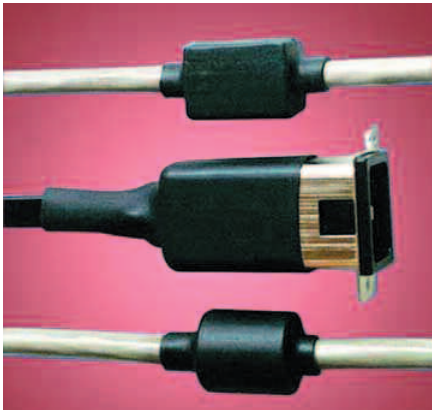
SIZE IN INCHES

SIZE (Inch)	As supplied (mm)		After Recovery (mm)	
	MIN ID	WALL	MAX ID	WALL
3/64"	1.2	0.18±0.05	≤0.6	0.30±0.05
1/16"	1.6	0.18±0.05	≤0.8	0.32±0.05
3/32"	2.4	0.18±0.05	≤1.00	0.35±0.05
1/8"	3.2	0.20±0.05	≤1.5	0.38±0.05
3/16"	4.8	0.23±0.05	≤2.0	0.45±0.05
1/4"	6.4	0.25±0.05	≤3.0	0.50±0.05
3/8"	9.5	0.30±0.08	≤4.5	0.60±0.08
1/2"	12.7	0.30±0.08	≤6.0	0.60±0.08
3/4"	19.1	0.40±0.12	≤10.0	0.75±0.12
1"	25.4	0.45±0.12	≤12.5	0.90±0.12
1-1/4"	31.8	0.45±0.12	≤15.0	0.90±0.12
1-1/2"	38.1	0.50±0.15	≤21	1.00±0.30
2"	50.8	0.50±0.15	≤27	1.00±0.30
3"	≥80	0.70±0.30	≤40.0	1.45±0.25
4"	≥100	0.70±0.30	≤50.0	1.45±0.25

SIZE IN MM

Size	As Supplied (mm)		After Recovery (mm)	
	Inside Diameter	Wall Thickness	Inside Diameter	Wall Thickness
ø0.8	1.3±0.2	0.15±0.05	≤0.45	0.28±0.05
ø1.0	1.5±0.2	0.18±0.05	≤0.6	0.30±0.05
ø1.5	2.0±0.2	0.18±0.05	≤0.8	0.32±0.05
ø2.0	2.5±0.2	0.18±0.05	≤1.00	0.35±0.05
ø2.5	3.0±0.2	0.20±0.05	≤1.25	0.38±0.05
ø3.0	3.5±0.3	0.20±0.05	≤1.5	0.38±0.05
ø3.5	4.0±0.3	0.20±0.05	≤1.75	0.38±0.05
ø4.0	4.5±0.3	0.23±0.05	≤2.0	0.45±0.05
ø4.5	4.8±0.3	0.23±0.05	≤2.25	0.45±0.05
ø5.0	5.5±0.3	0.23±0.05	≤2.5	0.45±0.05
ø6.0	6.5±0.4	0.25±0.05	≤3.0	0.50±0.05
ø6.5	7.0±0.4	0.25±0.05	≤3.0	0.52±0.05
ø7.0	7.5±0.4	0.30±0.08	≤3.5	0.60±0.05
ø8.0	8.5±0.3	0.30±0.08	≤4.0	0.60±0.08
ø9.0	9.5±0.4	0.30±0.08	≤4.5	0.60±0.08
ø10	10.5±0.5	0.30±0.08	≤5.0	0.60±0.08
ø11	11.5±0.5	0.30±0.08	≤5.5	0.60±0.08
ø12	12.5±0.5	0.30±0.08	≤6.0	0.60±0.08
ø13	13.5±0.5	0.36±0.12	≤6.5	0.65±0.12
ø14	14.5±0.5	0.36±0.12	≤7.0	0.65±0.12
ø15	15.5±0.5	0.36±0.12	≤7.5	0.65±0.12
ø16	16.5±0.5	0.36±0.12	≤8.0	0.70±0.12
ø17	17.5±0.5	0.36±0.12	≤8.5	0.70±0.12
ø18	18.7±0.5	0.40±0.15	≤9.0	0.75±0.12
ø20	20.6±0.6	0.40±0.15	≤10.0	0.80±0.12
ø22	22.7±0.6	0.40±0.15	≤11.0	0.80±0.12
ø25	25.5±0.7	0.45±0.15	≤12.5	0.90±0.12
ø28	29.2±0.7	0.45±0.15	≤14.0	0.90±0.12
ø30	31.0±0.7	0.45±0.15	≤15.0	0.90±0.12
ø35	≥35	0.50±0.15	≤19	1.00±0.30
ø40	≥40	0.50±0.15	≤21	1.00±0.30
ø50	≥50	0.50±0.15	≤27	1.00±0.30
ø55	≥55	0.50±0.15	≤28	1.00±0.30
ø60	≥60	0.50±0.15	≤31	1.00±0.30
ø70	≥70	0.70±0.30	≤35.0	1.45±0.25
ø80	≥80	0.70±0.30	≤40.0	1.45±0.25
ø90	≥90	0.70±0.30	≤45.0	1.45±0.25
ø100	≥100	0.70±0.30	≤50.0	1.45±0.25Z

CB-HFT (3X/4X)- HEAT-SHRINKABLE TUBING



The CB-HFT(3X/4X) heat shrink tubing has a shrink ratio of 3:1 or 4:1, and is UL approved, which can meet Sony environment substance and RoHS compliance. It is commonly used for protection and marking of specially shaped objects, such as wire terminations and electrical connections, cables and electronics components.

SPECIFICATIONS

Item		Specifications
Shrink Temperature (°C)		90
Temperature Range (°C)		-55 ~ 125
Shrinking Ratio		3:1, 4:1
Longitudinal Change (%)		≤5
Tensile Strength (MPa)		≥10.4
Ultimate Elongation (%)		≥200
Aging in Circulating-air Oven		158.0±1.0°C, 168hrs
After aging	Tensile Strength (MPa)	≥7.3
	Ultimate Elongation (%)	≥100
Volume Resistivity (Ω cm)		≥10 ¹⁴
Dielectric Strength at 1 min, AC2500V		No breakdown
Flammability		VW-1
Concentricity (%)		≥70

SIZE

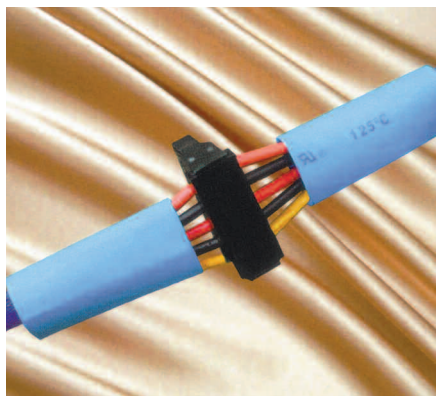
Size of CB-HFT(3X)

Size (Inches)	Size (mm)	As Supplied (mm)		After Recovery (mm)	
		Min. Inside Diameter	Nominal Wall-thickness	Max. Inside Diameter	Wall-thickness
1/16"	1.5/0.5	1.5	0.18±0.08	0.5	0.4±0.1
1/8"	3/1/12	3	0.20±0.08	1	0.55±0.1
3/16"	4.5/1.5	4.5	0.20±0.08	1.5	0.55±0.1
1/4"	6/2/12	6	0.2±0.0	2	0.6±0.15
3/8"	9/3/12	9	0.25±0.0	3	0.7±0.15
1/2"	12/4/12	12	0.25±0.1	4	0.7±0.15
5/8"	15/5	15	0.25±0.1	5	0.7±0.15
11/16"	18/6	18	0.3±0.12	6	0.8±0.2
3/4"	20/6.7	20	0.3±0.12	6.7	0.80±0.2
1"	24/8	24	0.36±0.15	8	1.0±0.2
1-1/4"	30/10	30	0.36±0.15	10	1.0±0.2
1-3/8"	33/11	33	0.36±0.15	11	1.0±0.2
1-1/2"	39/13	39	0.45±0.15	13	1.25±0.2

Size of CB-HFT(4X)

Size (Inches)	Size (mm)	As Supplied (mm)		After Recovery (mm)	
		Inside diameter	Nominal Wall-thickness	Inside diameter	Wall-thickness
3/16"	4/1/12	4.5±0.5	0.30±0.15	≤1.0	0.50±0.10
5/16"	8/2/12	8.5±0.5	0.30±0.15	≤2.0	0.95±0.15
3/8"	10/2/05	10.5±0.5	0.30±0.15	≤2.5	1.00±0.15
1/2"	12/3/12	12.5±0.5	0.30±0.15	≤3.0	1.00±0.15
5/8"	16/4	16.5±0.5	0.30±0.15	≤4.0	1.00±0.15
11/16"	18/4.5	18.5±0.5	0.30±0.15	≤4.5	1.00±0.15
3/4"	20/5	20.5±0.5	0.30±0.15	≤5.0	1.00±0.15
1"	24/6	25.5±0.5	0.40±0.20	≤6.25	1.40±0.20
1-1/4"	32/8	32.5±0.5	0.40±0.20	≤8.0	1.45±0.20

CB- HFT(300)- HEAT-SHRINKABLE TUBING



CB-HFT300 is a kind of very thin-wall, flame-retardant polyolefin heat-shrinkable tubing. It is typically used where rapid shrinking and space saving are important, such as wire terminals and splices, mini switch etc. The products are UL recognized at 125°C, 300V. All are F mark.125°C, 300V.

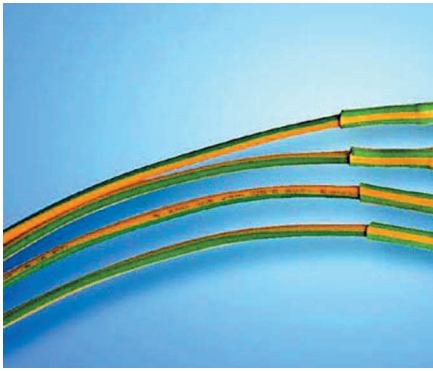
SIZE (INCHES)

Size (Inches)	Size (mm)	As supplied (mm)		After Recovery (mm)	
		MIN ID	WALL	MAX ID	WALL
3/64"	1	1.2	0.10±0.05	≤0.6	0.22±0.03
1/16"	1.5	1.6	0.10±0.05	≤0.75	0.22±0.03
3/32"	2	2.4	0.10±0.05	≤1.0	0.22±0.05
1/8"	3	3.2	0.13±0.05	≤1.5	0.25±0.05
3/16"	4.5	4.8	0.15±0.05	≤2.5	0.32±0.05
1/4"	6	6.4	0.15±0.05	≤3.0	0.32±0.05
3/8"	9	9.5	0.16±0.05	≤4.5	0.36±0.05
1/2"	12	12.7	0.18±0.05	≤6.0	0.36±0.05
5/8"	16	16.5	0.20±0.08	≤8.0	0.40±0.10
3/4"	19.1	20	0.20±0.08	≤10.0	0.42±0.10
7/8"	22.2	23	0.20±0.08	≤11.0	0.42±0.10
1"	25.4	25.5	0.20±0.08	≤12.5	0.42±0.10

SIZE (mm)

Size	As Supplied (mm)		After Recovery (mm)	
	Inside Diameter	Wall-thickness	Inside Diameter	Wall-thickness
ø0.8	1.1±0.2	0.10±0.05	≤0.45	0.22±0.02
ø1.0	1.5±0.3	0.10±0.05	≤0.6	0.22±0.05
ø1.5	2.0±0.3	0.10±0.03	≤0.8	0.22±0.05
ø2.0	2.5±0.3	0.10±0.05	≤1.0	0.22±0.05
ø2.5	3.0±0.3	0.13±0.05	≤1.25	0.25±0.05
ø3.0	3.5±0.4	0.13±0.05	≤1.5	0.28±0.05
ø3.5	4.0±0.4	0.13±0.05	≤1.75	0.30±0.05
ø4.0	4.5±0.4	0.15±0.05	≤2.0	0.32±0.05
ø5.0	5.5±0.4	0.15±0.05	≤2.5	0.32±0.05
ø6.0	6.5±0.4	0.15±0.05	≤3.0	0.32±0.05
ø7.0	7.5±0.4	0.15±0.05	≤3.5	0.32±0.05
ø8.0	8.5±0.5	0.15±0.05	≤4.0	0.32±0.05
ø9.0	9.5±0.5	0.16±0.05	≤4.5	0.36±0.05
ø10	10.5±0.5	0.16±0.05	≤5.0	0.36±0.05
ø11	11.5±0.5	0.18±0.05	≤5.5	0.36±0.05
ø12	12.5±0.5	0.18±0.05	≤6.0	0.36±0.05
ø13	13.5±0.5	0.18±0.05	≤6.5	0.36±0.05
ø14	14.5±0.5	0.18±0.05	≤7.0	0.36±0.05
ø15	15.5±0.5	0.18±0.05	≤7.5	0.36±0.05

CB-HFTYG- YELLOW/GREEN STRIPED HEAT-SHRINKABLE TUBING



CB-HFTYG is a yellow and green striped heat-shrinkable tubing which is flexible, flame-retardant and resistant to common fluids and solvents. This tubing may be used in yellow and green wiring linkage and ground marking.

SPECIFICATIONS

Item		Specifications
Shrink Temperature(°C)		90
Temperature Range(°C)		-55 ~ 125
Radial Shrinking Ratio(%)		≥50
Longitudinal Change(%)		≤5
Tensile Strength(MPa)		≥10.4
Ultimate Elongation (%)		≥200
Aging in Circulating-air Oven		158.0±1.0°C, 168hrs
After aging	Tensile Strength(MPa)	≥7.3
	Ultimate Elongation(%)	≥100
Volume Resistivity(Ω cm)		≥10 ¹⁴
Dielectric Strength(@ 1min, AC2500V)		No Breakdown
Flammability		VW-1
Concentricity(%)		≥70

SIZE IN INCHES

SIZE (Inches)	As supplied (mm)		After Recovery (mm)	
	MIN ID	WALL	MAX ID	WALL
3/64"	1.2	0.18±0.05	≤0.6	0.30±0.05
1/16"	1.6	0.18±0.05	≤0.8	0.32±0.05
3/32"	2.4	0.18±0.05	≤1.00	0.35±0.05
1/8"	3.2	0.20±0.05	≤1.5	0.38±0.05
3/16"	4.8	0.23±0.05	≤2.0	0.45±0.05
1/4"	6.4	0.25±0.05	≤3.0	0.50±0.05
3/8"	9.5	0.30±0.08	≤4.5	0.60±0.08
1/2"	12.7	0.30±0.08	≤6.0	0.60±0.08
5/8"	19.1	0.40±0.12	≤10.0	0.75±0.12
3/4"	25.4	0.45±0.12	≤12.5	0.90±0.12
7/8"	31.8	0.45±0.12	≤15.0	0.90±0.12
1"	38.1	0.50±0.15	≤21	1.00±0.30
2	50.8	0.50±0.15	≤27	1.00±0.30
3	≥80	0.70±0.30	≤40.0	1.45±0.25
4	≥100	0.70±0.30	≤50.0	1.45±0.25

Other sizes are available upon special order.

SIZE IN MM

Size	As Supplied (mm)		After Recovery (mm)	
	Inside Diam.	Wall-thickness	Inside Diam	Wall-thickness
ø0.8	1.3±0.2	0.15±0.05	≤0.45	0.28±0.05
ø1.0	1.5±0.2	0.18±0.05	≤0.6	0.30±0.05
ø1.5	2.0±0.2	0.18±0.05	≤0.8	0.32±0.05
ø2.0	2.5±0.2	0.18±0.05	≤1.00	0.35±0.05
ø2.5	3.0±0.2	0.20±0.05	≤1.25	0.38±0.05
ø3.0	3.5±0.3	0.20±0.05	≤1.5	0.38±0.05
ø3.5	4.0±0.3	0.20±0.05	≤1.75	0.38±0.05
ø4.0	4.5±0.3	0.23±0.05	≤2.0	0.45±0.05
ø4.5	4.8±0.3	0.23±0.05	≤2.25	0.45±0.05
ø5.0	5.5±0.3	0.23±0.05	≤2.5	0.45±0.05
ø6.0	6.5±0.4	0.25±0.05	≤3.0	0.50±0.05
ø6.5	7.0±0.4	0.25±0.05	≤3.0	0.52±0.05
ø7.0	7.5±0.4	0.30±0.08	≤3.5	0.60±0.05
ø8.0	8.5±0.3	0.30±0.08	≤4.0	0.60±0.08
ø9.0	9.5±0.4	0.30±0.08	≤4.5	0.60±0.08
ø10	10.5±0.5	0.30±0.08	≤5.0	0.60±0.08
ø11	11.5±0.5	0.30±0.08	≤5.5	0.60±0.08
ø12	12.5±0.5	0.30±0.08	≤6.0	0.60±0.08
ø13	13.5±0.5	0.36±0.12	≤6.5	0.65±0.12
ø14	14.5±0.5	0.36±0.12	≤7.0	0.65±0.12
ø15	15.5±0.5	0.36±0.12	≤7.5	0.65±0.12
ø16	16.5±0.5	0.36±0.12	≤8.0	0.70±0.12
ø17	17.5±0.5	0.36±0.12	≤8.5	0.70±0.12
ø18	18.7±0.5	0.40±0.15	≤9.0	0.75±0.12
ø20	20.6±0.6	0.40±0.15	≤10.0	0.80±0.12
ø22	22.7±0.6	0.40±0.15	≤11.0	0.80±0.12
ø25	25.5±0.7	0.45±0.15	≤12.5	0.90±0.12
ø28	29.2±0.7	0.45±0.15	≤14.0	0.90±0.12
ø30	31.0±0.7	0.45±0.15	≤15.0	0.90±0.12
ø35	≥35	0.50±0.15	≤19	1.00±0.30
ø40	≥40	0.50±0.15	≤21	1.00±0.30
ø50	≥50	0.50±0.15	≤27	1.00±0.30
ø55	≥55	0.50±0.15	≤28	1.00±0.30
ø60	≥60	0.50±0.15	≤31	1.00±0.30
ø70	≥70	0.70±0.30	≤35.0	1.45±0.25
ø80	≥80	0.70±0.30	≤40.0	1.45±0.25
ø90	≥90	0.70±0.30	≤45.0	1.45±0.25
ø100	≥100	0.70±0.30	≤50.0	1.45±0.25

CB-HFTLS- HEAT-SHRINKABLE TUBING



CB-HFTLS is a halogen-free, highly flexible, low shrink temperature and flame retardant polyolefin heat-shrinkable tubing. A 90°C shrink temperature reduces the operation time and the risk of damage to temperature sensitive components. It can be used in identifying wire bundles and cables, wire terminals and components. Shrinkage starts at 55°C and completes at 90°C.

SPECIFICATIONS

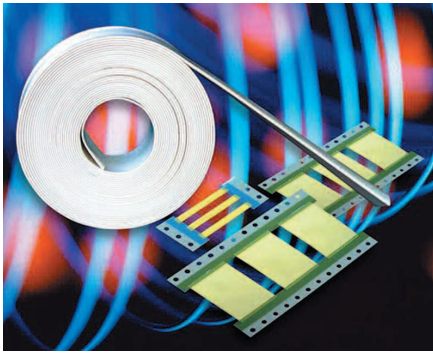
Item		Specifications
Shrink Temperature(°C)		90
Temperature Range(°C)		-55 ~ 125
Radial Shrinking Ratio(%)		≥50
Longitudinal Change(%)		≤5
Tensile Strength(MPa)		≥10.4
Ultimate Elongation (%)		≥200
Aging in Circulating-air Oven		158.0±1.0°C, 168hrs
After aging	Tensile Strength(MPa)	≥7.3
	Ultimate Elongation(%)	≥100
Volume Resistivity(Ω cm)		≥10 ¹⁴
Dielectric Strength(@ 1min, AC2500V)		≥15
Flammability		VW-1
Concentricity(%)		≥70

SIZE IN INCHES

SIZE (Inch)	As supplied (mm)		After Recovery (mm)	
	MIN ID	WALL	MAX ID	WALL
3/64	1.2	0.18±0.05	≤0.6	0.30±0.05
1/16	1.6	0.18±0.05	≤0.8	0.32±0.05
3/32	2.4	0.18±0.05	≤1.00	0.35±0.05
1/8	3.2	0.20±0.05	≤1.5	0.38±0.05
3/16	4.8	0.23±0.05	≤2.0	0.45±0.05
1/4	6.4	0.25±0.05	≤3.0	0.50±0.05
3/8	9.5	0.30±0.08	≤4.5	0.60±0.08
1/2	12.7	0.30±0.08	≤6.0	0.60±0.08
3/4	19.1	0.40±0.12	≤10.0	0.75±0.12
1	25.4	0.45±0.12	≤12.5	0.90±0.12
1-1/4	31.8	0.45±0.12	≤15.0	0.90±0.12
1-1/2	38.1	0.50±0.15	≤21	1.00±0.30
2	50.8	0.50±0.15	≤27	1.00±0.30
3	≥80	0.70±0.30	≤40.0	1.45±0.25
4	≥100	0.70±0.30	≤50.0	1.45±0.25

SIZE IN MM

Size	As Supplied (mm)		After Recovery (mm)	
	Inside Diameter	Wall-thickness	Inside Diameter	Wall-thickness
ø0.8	1.3±0.2	0.15±0.05	≤0.45	0.28±0.05
ø1.0	1.5±0.2	0.18±0.05	≤0.6	0.30±0.05
ø1.5	2.0±0.2	0.18±0.05	≤0.8	0.32±0.05
ø2.0	2.5±0.2	0.18±0.05	≤1.00	0.35±0.05
ø2.5	3.0±0.2	0.20±0.05	≤1.25	0.38±0.05
ø3.0	3.5±0.3	0.20±0.05	≤1.5	0.38±0.05
ø3.5	4.0±0.3	0.20±0.05	≤1.75	0.38±0.05
ø4.0	4.5±0.3	0.23±0.05	≤2.0	0.45±0.05
ø4.5	4.8±0.3	0.23±0.05	≤2.25	0.45±0.05
ø5.0	5.5±0.3	0.23±0.05	≤2.5	0.45±0.05
ø6.0	6.5±0.4	0.25±0.05	≤3.0	0.50±0.05
ø6.5	7.0±0.4	0.25±0.05	≤3.0	0.52±0.05
ø7.0	7.5±0.4	0.30±0.08	≤3.5	0.60±0.05
ø8.0	8.5±0.3	0.30±0.08	≤4.0	0.60±0.08
ø9.0	9.5±0.4	0.30±0.08	≤4.5	0.60±0.08
ø10	10.5±0.5	0.30±0.08	≤5.0	0.60±0.08
ø11	11.5±0.5	0.30±0.08	≤5.5	0.60±0.08
ø12	12.5±0.5	0.30±0.08	≤6.0	0.60±0.08
ø13	13.5±0.5	0.36±0.12	≤6.5	0.65±0.12
ø14	14.5±0.5	0.36±0.12	≤7.0	0.65±0.12
ø15	15.5±0.5	0.36±0.12	≤7.5	0.65±0.12
ø16	16.5±0.5	0.36±0.12	≤8.0	0.70±0.12
ø17	17.5±0.5	0.36±0.12	≤8.5	0.70±0.12
ø18	18.7±0.5	0.40±0.15	≤9.0	0.75±0.12
ø20	20.6±0.6	0.40±0.15	≤10.0	0.80±0.12
ø22	22.7±0.6	0.40±0.15	≤11.0	0.80±0.12
ø25	25.5±0.7	0.45±0.15	≤12.5	0.90±0.12
ø28	29.2±0.7	0.45±0.15	≤14.0	0.90±0.12
ø30	31.0±0.7	0.45±0.15	≤15.0	0.90±0.12
ø35	≥35	0.50±0.15	≤19	1.00±0.30
ø40	≥40	0.50±0.15	≤21	1.00±0.30
ø50	≥50	0.50±0.15	≤27	1.00±0.30
ø55	≥55	0.50±0.15	≤28	1.00±0.30
ø60	≥60	0.50±0.15	≤31	1.00±0.30
ø70	≥70	0.70±0.30	≤35.0	1.45±0.25
ø80	≥80	0.70±0.30	≤40.0	1.45±0.25
ø90	≥90	0.70±0.30	≤45.0	1.45±0.25
ø100	≥100	0.70±0.30	≤50.0	1.45±0.25



CB-HFTTM is used to identify wire and cable, tools, hoses and equipment in operating environments where temperatures range from -55°C to 135°C. It can withstand abrasion and exposure to cleaning solvents and other industrial fluids. Sleeves are flame-retardant and can be used for electrical insulation. This tubing can be custom printed with

words and symbols on both sides by thermal transfer equipment and all markings are permanent after printing. Available in 2:1 and 3:1 shrink ratios and in many different sizes and shapes. Certificate: UL, CUL, F-mark, Sony Green Partner Standard: UL224, AMS-DTL-23053/5, SAE-AS81531, MIL-STD-202 Standard color: flat white and yellow

SPECIFICATIONS

Item	Specifications
Physical performance	
Operation temp	-55°C~135°C
Tensile strength (M Pa)	≥10.3MPa
Ultimate elongation ratio(%)	≥200%
Flexibility (-55°C, 4hrs)	No cracking
Heat shock	No cracking, dripping, flowing
Print performance	
UL 224	50 Rubber erasure, identification
MIL-M-81531-4.6.2	50 Rubber erasure, identification
MIL-STD-202	30 Rubber erasure, identification
Electrical performance	
Dielectric strength	≥19.7KV/mm
Volume Resistance	≥10 ¹⁴ Ωcm
Flammability as per AMS-DTL-23053	Average burn time is <1
Fluid resistance (23°C 24hrs)	Print identified
Tensile strength (MPa)	≥6.5MPa
Ultimate elongation ratio (%)	≥100%
MIL-M-81531-4.6.2	20 rubber erasure, identification

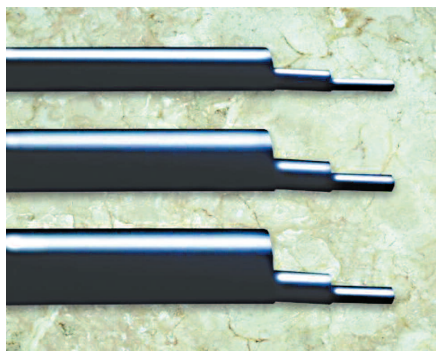
SIZE CB-HFTTM 2X

Size (Inch)	Min Expanded diameter as supplied (mm)	Max diameter After Recovery (mm)	Recommended use range (mm)
3/32	2.4	1.2	1.3-2.0
1/8	3.2	1.6	1.7-2.7
3/16	4.8	2.4	2.5-4.1
1/4	6.4	3.2	3.3-5.5
3/8	9.5	4.8	4.9-8.0
1/2	12.7	6.4	6.5-10.8
3/4	19.1	9.5	9.6-16.3
1	25.4	12.7	12.8-21.6
1-1/2	38.1	19.1	19.2-33.5
2	50.8	25.4	25.5-48

SIZE CB-HFTTM 3X

Size (Inch)	Min Expanded diameter as supplied (mm)	Max diameter After Recovery (mm)	Recommended use range (mm)
3/32	2.4	0.80	0.9-2.0
1/8	3.2	1.07	1.1-2.7
3/16	4.8	1.60	1.8-4.1
1/4	6.4	2.11	2.3-5.5
3/8	9.5	3.2	3.5-8.0
1/2	12.7	4.2	4.7-10.8
3/4	19.1	6.35	7-16.3
1	25.4	8.46	9.3-21.6
1-1/2	38.1	12.7	13-33.5
2	50.8	16.9	17-48

CB-HFT1000- SHRINKABLE TUBING



CB-HFT1000 is low-smoking, halogen-free polyolefin cross-linked heat shrinkable tubing that is designed to meet the specialized requirements of the automotive industry. It has good resistance to oil and is an excellent insulator. This material is very flexible and has excellent mechanical strength, so it is

suitable for a wide range of applications including automotive oil pipes, electronics insulation, wire protection, and any place protection is needed in extreme environments. Sony Green Partner. Standard: UL224, AMS-DTL-23053/5

SPECIFICATIONS

Item	Test method	Standard	Specifications
Operating Temperature Range (°C)			-55 ~ +125
Shrink Temperature			100°C - 140°C
Tensile Strength (MPa)	ASTM D638	≥10.4MPa	14.1MPa
Ultimate Elongation Ratio	ASTM D638	≥200%	329.00%
Dielectric Strength	ASTM D2671	≥19.7kv/mm	26kv/mm
Volume resistivity	ASTM D876	≥1X10 ¹²	3.6X10 ¹⁴ Ω.cm
Longitudinal Shrinkage		-5%~+5%	-4.00%
Radial Shrinkage		≥50%	66.00%
Concentricity		≥50%	73.00%
Aging in circulating – air oven	180±2°C 50hrs		
Tensile Strength	ASTM D638	≥6.9MPa	9.5MPa
Dielectric Strength	ASTM D2671	≥15.8kv/mm	24kv/mm
Heat strike	250±3°C 4hrs	No dropping, No flow, No cracking	pass
Copper corrosion	ASTM D2671	175±2°C 168hrs	No corrosion

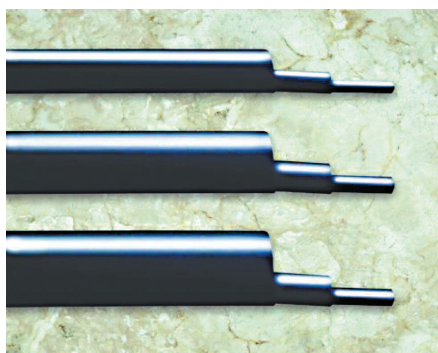
SIZE

Type	Size (Inches)	Inside diameter		
		Min ID as supplied (in mm)	Max ID after recovery (in mm)	Wall after recovery
101	3/164	1.2	0.6	0.41±0.08
102	1/16"	1.6	0.8	0.43±0.08
103	3/1/32	2.4	1.2	0.51±0.08
104	1/8"	3.2	1.6	0.51±0.08
105	3/16"	4.8	2.4	0.51±0.08
106	1/4"	6.4	3.2	0.64±0.08
107	3/8"	9.5	4.75	0.64±0.08
108	1/2"	12.7	6.4	0.64±0.08
109	3/4"	19.1	9.53	0.76±0.08
110	1"	25.4	12.7	0.89±0.13
111	1-1/4"	31.8	15.9	0.95±0.13
112	1-1/2"	38.1	19.1	1.02±0.15
113	2"	50.8	25.4	1.14±0.18
114	3"	76.2	38.1	1.27±0.20
	4"	101.6	50.8	1.4±0.23

HIGH SHRINK RATE

115	1/16"	25.4	7	1.14±0.18
116	1/8"	50.8	14	1.14±0.18
117	3/16"	76.2	20.6	1.14±0.18
118	1/4"	101.6	26.7	1.14±0.18
119	3/8"	25.4	11.7	1.14±0.18
120	1/2"	60.3	17.3	1.14±0.18
121	3/4"	76.2	21.3	1.14±0.18
122	1"	95.3	23.6	1.14±0.18
123	1-1/2"	114.3	36.8	1.14±0.18

CB-HRT- HEAT-RESISTING HEAT-SHRINKABLE TUBING



CB-HRT is a heat-resisting polyolefin heat-shrinkable tubing which is flexible, insulation and resistant to common fluids and solvents. This tubing can be used for electrical insulation and strain relief of components that are exposed to high temperature. This tubing meets UL224 requirements.

SPECIFICATIONS

Item		Specifications
Shrink Temperature		120°C
Temperature Rating		150°C
Radial Shrinking Ratio		≥50%
Longitudinal Change		≤5%
Tensile Strength/MPa		≥10.4mpa
Ultimate Elongation Ratio		≥200%
Aging in Circulating-air Oven		180.0±1.0°C, 168hrs
After aging	Tensile Strength/MPa	≥7.3
	Ultimate Elongation	≥100%
Concentricity		≥65%
Volume Resistivity/Ωcm		≥10 ¹⁴
Dielectric Strength /KV/mm		≥15
Water Absorption		less than 0.4%
Copper Corrosion		No corrosion

Other sizes are available upon special order.

SIZE IN INCHES

SIZE (in inch)	As supplied in mm		After Recovery (mm)	
	MIN ID (in mm)	WALL (in mm)	MIN ID (in mm)	WALL (in mm)
3/64	1.2	0.18±0.05	≤0.6	0.30±0.05
1/16	1.6	0.18±0.05	≤0.8	0.32±0.05
3/32	2.4	0.18±0.05	≤1.00	0.35±0.05
1/8	3.2	0.20±0.05	≤1.5	0.38±0.05
3/16	4.8	0.23±0.05	≤2.0	0.45±0.05
1/4	6.4	0.25±0.05	≤3.0	0.50±0.05
3/8	9.5	0.30±0.08	≤4.5	0.60±0.08
1/2	12.7	0.30±0.08	≤6.0	0.60±0.08
3/4	19.1	0.40±0.12	≤10.0	0.75±0.12
1	25.4	0.45±0.12	≤12.5	0.90±0.12

Other sizes are available upon special order.

SIZE IN MM

Size	As Supplied(mm)		After Recovery(mm)	
	Inside Diam.	Wall-thickness	Inside Diam.	Wall-thickness
ø0.8	1.3±0.2	0.20±0.05	≤0.40	0.40±0.05
ø1.0	1.5±0.2	0.20±0.05	≤0.55	0.40±0.05
ø1.5	2.0±0.2	0.20±0.05	≤0.75	0.42±0.05
ø2.0	2.5±0.2	0.20±0.05	≤1.0	0.44±0.05
ø2.5	3.0±0.2	0.22±0.05	≤1.25	0.47±0.05
ø3.0	3.5±0.2	0.25±0.05	≤1.5	0.50±0.05
ø3.5	4.0±0.3	0.25±0.05	≤1.75	0.50±0.05
ø3.5T	4.0±0.3	0.56±0.05	≤1.75	1.10±0.05
ø4.0	4.5±0.3	0.25±0.05	≤2.0	0.50±0.05
ø4.5	4.8±0.3	0.25±0.05	≤2.0	0.52±0.05
ø5.0	5.5±0.3	0.25±0.05	≤2.5	0.52±0.05
ø6.0	6.5±0.3	0.25±0.05	≤3.0	0.52±0.05
ø6.5	6.8±0.3	0.30±0.05	≤3.0	0.60±0.05
ø7.0	7.5±0.3	0.30±0.05	≤3.5	0.60±0.05
ø7.0T	7.5±0.3	0.40±0.05	≤3.5	0.80±0.05
ø8.0	8.5±0.3	0.36±0.08	≤4.0	0.70±0.08
ø9.0	9.5±0.3	0.36±0.08	≤4.5	0.70±0.08
ø9.0T	9.5±0.3	0.40±0.08	≤4.5	0.80±0.08
ø10	10.5±0.4	0.36±0.08	≤5.0	0.70±0.08
ø11	11.5±0.4	0.36±0.08	≤5.5	0.70±0.08
ø12	12.5±0.4	0.36±0.08	≤6.0	0.70±0.08
ø13	13.5±0.4	0.36±0.12	≤6.5	0.70±0.12
ø14	14.5±0.4	0.36±0.12	≤7.0	0.70±0.12
ø15	15.5±0.4	0.36±0.12	≤7.5	0.70±0.12
ø16	16.5±0.4	0.36±0.12	≤8.0	0.72±0.12
ø17	17.5±0.4	0.36±0.12	≤8.5	0.77±0.12
ø18	18.7±0.5	0.40±0.12	≤9.0	0.77±0.12
ø20	20.6±0.8	0.40±0.12	≤10.0	0.80±0.12
ø22	22.7±0.8	0.46±0.12	≤11.0	0.90±0.12
ø25	25.5±0.8	0.46±0.12	≤12.5	0.90±0.12
ø28	29.2±0.8	0.46±0.12	≤14.0	0.90±0.12
ø30	31.0±0.8	0.46±0.12	≤15.0	1.00±0.12
ø35	≥35	0.50±0.15	≤19	1.00±0.30
ø40	≥40	0.50±0.15	≤21	1.00±0.30
ø50	≥50	0.50±0.15	≤27	1.00±0.30
ø55	≥55	0.50±0.15	≤28	1.00±0.30
ø60	≥60	0.50±0.15	≤31	1.00±0.30

CB-PET- HALOGEN FREE HEAT SHRINKABLE PET FILM



CB-PET is a flexible, halogen free and environmentally more friendly heat shrink film. It is widely used for packing and identification of battery, inductance, and capacitor.

SPECIFICATIONS

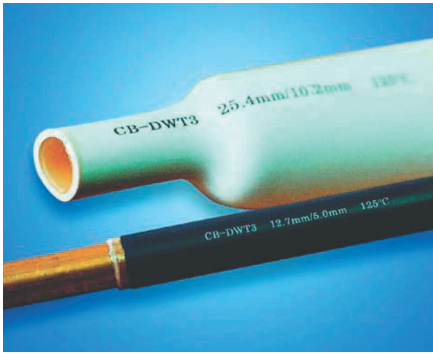
Item	Unit	Specifications
Appearance		Without feculence
Bend (280mm)	mm	At or above size 8.0mm < 3.0 At or under size 10.0mm < 3.5
Density	Kg/L	1.3—1.4
Tensile strength	N/m2	5.0*107---10.0*107
Ultimate elongation rate	%	200---350
Absorption (water)	%	< 2.0%
Dielectric strength	Kv/mm	> 80
Resistivity	Ω	> 10 ⁹
Volume resistivity	Ω.cm	> 10 ¹⁴
Operating temperature range	°C	-40°C — +130°C

SIZE

Size	Width (mm)	Thickness (X0.01mm)	Shrink Ratio (%)	Longitudinal ratio (%)	Longitudinal ratio (180±2) °C X15 min
ø4	7.1±0.2	8.0±1.0	48±2	8±2	12±3
ø5	9.1±0.2	8.0±1.0	48±2	8±2	12±3
ø6	10.6±0.2	8.0±1.0	48±2	8±2	12±3
ø6.3	11.0±0.2	8.0±1.0	48±2	8±2	12±3
ø8	14.0±0.2	10.0±1.0	48±2	8±2	12±3
ø10	17.0±0.2	10.0±1.0	48±2	8±2	12±3
ø13	22.0±0.3	10.0±1.0	48±2	8±2	12±3
ø14.8	25.0±0.3	10.5±1.5	48±2	8±2	12±3
ø16	27.1±0.3	10.5±1.5	48±2	8±2	12±3
ø18	30.2±0.3	10.5±1.5	48±2	8±2	12±3
ø22	36.3±0.3	11.0±2.0	48±2	8±2	12±3
ø25	41.3±0.3	11.0±2.0	48±2	8±2	12±3
ø30	49.0±0.3	11.0±2.0	48±2	8±2	12±3
ø35	56.6±0.3	11.0±2.0	48±2	8±2	12±3

Remark: any size from ø4.0—ø35.0 can be produced on customer's request.

CB-DWT(2X)/(3X)/(4X)- ADHESIVE-LINED HEAT-SHRINKABLE TUBING



CB-DWT is adhesive-lined, flexible, halogen free and flame-retardant poly-olefin heat-shrinkable dual wall tubing. This tubing has good mechanical strength providing protection from fluids, moisture and corrosion. This tubing may be used in a wide variety of electrical applications, including

back end connector sealing, breakouts, and connector-to-cable transitions. High expansion ratio makes it possible to repair most damaged cable jackets without removing connectors. The product is UL recognized and the file No is E180908.

SPECIFICATIONS:

Item		Specifications
Shrink Temperature(°C)		110
Operating Temperature Range(°C)		-55—125
Tensile Strength (MPa)		≥10.4
Ultimate Elongation (%)		≥200
Radial shrinking ratio (%)		≥50
Longitudinal Change (%)		≤10
Aging in Circulating-air Oven		158.0±1.0°C, 168hrs
After Aging	Tensile Strength (MPa)	≥7.3
	Ultimate Elongation (%)	≥100
Dielectric Strength at 1min, AC2500V		No breakdown
Volume Resistivity (Ω cm)		≥10 ¹³
Flammability		VW-1
Water Absorption (%)		Less than 0.4%
Fluid Resistance		Excellent
Copper Corrosion		(No Corrosion)
Softening Point (°C)		120±5°C
Tissue Strength (N/25mm)		>80

SPECIFICATIONS OF CB-DWT

CB-DWT (2X)					
Size	As Supplied		After Recovery		
(Inch)	Min ID(mm)	Nominal Wall (mm)	Max ID (mm)	Total Wall (mm)	Nominal Adhesive Wall (mm)
3/64"	1.2	0.3	0.6	0.45±0.12	0.2
1/16"	1.6	0.3	0.8	0.45±0.12	0.2
3/32"	2.4	0.35	1.2	0.55±0.12	0.3
1/8"	3.2	0.4	1.6	0.60±0.15	0.3
3/16"	4.8	0.4	2.4	0.75±0.15	0.35
1/4"	6.4	0.4	3.2	0.75±0.15	0.35
3/8"	9.5	0.4	4.8	0.80±0.20	0.35
1/2"	12.7	0.4	6.4	0.80±0.20	0.35
3/4"	19.1	0.5	9.5	0.95±0.28	0.4
1"	25.4	0.5	12.7	1.15±0.28	0.45
1-1/2"	38.1	0.65	19	1.25±0.41	0.45
2"	50.8	0.73	25.4	1.40±0.41	0.5

CB-DWT (3X)					
Size	As Supplied		After Recovery		
(Inch)	Min ID (mm)	Nominal Wall (mm)	Max ID (mm)	Total Wall (mm)	Nominal Adhesive Wall(mm)
1/8	3	0.57	1	1.00±.28	0.5
3/16	4.8	0.57	1.5	1.0±.28	0.6
1/4	6	0.57	2	1.00±.28	0.5
3/8	9	0.64	3	1.40±.28	0.61
1/2	12	0.8	4	1.78±.38	0.76
3/4	19	0.93	6	2.25±.55	0.76
1	24	1	8	2.54±.55	1.02
1 1/4	31.8	1	11	2.54±.55	1.02
1 1/2	38.1	1	13	2.54±.55	1.02
2	50	1	17	2.54±.55	1.02

CB-DWT (4X)					
Size	As Supplied		After Recovery		
(Inch)	Min ID (mm)	Nominal Wall (mm)	Max ID (mm)	Total Wall (mm)	Nominal Adhesive Wall(mm)
3/16"	4	0.4	1	1.00±0.28	0.5
1/4"	6	0.4	1.5	1.00±0.28	0.5
5/16"	8	0.4	2	1.10±0.28	0.5
3/8"	9.5	0.45	2.5	1.20±0.28	0.55
1/2"	12	0.5	3	1.40±0.28	0.61
5/8"	16	0.6	4	1.78±0.38	0.76
3/4"	19	0.6	4.8	2.00±0.55	0.76
1"	24	0.75	6	2.25±0.55	0.76
1-1/4"	32	0.8	8	2.54±0.55	1.02
1-1/2"	38.1	0.8	9.5	2.54±0.55	1.02
2"	52	0.8	13	2.60±0.55	1.02

CB-DWT1000- ADHESIVE-LINED HEAT-SHRINKABLE TUBING



CB-DWT1000 is an adhesive-lined, flexible, flame-retardant polyolefin heat-shrinkable dual wall tubing. This tubing has good mechanical strength, oil-resistance and is used in the medical environment where the most stringent standards are required. They are widely used in sleeving wire bundles and harness. Standard: UL224 and SAE-AMS-DTL25053/4.

SPECIFICATION:

Item	Test methods	Specifications	Typical value
Operating temperature			-55°C ~+135°C
Shrink temperature			100 ~140°C
Shrink rate			2:1
Tensile strength	ASTM D638	≥10.4MPa	14.1MPa *1
Ultimate elongation (%)	ASTM D638	≥200%	329%
2% scan modulus	ASTM D882	≤172MPa	153MPa
Heat shock	250±3°C 4hrs	No cracking, dripping, flowing	Pass
Cold shock	ASTM D745 -55±2°C	No cracking	Pass
Dielectric strength	ASTM D2671	≥19.7kv/mm	26kv/mm
Volume resistivity	ASTM D876	≥1X10 ¹²	3.6X10 ¹³
Aging	175±2°C 168hrs	Adhesive, no dripping Sleeving, no cracking	Pass
Oil resistant	24±3°C 24hrs		
Tensile strength after aging	ASTM D638	≥6.9MPa	9.5MPa
Dielectric strength after aging	ASTM D2671	≥15.8kv/mm	24kv/mm

SIZE

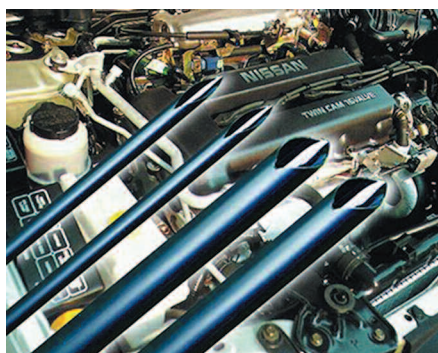
2:1

Size (mm)	Size (inches)	Min as Supplied	Max. after recovery	Total Wall	Adhesive wall
2.36	3/16"	2.4	1.2	0.55±0.12	0.3
3.18	1/8"	3.2	1.6	0.60±0.15	0.3
4.75	3/16"	4.8	2.4	0.75±0.15	0.35
6.35	1/4"	6.4	3.2	0.75±0.15	0.35
9.53	3/8"	9.5	4.8	0.80±0.20	0.35
12.7	1/2"	12.7	6.4	0.80±0.20	0.35
19.1	3/4"	19.1	9.5	0.95±0.28	0.4
25.4	1"	25.4	12.7	1.15±0.28	0.45
31.8	1-1/4"	31.8	16	1.20±0.35	0.45
38.1	1-1/2"	38.1	19.1	1.25±0.41	0.5

3:1

Size (mm)	Size (mm)	Min as Supplied	Max. after recovery	Total Wall	Adhesive wall
3	1/8"	3.2	1	0.85±0.28	0.35
4.5	3/16"	4.8	1.5	1.05±0.28	0.45
6	1/4"	6.4	2	1.10±0.28	0.45
9	3/8"	9.5	3	1.45±0.28	0.45
12	1/2"	12.7	4	1.50±0.38	0.45
18	3/4"	19.1	6	2.00±0.55	0.65
24	1"	25.4	8	2.20±0.55	0.65
39	1-1/2"	38.1	13	2.54±0.55	1

CB-DWT2000- ADHESIVE-LINED HEAT-SHRINK FOR AUTOMOTIVE BRAKE PIPE PROTECTION



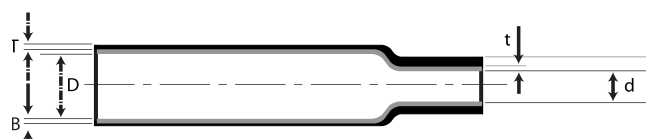
CB-DWT (2000) is especially designed for automotive industry applications. It can effectively protect metal pipes and fuel lines against any kind of damage caused by friction and corrosion, improving vehicle safety. This product is positioned on straight pipe lengths prior to the second end-nut fitting.

FEATURES

- Flexible even at low temperatures
- Good oil resistance
- Meets: SAE-AMS-DTL-23053
- Operating temperature range: -40-125°C
- Minimum full recovery temperature: 110°C

SPECIFICATION:

Item	Test methods	Specifications	Typical value
Operating temperature			-55°C ~+135°C
Shrink temperature			100 ~140°C
Shrink rate			2:1
Tensile strength	ASTM D638	≥10.4MPa	14.1MPa *1
Ultimate elongation (%)	ASTM D638	≥200%	329%
2% scan modulus	ASTM D882	≤172MPa	153MPa
Heat shock	250±3°C 4hrs	No cracking, dripping, flowing	Pass
Cold shock	ASTM D745 -55±2°C	No cracking	Pass
Dielectric strength	ASTM D2671	≥19.7kv/mm	26kv/mm
Volume resistivity	ASTM D876	≥1X10 ¹²	3.6X10 ¹³
Aging	175±2°C 168hrs	Adhesive, no dripping Sleeving, no cracking	Pass
Oil resistant	24±3°C 24hrs		
Tensile strength after aging	ASTM D638	≥6.9MPa	9.5MPa
Dielectric strength after aging	ASTM D2671	≥15.8kv/mm	24kv/mm



SIZE

Size (Inches)	Standard Pipe diameter (mm)	Inside diameter as supplied (mm)	Wall thickness After recovered (mm)
3/16"	3.5	5	1
1/4"	4.76	6	1
5/16"	6.35	8	1
3/8"	8	10	1
1/2"	10	12.5	1
9/16"	4.85	14	1
19/32"	10	15	1

Standard color: black, other colors are also available.
Please refer the pipe diameters to make the order.

CB-DWT3000- SEMI-RIGID ADHESIVE-LINED HEAT-SHRINKABLE POLYOLEFIN TUBING

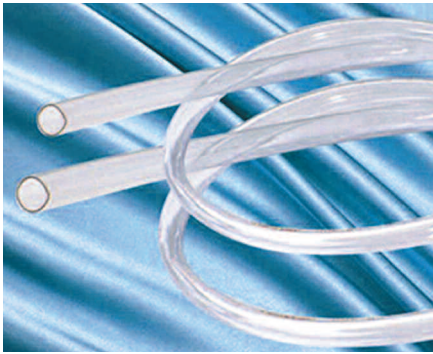


CB-DWT3000 is semi-rigid, flame retardant and adhesive-lined polyolefin heat shrinkable tubing. It is designed to meet automotive requirements for sealing and electrical insulation on wire splices, terminations and components. It can provides abrasion protection of wire splices and is fluid and moisture proof, which help to protect wire bundles from corrosion.

ITEM	TEST METHOD	SPECIFICATIONS
Operating temp. (°C)		-40°C to 135°C
Min. shrink temp. (°C)		110°C
Longitudinal Change (%)	ASTM D 2671	0~10%
Tensile Strength (M Pa)	ASTM D 2671	≥10.3
Ultimate Elongation (%)	ASTM D 2671	≥250
Scant Modulus at 2% (expanded) (M Pa)	ASTM D 2671	≥137
Heat Shock 4 hours at 250°C (437)	ASTM D 2671	No dripping, flowing or cracking of outer jacket
Dynamic Cut Through (Kg)	ASTM D 3032	≥16.3kg
Volume Resistivity (Ω-cm)	ASTM D 2671	1.0 x 10 ¹²
Flammability	ASTM-D2671	Self-extinguishing within 30 seconds
Fluid resistance property after		
Tensile Strength(M Pa)	ASTM D 2671	≥6.9
Dielectric strength (Kv/mm)	ASTM D 2671	15.8kv/mm 60 seconds

SIZE				
Size (Inches)	Inside diameter (mm)		After recovery	
	Min. as supplied	Max. after recovery	Total wall	Minimum adhesive wall
7/32"	5.72	1.27	1.2	0.56
19/64"	7.44	1.65	1.52	0.76
7/16"	10.85	2.41	1.91	1.02
11/16"	17.78	4.45	2.41	1.37

CB-DWT4000- ADHESIVE-LINED SEMI-RIGID HEAT-SHRINKABLE DUAL WALL TUBING



CB-DWT4000 is adhesive-lined, semi-rigid polyolefin heat shrink dual-wall tubing. It has good mechanical strength and fray-resistance for wire harness terminals and features thicker adhesive for excellent sealing against fluid and moisture. CB-DWT4000 is specially designed for use on automotive

lines, stress relief on wire harnesses, and anywhere oil resistance and abrasion protection are required.

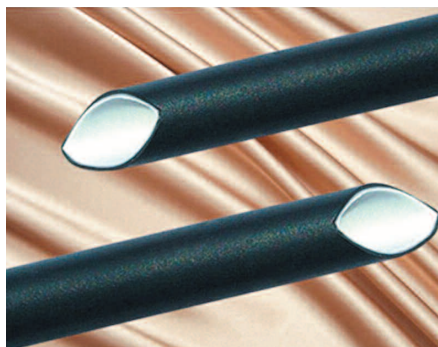
SPECIFICATIONS

Item	Test Method	Specifications	Test Value
Operation Temp. Range		40°C to 130°C	
Shrink Temperature		110°C --135°C	
Tensile Strength	ASTM D 2671	≥10.3 MPa	18.87 MPa
Longitudinal Change	ASTM D 2671	0 to -10 %	5%
Elongation at Break	ASTM D 2671	≥250%	330%
Aging at 168H 175°C±2°C	ASTM D 3032	No cracking	Pass
Water Absorption	ASTM D 570	≤1.0 %	0.5%
Volume Resistance	ASTM D 2671	≥1.0 x 10 ¹² (Ω.cm)	9.0 x 10 ¹⁴ (Ω.cm)

SIZE

Size (Inches)	Inside diameter (mm)		After recovery	
	Min. as supplied	Max. after recovery	Total wall	Minimum adhesive wall
7/32"	5.72	1.27	0.56	1.20
19/64"	7.44	1.65	0.76	1.52
7/16"	10.85	2.41	1.02	1.91
11/16"	17.78	4.45	1.37	2.41

DWTFR- HEAT SHRINKABLE DUAL-WALL TUBING WITH MELTABLE LINER

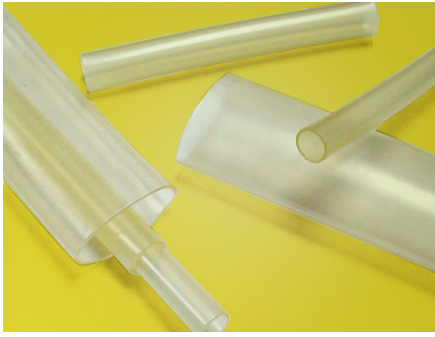


DWTFR is flexible, flame-retardant poly-olefin heat shrink dual-wall tubing. It is special designed for automotive wire harnesses and features good mechanical strength, sealing, oil-resistance and insulation properties. DWTFR is widely used for all kinds of automotive wire harnesses, and is especially useful in harsh environments or where special protection is required.

ITEM		SPECIFICATIONS
Shrink Temperature (°C)		100–150
Operating Temperature Range (°C)		-55—135
Tensile Strength (MPa)		≥10.4
Elongation at Break (%)		≥200
Radial Shrinking Ratio (%)		≥50
Longitudinal Change (%)		≤10
Aging in Circulating-Air Oven		158.0±1.0°C, 168hrs
After Aging	Tensile Strength (MPa)	≥7.3
	Elongation at break(%)	≥100
Dielectric Strength at 1min, AC2500V		No breakdown
Volume Resistance (Ω cm)		≥10 ¹³
Flammability		VW-1
Water Absorption (%)		Less than 0.4%
Fluid Resistance		Excellent
Copper Corrosion		(No Corrosion)
Softening Point of meltable Liner(°C)		120±5
Peel Strength of Meltable Liner(N/25mm)		>80

SIZE				
Size (Inches)	Inside diameter (mm)		Wall after recovery	
	Min. as supplied	Max. after recovery	Total wall	Min. adhesive wall
5/16"	≥ 7.6	≤1.65	1.5±0.3	0.7
3/8"	≥ 9.0	≤2.30	1.5±0.4	0.7
7/16"	≥ 11.6	≤2.54	2.3±0.4	1.2
11/16"	≥ 17.8	≤4.45	2.5±0.4	1.2

DWTRX- LOW SHRINK TEMPERATURE HEAT SHRINKABLE TUBING WITH MELTABLE LINER



DWTRX is very clear, flexible, adhesive-lined, heat-shrinkable polyolefin dual-wall tubing. It has excellent sealing, oil-resistance, insulation and mechanical strength properties. DWTRX is widely used for insulation and sealing of the temperature sensitive parts.

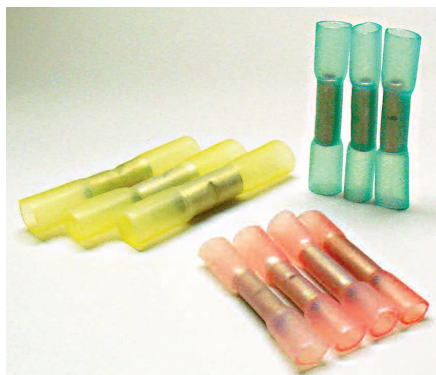
SPECIFICATIONS

Item	Test methods	Requirement	Typical Value
Operation Temp. Range		-40°C-125°C	
Shrink Temperature		70°C-100°C	
Tensile Strength	ASTM D638	≥10.4MPa	13.2MPa
Elongation At Break	ASTM D638	≥200%	535%
Cold Shock	ASTM D745 -55±2°C	No cracking	Pass
Dielectric Strength	ASTM D2671	≥19.7kv/mm	22.7kv/mm
Volume Resistance	ASTM D876	≥1X10 ¹²	2.4X10 ¹⁴
Tensile Strength After Aging	ASTM D638	≥7.3MPa	9.8MPa
Elongation at Break After Aging	ASTM D638	≥100%	248%
Dielectric Strength	ASTM D2671	≥15.8kv/mm	24kv/mm
Sealing	TM 823 24	≥1X10 ⁸	pass

SIZE

Size (Inches)	Size (mm)	Inside diameter (mm)		After recovery
		Min. as supplied	Max. after recovery	Total wall
5/32"	4	≥4.0	≤1.0	0.80±0.20
1/4"	6.4	≥6.4	≤1.0	0.80±0.20
5/16"	8	≥8.0	≤2.0	0.90±0.20
3/8"	9	≥9.0	≤1.5	1.60±0.30
1/2"	12	≥12.0	≤3.0	1.20±0.30
5/8"	16	≥16.0	≤4.0	1.50±0.30

DS406- HEAT SHRINKABLE BUTT SPLICE CONNECTORS



DS406 are heat-shrinkable, insulating butt splice connectors featuring a dual seal. DS406 connectors are environmentally sealed, polyolefin-insulated splices that provide one-step sealing for wire to wire splicing applications.

CHARACTERISTICS

- Protects splices from water condensation, salt, and corrosion
- Provides strain relief
- Protects against vibration in rugged environments
- Completely insulates and protects key

electrical connections

- Has adhesive lining protection that is more reliable than conventional splices

APPLICATIONS

- Automotive and truck wiring repair and maintenance.
- Automotive accessories installation.
- Marine electronics and Fleet maintenance
- Commercial wiring in outdoor applications (pumps/pools/spas).
- Appliances

SPECIFICATIONS

Item	Specification
Operating Temperature	55°C to 125°C
Shrink Ratio	4:1
Cut-Through Resistance	31 kg
Flammability	Non flame retardant
Wire Pullout After Crimping and Recovery	red: 11.3 kg , blue: 22.7 kg, yellow: 27.2 kg
Solvent Resistance	Isopropyl alcohol, trichloroethylene, gasoline, battery acid, diesel fuel, motor oil, antifreeze, brake fluid, 5% salt water
Dielectric Strength: 2500 V(AC)	Insulation resistance: 1000 megohms at 100 V

SIZE

Part No.	Butt Splice Dim.		Color	Conductor	Wire Dimensions	
	A Min.	L Nom.			Insulation O.D. (Min.)	Insulation O.D. (Min.)
DS406-001	3.68	31.75	Red	22-18	3.56	1.4
DS406-002	4.57	31.75	Blue	16-14	4.45	2.03
DS406-003	6.35	38.10	Yw	12-10	6.22	2.79

SELECTION GUIDE

Wire Size	AWG	mm ²	Part No.	Color
22-18		0.8-0.95	CYG-DS-1	Red
16-14		1.2-2.5	CYG-DS-2	Blue
12-10		3-6	CYG-DS-3	Yellow

DWTMW- ADHESIVE-LINED MEDIUM WALL HALOGEN FREE HEAT SHRINK SLEEVING



DWTMW is a halogen free, adhesive lined heat shrink sleeving, which can provide good mechanical protection and excellent water and moisture proofing. Designed for use on electrical splices, cable terminations and joints, the 3:1 ratio makes it possible for applications with irregular shape and large connectors.

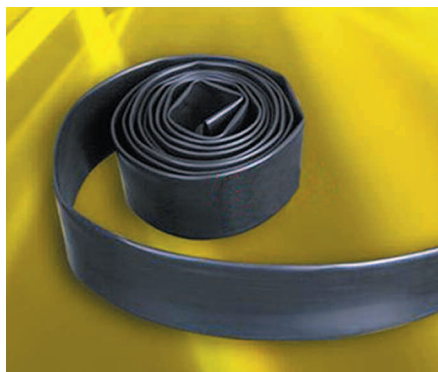
SPECIFICATIONS

Test item	Test method	Typical
Operation temperature	Company standard	-55°C-110°C
Shrink temperature	Company standard	120°C
Tensile strength	ASTM D2671	12MPa
Elongation	ASTM D2671	400%
Elongation after aging (168hrs at 150°C)	ASTM D2671	350%
Tensile strength after aging (168hrs at 150°C)	ASTM D2671	12MPa
Dielectric strength	ASTM D2671	20kV/mm
Volume resistivity	ASTM D257	1X10 ¹⁴ Ω.cm
Copper corrosion	ASTM D2671	No corrosion
Water absorption	ASTM D570	0.5%
Cold blend(-55°C/4hrs)	ASTM D2671	No cracking

SIZE

Size (inches)	Size (mm)	ID as supplied	ID after recovery	Wall thickness after recovery	Standard length
5/16"	8/2	8	2	1.7	1.22m/pc
3/8"	10/3	10	3	1.7	1.22m/pc
1/2"	12/4	12	4	2	1.22m/pc
5/8"	16/5	16	5	2.2	1.22m/pc
3/4"	19/6	19	6	2.2	1.22m/pc
1-1/8"	22/6	22	6	2.5	1.22m/pc
1"	25/8	25	8	2.5	1.22m/pc
1-1/8"	28/6	28	6	2.5	1.22m/pc
1-1/4"	33/8	33	8	2.5	1.22m/pc
1-3/8"	35/12	35	12	2.5	1.22m/pc
1-9/16"	40/12	40	12	2.5	1.22m/pc
1-3/4"	45/13	45	13	2.5	1.22m/pc
2-3/16"	55/16	55	16	2.7	1.22m/pc
2-1/2"	65/19	65	19	2.8	1.22m/pc
3"	75/22	75	22	3	1.22m/pc
3-1/2"	85/25	85	25	3	1.22m/pc
4"	95/25	95	25	3	1.22m/pc
4-1/2"	115/34	115	34	3	1.22m/pc
5-1/2"	140/42	140	42	3	1.22m/pc
6"	150/42	150	42	3	1.22m/pc
6-3/8"	160/50	160	50	3	1.22m/pc
7"	175/58	175	58	3	1.22m/pc
8"	200/65	200	65	3	1.22m/pc
9"	230/75	230	75	3	1.22m/pc

DWTMWT- MEDIUM WALL HEAT SHRINKABLE TUBING



CHARACTERISTICS

- Non Flame Retardant
- Single Wall, 3:1
- Flat in reel/Oval in piece
- RoHS Compliant
- Black & Red Available

FEATURES

- Excellent insulating abilities
- Resistant to Impact and abrasion

- Bigger shrink ratio for you easier and faster installation
- Continuous working temperature : 55°C to 110°C
- Convenient and free lengths cutting
- Smaller packing volume for your economical logistics

SPECIFICATIONS

Test item	Test method	Typical
Operation temperature	Company standard	-55°C-110°C
Shrink temperature	Company standard	120°C
Tensile strength	ASTM D2671	12MPa
Elongation	ASTM D2671	400%
Elongation after aging (168hrs at 150°C)	ASTM D2671	350%
Tensile strength after aging (168hrs at 150°C)	ASTM D2671	12MPa
Dielectric strength	ASTM D2671	20kV/mm
Volume resistivity	ASTM D257	1X10 ¹⁴ Ω.cm
Copper corrosion	ASTM D2671	No corrosion
Water absorption	ASTM D570	0.5%
Cold blend(-55°C/4hrs)	ASTM D2671	No cracking

DWTHW- ADHESIVE-LINED HEAVY WALL HALOGEN FREE HEAT SHRINK SLEEVING



DWTHW is halogen free, adhesive lined, heat shrink sleeving widely used for wire and cable sealing applications. The 3:1 ratio makes it the largest application range offered in the industry, providing good mechanical protection and excellent water and moisture protection. It is ideal for insulation of splicing, electrical connection and jacket repair of buried wire.

SPECIFICATIONS

Test item	Test method	Typical
Operation temperature	Company standard	-55°C-110°C
Shrink temperature	Company standard	125°C
Tensile strength	ASTM D2671	12MPa
Elongation	ASTM D2671	400%
Elongation after aging (168hrs at 150°C)	ASTM D2671	350%
Tensile strength after aging (168hrs at 150°C)	ASTM D2671	12MPa
Dielectric strength	ASTM D2671	15kV/mm
Volume resistivity	ASTM D257	1X10 ¹⁴ Ω.cm
Copper corrosion	ASTM D2671	No corrosion
Water absorption	ASTM D570	0.5%
Cold blend(-55°C/4hrs)	ASTM D2671	No cracking

SIZE

Size (inches)	Size (mm)	ID as supplied	ID after recovery	Wall thickness after recovery	Standard length
3/8"	9/3	10	3	2.6	1.22m/pc
1/2"	12/4	12	4	2.8	1.22m/pc
5/8"	16/5	16	5	3.0	1.22m/pc
3/4"	19/6	19	6	3.0	1.22m/pc
7/8"	22/6	22	6	3.2	1.22m/pc
1"	25/8	25	8	3.2	1.22m/pc
1-3/8"	33/8	33	8	3.9	1.22m/pc
1-1/2"	40/12	40	12	3.9	1.22m/pc
1-3/4"	45/13	45	13	4.0	1.22m/pc
2-1/8"	55/16	55	16	4.0	1.22m/pc
2-1/2"	65/19	65	19	4	1.22m/pc
3"	75/22	75	22	4.0	1.22m/pc
3-3/8"	85/25	85	25	4.0	1.22m/pc
3-3/4"	95/25	95	25	4.0	1.22m/pc
4"	100/30	100	30	4.0	1.22m/pc
4-1/2"	115/34	115	34	4.0	1.22m/pc
5"	130/36	130	36	4.0	1.22m/pc
5-3/8"	140/42	140	42	4.0	1.22m/pc
6"	150/42	150	42	4.0	1.22m/pc
6-3/8"	160/50	160	50	4.0	1.22m/pc
7"	180/50	180	50	4.0	1.22m/pc
8"	200/60	200	50	4.0	1.22m/pc

DWHWT- HEAVY WALL HEAT SHRINKABLE TUBING



CHARACTERISTICS

- Non Flame Retardant
- Single Wall, 3:1
- Flat in reel/Oval in piece
- RoHS Compliant

FEATURES

- Excellent insulating abilities
- Resistant to impact and abrasion

- Greater shrink ratio for easier and faster installation
- Continuous working temperature: 55°C to 110°C
- Convenient and free lengths cutting
- Smaller packing volume for your economical logistics

TECHNICAL DATA

Property	Test Method	Typical Data
Tensile strength	ASTM D2671	≥14MPa
Elongation at break	ASTM D2671	≥400%
Elongation at break after aging	ASTM D2671/150°C,168hrs	≥300%
Density	ASTM D792	1.05g/cm ³
Eccentricity	ASTM D2671	<30%
Longitudinal shrinkage	UL224	0-10%
Dielectric strength	IEC243	≥20kV/mm
Volume resistivity	IEC93	≥10 ¹⁴ Ω-cm
Copper stability	ASTM D2671	Pass
Water absorptivity	ISO 62/23°C,14days	<0.15%
Adhesive		
Water absorptivity	ISO 62	<0.2%
Softening Point	ASTM-E28	85°C
Peel Strength (PE)	DIN 30672	4N/cm
Copper stability	ASTM D2671	Non-corrosive
Resistance to fungus and decay	ISO 846	Pass

ORDERING GUIDE

Ordering Ref.	Inside Dia. As supplied (mm,Min.)	Inside Dia.	Wall thickness	Shape/ Style	Standard Length (meters)
		Recovered (mm, Max.)	Recovered (mm, Min.)		
HWT-9/3	9	3	2.4	O/—	39750
HWT-13/4	13	4	2.7	O/—	39750
HWT-22/6	22	6	3.2	O/—	39750
HWT-33/8	33	8	4.1	O/—	39750
HWT-45/12	45	12	4.1	O/—	39750
HWT-55/16	55	16	4.1	O/—	39750
HWT-75/22	75	22	4.3	O/—	39750
HWT-85/25	85	25	4.3	O/—	1-1.5
HWT-95/30	95	30	4.3	O/—	1-1.5
HWT-115/34	115	34	4.3	O/—	1-1.5
HWT-130/36	130	36	4.3	—	1-1.5
HWT-160/50	160	50	4.3	—	1-1.5
HWT-175/50	175	50	4.3	—	1-1.5
HWT-205/60	205	60	4.3	—	1-1.5

DWTHWTA6X- HEAVY WALL SHRINKABLE TUBING



CHARACTERISTICS

- Non Flame Retardant
- Dual Wall, Adhesive-coated, 6:1
- Round/oval in piece
- RoHS Compliant
- Black Available

FEATURES

- Excellent sealing and insulating abilities
- Resistant to impact and abrasion
- Close fit to irregular shapes
- Continuous Working Temperature: 55°C to 110°C

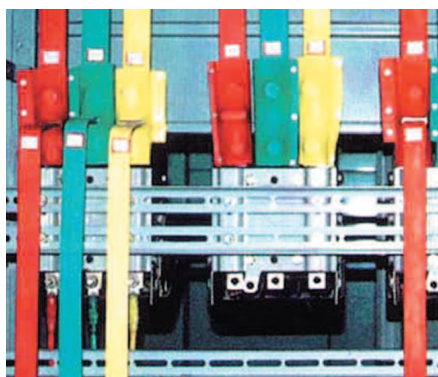
TECHNICAL DATA

Property	Test Method	Typical Data
Tensile strength	ASTM D2671	≥ 14MPa
Elongation at break	ASTM D2671	≥ 400%
Elongation at break after aging	ASTM D2671/150°C, 168hrs	≥ 300%
Density	ASTM D792	1.05g/cm ³
Eccentricity	ASTM D2671	<30%
Longitudinal shrinkage	UL224	0-10%
Dielectric strength	IEC243	≥ 20kV/mm
Volume resistivity	IEC93	≥ 10 ¹⁴ Ω·cm
Copper stability	ASTM D2671	Pass
Water absorptivity	ISO 62/23°C, 14 days	<0.15%
Adhesive		
Water absorptivity	ISO 62	<0.2%
Softening Point	ASTM-E28	85°C
Peel Strength (PE)	DIN 30672	4N/cm
Copper stability	ASTM D2671	Non-corrosive
Resistance to fungus and decay	ISO 846	Pass

SIZE

Size (inches)	Size (mm)	Inside Diameter		Wall thickness	Shape/Style	Std Length (mm)
		As supplied (mm, Min.)	Recovered (mm, Max.)	Recovered (mm, Min.)		
3/4"	19.0/3.2	19	3.2	3.2	O	1000-1220
1-3/8"	33.0/5.5	33	5.5	3.4	O	1000-1220
1-3/4"	44.4/7.7	44.4	7.4	3.6	O	1000-1220
2"	50.8/8.3	50.8	8.3	4.3	O	1000-1220
2-3/4"	69.8/11.7	69.8	11.7	4.8	O	1000-1220
3-1/2"	88.9/17.1	88.9	17.1	4.8	O	1000-1220
4-3/4"	119.4/22.9	119.4	22.9	4.8	O	1000-1220

BBT 1T/10M- HEAT-SHRINKABLE BUS BAR TUBING



BBT1T/10M is a well insulated and track-resistant, heat-shrinkable, poly-olefin protective sleeve for bus bars. It is widely used to protect the rectangular, square and round bus bars found in low or medium voltage switching equipment.

SPECIFICATIONS

Item	Test Method	Specifications
Shrink Temperature (°C)		110
Operating Temperature Range (°C)		125
Tensile Strength (Mpa)	ASTM D2671	≥10
Elongation at break (%)	ASTM D2671	≥450
Aging in Circulating-air Oven	ASTM D2671	136.0±1.0°C, 168hrs
After aging	Tensile Strength (MPa)	ASTM D2671 ≥10
	Elongation at break (%)	ASTM D2671 ≥400
Flexibility at -40°C, 4h	ASTM D2671	No cracking
Volume Resistance (Ω.m)	ASTM D876	≥10 ¹³
Dielectric Strength(15kV/mm)	ASTM D2671	≥15
Heat shock	200°C±3°C, 4h	No cracking
Oxygen index	ASTM D2863	≥30
Water absorption	ASTM D570A	<0.5%

SIZE FOR BBT-1KV

Size (inches)	Size (mm)	Inside Dia. (mm)	Wall Thickness	Inside Dia. (mm)	Wall Thickness	Cable Range (mm²)
1-1/4"	30/15	31.5±1.0	0.5±0.15	15	1±0.15	30
1-3/8"	35/16	37±1.5	0.5±0.15	16	1±0.15	40
1-9/16"	40/20	40.5±1.5	0.5±0.15	20	1±0.15	40
2"	50/25	50.5±2	0.5±0.15	25	1±0.15	50
2-3/8"	60/30	60±3	0.8±0.2	30	1.3±0.2	60
2-3/4"	70/32	70±3	0.8±0.2	32	1.5±0.2	80
3"	80/40	80±3	0.8±0.3	40	1.5±0.3	80/100
3-1/2"	90/43	90±4	0.8±0.3	43	1.5±0.3	100
4"	100/50	100±4	0.8±0.3	50	1.5±0.3	100/120
5"	120/60	120±4	0.8±0.3	60	1.5±0.3	150
6"	150/75	150±4	0.8±0.3	75	1.5±0.3	180
7"	180/70	180±4	1.0±0.3	90	1.8±0.3	210

SIZE FOR BBT-10KV

Size (inches)	Size (mm)	Inside Dia. (mm)	Wall Thickness	Inside Dia. (mm)	Wall Thickness	Cable Range (mm²)
3/4"	20/9	20±0.8	1±0.2	9	2.5±0.2	20
1-1/4"	30/13	30±0.8	1±0.2	13	2.5±0.2	30
1-1/2"	40/15	40±1.0	1.2±0.2	15	2.5±0.2	40
2"	50/20	50±2.0	1.2±0.2	20	2.8±0.2	50
2-3/8"	60/24	65±3.0	1.2±0.2	24	2.8±0.2	60
3"	80/32	80±4.0	1.2±0.3	32	2.8±0.2	80/100
4"	100/40	100±4.0	1.2±0.3	40	2.8±0.2	100/120
5"	120/48	120±4.0	1.2±0.3	48	2.8±0.2	150
6"	150/60	150±4.0	1.2±0.3	60	2.8±0.2	200
7"	175/75	175±4.0	1.5±0.3	88	3.2±0.3	210
8"	210/85	210±4.0	1.5±0.3	105	3.2±0.3	240



RSI Heat-shrinkable breakouts are designed to provide insulating and sealing protection to the crotch section of cable phases. These products are available respectively for two core, three core, four core and five core cables.

SPECIFICATIONS

No	Content	Units	Index	
			Insulation	Oil-Proof
1	Hardness	Shore A	≥90	≥90
2	Tensile Strength	MPa	≥11	≥12
3	Elongation	%	≥300	≥250
4	Heat Aging		K1>0.8	K1>0.8
	120°C 168h		K2>0.7	K2>0.7
5	Volume Resistivity	Ω-cm	≥10 ¹⁴	≥10 ¹⁴
6	Oil-Proof 70°C			K1>0.8
	Cable Oil 168h			K2>0.7

SIZE

Size	As Supplied (mm)					
	Branch			Base		
	Inside Diameter	Wall-thickness ±30%	Length	Inside Diameter	Wall thickness ±30%	Length
25/9	≥8	0.9	27	≥850	1.2	50
38/16	≥15	1.1	35	≥38	1.4	77
45/18	≥18	1.2	28	≥45	1.56	73
75/28	≥28	1.68	38	≥75	1.86	100
50/25	≥23	1.5	43	≥48	1.8	132
75/30	≥28	2	42	≥73	2.9	148
90/40	≥38	2.2	45	≥88	2.7	175
110/50	≥48	2.2	40	≥108	2.7	175
130/60	≥58	2.2	63	≥123	2.8	192
55/20	≥20	1.4	36	≥52	2.2	114
55/22	≥20	1.8	40	≥54	3	145
70/26	≥26	1.4	50	≥68	2.2	115
85/32	≥30	1.4	45	≥86	2.2	135
	≥30	2	45	≥86	3.1	135
110/45	≥44	2.2	45	≥110	3.5	170
50/15	≥14	1.4	40	≥46	2.2	95
75/25	≥22	1.5	50	≥69	2.4	100
100/35	≥32	1.6	53	≥98	2.8	112

SIZE

Size	After Free Recovery (mm)						Total Length (mm)
	Branch			Base			
	Inside Diameter	Wall thickness $\pm 30\%$	Length	Inside Diameter	Wall thickness $\pm 30\%$	Length	
25/9	≤ 3.5	1.5 ± 0.4	27	≤ 11	2.2 ± 0.4	50	
38/16	≤ 6.5	1.7 ± 0.4	35	≤ 15	2.7 ± 0.4	77	
45/18	≤ 8	1.8 ± 0.4	28	≤ 22	2.7 ± 0.4	73	
75/28	≤ 11	2.8 ± 0.4	38	≤ 37	3 ± 0.4	100	
50/25	≤ 9	2.5 ± 0.4	45	≤ 21	3.5 ± 0.4	130	175
75/30	≤ 12	3.4 ± 0.4	40	≤ 34	4.1 ± 0.4	145	185
90/40	≤ 15	3.6 ± 0.4	43	≤ 45	3.6 ± 0.4	162	205
110/50	≤ 19	3.7 ± 0.4	40	≤ 55	3.6 ± 0.4	165	205
130/60	≤ 27	3.6 ± 0.4	65	≤ 55	4.5 ± 0.4	190	255
55/20	≤ 7	2.7 ± 0.4	38	≤ 27	3.3 ± 0.4	120	150
55/22	≤ 9.0	3 ± 0.4	40	≤ 35	4 ± 0.4	144	184
70/26	≤ 9.0	2.5 ± 0.4	48	≤ 30	3.5 ± 0.4	110	165
85/32	≤ 12.5	3 ± 0.4	47	≤ 42.5	4.3 ± 0.4	140	185
	≤ 14	3.2 ± 0.4	47	≤ 46	4.3 ± 0.4	140	187
110/45	≤ 14	3.7 ± 0.4	47	≤ 51	4.9 ± 0.4	158	205
50/15	≤ 8	2.3 ± 0.4	40	≤ 30	3 ± 0.4	95	135
75/25	≤ 11	2.7 ± 0.4	50	≤ 44	3.2 ± 0.4	105	150
100/35	≤ 14	3.2 ± 0.4	55	≤ 55	3.8 ± 0.4	110	165

Note: RSI- Insulation Breakout RSC- Oil-Proof Breakout

RSCE- HEAT SHRINKABLE ENDCAP

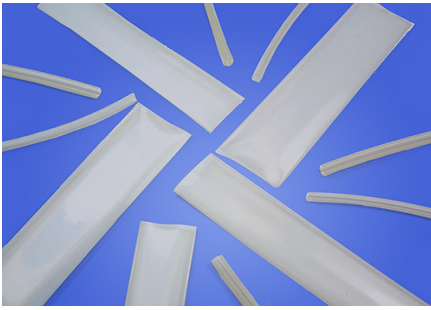


RCSE Heat-shrinkable Endcaps are inner coated with hot melt adhesive for electric insulation, providing excellent sealing, waterproofing and resistance to chemical corrosion and abrasion . Used for power or telecommunication cables while being stored, transported and installed.

SIZE

Type	Name	Diameter(±10%)		Length	Applied To Cable Range (mm²)
		As Supplied	After Shrink		
15/5	Heat Shrinkable Cable Endcap	≥15	≤5	50	
22/9		≥20	≤9	70	9~17
35/18		≥33	≤18	85	18~30
55/30		≥53	≤30	145	31~45
75/42		≥73	≤42	150	45~60
100/55		≥98	≤55	160	61~82
110/55		≥110	≤55	160	
120/70		≥18	≤70	170	83~100
165/66		≥165	≤66	250	
15/5	Heat Shrinkable Cable Endcap (with valve)	≥15	≤5	35	
22/9		≥20	≤9	70	9~17
35/18		≥33	≤18	85	18~30
55/30		≥53	≤30	145	31~45
75/42		≥73	≤42	150	45~60
100/55		≥98	≤55	160	61~82
110/55		≥110	≤55	160	
120/70		≥18	≤70	170	83~100
165/66		≥165	≤66	250	

KYNAR- FLAME-RETARDANT POLYVINYLDENE FLUORIDE HEAT-SHRINKABLE TUBING



KYNAR150 (150°C) is clear, thin wall, flexible, flame-retardant with excellent chemical resistance, it is especially suitable for applications requiring abrasion resistance and cut-through resistance, or superior chemical and solvent properties performance. Provides electrical insulation and strain relief of multi-point connectors and solder joints. Ideal for applications that require dense packing of components or visual inspection of covered components.

KYNAR175 is same as KYNAR150, except semi-rigid with high temperature tolerance and excellent chemical resistance. Especially suitable for applications requiring high temperature performance (175°C), outstanding abrasion resistance and cut-through resistance, in harsh chemical and solvent environments. Also provides electrical insulation and strain relief of multipoint connectors and solder joints. They are also ideal for applications that require dense packing of components or visual inspection of covered components.



150°C SPECIFICATIONS

Item	Test Method	Unit	Specifications
Min. Shrink temperature		°C	140°C
Operation temperature		°C	-55°C ~150°C
Specific gravity	ASTM D792	g/cm ³	1.78
Tensile strength	ASTM D2671	MPa	≥30
Elongation change	ASTM D2671	%	≥150
After Aging Elongation	225°C,168h	%	≥100
Heat Shock	275°C,4h	-	-No Cracking-
Cold Bend	-55°C,4h	-	-No Cracking-
Dielectric Strength	ASTM D2671	kV/mm	≥15.7
Volume Resistivity	ASTM D257	Ω.cm	≥10 ¹³
Flammability Rating	UL-224	VW-1	Pass

150°C PRODUCT SIZE

Size	Min. Inside Diameter as Supplied (mm)	Max. Inside Diameter after Recovery (mm)	Recovered Wall Thickness (mm)
3/64	1.2	0.6	0.25 ± 0.05
1/16	1.6	0.8	0.25 ± 0.05
3/32	2.4	1.2	0.25 ± 0.05
1/8	3.2	1.6	0.25 ± 0.05
3/16	4.8	2.4	0.25 ± 0.05
1/4	6.4	3.2	0.33 ± 0.05
3/8	9.5	4.8	0.33 ± 0.05
1/2	12.7	6.4	0.33 ± 0.05
4/3	19.1	9.5	0.43 ± 0.08
1	25.4	12.7	0.48 ± 0.08
1 1/2	38.1	19.1	0.48 ± 0.08

175°C SPECIFICATIONS

Item	Test Method	Unit	Specifications
Min. shrink temperature		°C	155°C
Operation temperature		°C	-55°C ~175°C
Specific gravity	ASTM D792	g/cm ³	1
Tensile strength	ASTM D2671	M Pa	≥34.5
Elongation at break	ASTM D2671	%	≥150
After Aging Elongation	250°C,168h	%	≥50
Heat Shock	300°C,4h	-	-No Cracking-
Cold Bend	-55°C,4h	-	-No Cracking-
Dielectric Strength	ASTM D2671	kV/mm	≥30
Volume Resistivity	ASTM D257	Ω.cm	≥10 ¹³
Flammability Rating	UL-224	VW-1	Pass

175°C PRODUCT SIZE

Size	Min. Inside Diameter as Supplied (mm)	Max. Inside Diameter after Recovery (mm)	Recovered Wall Thickness (mm)
3/64	1.2	0.6	0.25 ± 0.05
1/16	1.6	0.8	0.25 ± 0.05
3/32	2.4	1.2	0.25 ± 0.05
1/8	3.2	1.6	0.25 ± 0.05
3/16	4.8	2.4	0.25 ± 0.05
1/4	6.4	3.2	0.33 ± 0.05
3/8	9.5	4.8	0.33 ± 0.05
1/2	12.7	6.4	0.33 ± 0.05
4/3	19.1	9.5	0.43 ± 0.08
1	25.4	12.7	0.48 ± 0.08
1 1/2	38.1	19.1	0.48 ± 0.08

FKM- HIGH TEMPERATURE FLUOROELASTOMER HEAT-SHRINKABLE TUBING



Very flexible at high and low temperatures without cracking. Made from modified fluoroelastomer, FKM is used for applications at elevated temperatures, has superior chemical and solvent resistant properties. It reliably protects wires, solder joints, terminals, connectors and components from most industrial fluids, solvents and chemicals.

SPECIFICATIONS:

Item	Test Method	Specifications
Min. shrink temperature (°C)		175
Operating Temperature (°C)	IEC216	-55 °C to +200
Tensile Strength (M Pa)	ASTM D638	≥8
Elongation change (%)	ASTM D638	≥250
Longitudinal change (%)		≤10
Elongation change after aging at 168hrs, 250°C		≥200 MPa
Heat Shock at 4hrs, 300°C		No cracking or dripping
Dielectric Strength (KV/mm)	ASTM D2671	≥9
Volume Resistivity (Ω.cm)	ASTM D876	≥10 ¹¹

PROPERTY COMPARISON WITH HEAT SHRINKABLE SILICONE RUBBER TUBING

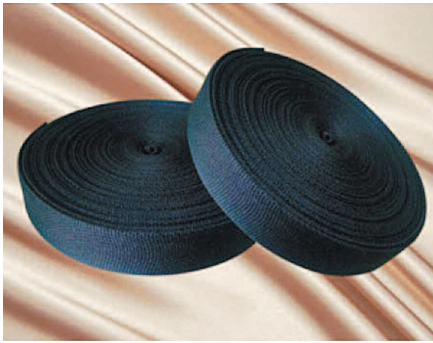
Item	KFM Fluoroelastomer Shrinkable tubing	Silicone rubber shrinkable tubing
Operating Temp. (°C)	-55°C~+200°C	-60°C~+200°C
Mechanics	Good	Poor
Acid/alkali resistance	Good	Poor
Oil resistance	excellent	Normal
Flammability	good self-flammability	Flammable, and bad self-flammability
Abrasion resistance	Normal	Poor
Sealing	Good	Poor
Insulation	Normal	Good
Water proof	Good	Normal

SIZE:

Size (inch)	Inside Diameter		Recovered Wall (mm)	Standard Length (m/spool)
	Minimum Expanded as Supplied (mm)	Maximum Recovered after Heating (mm)		
1/8	3.2	1.6	0.76	50
3/16	4.8	2.4	0.89	50
1/4	6.4	3.2	0.89	50
3/8	9.5	4.7	1.02	50
1/2	12.7	6.4	1.22	30
5/8	15.9	7.9	1.4	30
3/4	19	9.5	1.45	30
7/8	22.2	11.1	1.53	30
1	25.4	12.7	1.78	30
1 1/4	31.8	15.9	1.91	30
1 1/2	38.1	19.1	2.41	15
2	51.8	25.4	2.79	1

FKM (TW) FLUOROELASTOMER THIN WALL TUBING

Size (inch)	Inside Diameter		Recovered Wall (mm)	Standard Length (m/spool)
	Minimum Expanded as Supplied (mm)	Maximum Recovered after Heating (mm)		
1/8	3.2	1.6	0.76	50
3/16	4.8	2.4	0.89	50
1/4	6.4	3.2	0.89	50
3/8	9.5	4.7	0.89	50
1/2	12.7	6.4	0.89	30
3/4	19.1	9.5	1.07	30
1	25.4	12.7	1.25	30
1 1/2	38.1	19.1	1.4	15
2	50.8	25.4	1.65	15



RSF is flexible, halogen free, flame-retardant braided cloth fiber tubing designed primarily to provide outstanding mechanical abrasion protection for components such as rubber hoses, plastic pipes and harness wiring bundles. RSF is also suitable for noise and rattle suppression.

SPECIFICATIONS

Items	Test condition(s)	Specifications
Shrink Temperature:		110°C
Operating Temperature Range		-40°C to 125°C
Abrasion Resistance (200g load, 144 000 cycles)	23°C	No wear to underlying rubber hose
	80°C	No wear to underlying rubber hose
	125°C	No wear to underlying rubber hose
Thermal Aging	3000 hrs at 125°C	No deterioration in abrasion resistance at 80°C
Low Temperature Flexibility	4 Hours At -40°C, 10X Diameter Mandrel	No cracking
Cold impact	200g weight from 100mm at -40°C	No cracking
Thermal shock	100 cycles between -40°C and 125°C	No deterioration in abrasion resistance at 80°C
Fluid resistance	24 hr immersion at 23°C	No deterioration in abrasion resistance at 80°C

SIZE

Size (inches)	Size (mm)	Min. ID as supplied(mm)	Max. ID after recovery (mm)
1/2"	12	12	6
7/8"	20	20	10
1-1/4"	30	30	15
1-3/8"	35	35	18
1-5/8"	40	40	20
2"	50	50	25
2-3/8"	60	60	30
3"	70	70	35

Remarks:

1. Standard color: black

2. the wall thickness is about 1mm after full recovery

PTFE- HIGH TEMPERATURE, TEFLON HEAT-SHRINKABLE TUBING



PTFE is a high-temperature, high-flame retardant PTFE tubing with excellent chemical resistance, and is designed to provide insulation and mechanical protection in severe chemical and thermal environments. Used to cover hydraulic hose and couplings to prevent contamination and corrosion. Its high mechanical strength and extremely low coeffi-

cient of friction make it ideal for reducing damage to bearing shafts and similar applications. PTFE is available in sizes ranging from 1/64" to 1 3/4'.

SPECIFICATIONS

Item	Test Method	Unit	Specifications
Specific gravity	ASTM D792	g/cm ³	2.16
Operating temperature		°C	-55°C to +260°C
Min. full recovery temperature:		°C	327°C
Tensile strength	ASTM D638	MPa	24.5
Elongation at break	ASTM D638	%	350
Bending Modulus	ASTM D790	M Pa	490
Impact Strength	ASTM D256+23°C -54°C J/m		No crack
Hardness (shore)	ASTM D2240	Shore D	55
Coefficient of Dynamic Friction			0.1
Flammability	UL-224		VW-1
Dielectric Constant 10 ³ -10 ⁶ Hz	ASTM D150		2.1
Dielectric Dissipation Factor 106Hz	ASMT D150		0
Arc Resistance	ASMT D495	S	>300
Linear Coefficient of Expansion	ASTM D257	Ω /cm	>10 ¹⁸
Weather Resistance	"Weather-o-meter"(2000h)		No crack
Fluid resistance	ASTM D543		Excellent
Chemical resistance	ASTM D543		Excellent

SIZE

Size	Size	Inside Dia.(mm)		Wall thickness (mm)
(mm)	(inch)	As supplied	After recovery	After recovery
0.5	1/64"	0.7±0.2	≤0.4	0.15±0.05
1	1/32"	1.0±0.2	≤0.5	0.15±0.05
1.2	3/64"	1.0±0.2	≤0.6	0.15±0.05
1.5	1/16"	1.5±0.2	≤0.8	0.15±0.05
1.8	5/64"	1.5±0.2	≤0.9	0.15±0.05
2	5/64"	2.0±0.2	≤1.0	0.15±0.05
2.2	3/32"	2.0±0.2	≤1.3	0.15±0.05
2.5	7/64"	2.5±0.2	≤1.5	0.15±0.05
2.7	7/64"	2.7±0.2	≤1.5	0.15±0.05
3	1/8"	3.0±0.2	≤1.8	0.20±0.05
3.5	9/64"	3.5±0.2	≤2.0	0.20±0.05
4	5/32"	4.0±0.3	≤2.5	0.20±0.05
4.5	3/16"	4.5±0.3	≤2.8	0.20±0.05
5	13/64"	5.0±0.3	≤3.0	0.20±0.05
6	1/4"	6.0±0.3	≤3.8	0.25±0.05
7	9/32"	7.0±0.3	≤4.0	0.25±0.05
8	5/16"	8.0±0.3	≤4.8	0.25±0.05
9	3/8"	9.0±0.3	≤5.0	0.25±0.05
10	13/32"	10.0±0.3	≤6.0	0.25±0.05
12	1/2"	12.0±0.3	≤7.0	0.25±0.05
15	5/8"	15.0±0.3	≤9.0	0.50±0.05
18	11/16"	18.0±0.3	≤10.0	0.50±0.05
20	3/4"	20.0±1.0	≤13.0	0.50±0.05
25	1"	25.0±1.0	≤15.0	0.50±0.05
27	1-1/8"	27.0±1.0	≤16.0	0.50±0.05
30	1-1/4"	30.0±1.0	≤18.0	0.50±0.05
35	1-3/8"	35.0±1.0	≤20.0	0.50±0.05
40	1-1/2"	40.0±1.0	≤28.0	0.50±0.05
45	1-3/4"	45.0±1.0	≤36.0	0.50±0.05



PET is an expandable braided polyester sleeve for general purpose use such as mechanical protection of cables, wires, wire harnesses, flat ribbon and cable assemblies or in cable management applications.

FEATURES

- Continuous use temperature of -70°C to 125°C
- Melt temperature of 240°C
- Expands up to two times its resting diameter
- Halogen Free, ROHS compliant, self extinguishing

SPECIFICATIONS

P/N	Size (inches)	Size (ø) (mm)	Application Range
125016	0.118	2	2-4
125032	0.197	3	3-6
125040	3/16"	4	4-8
325024	1/4"	5	5-10
125048	0.276	6	6-12
320032	0.315	6	3-12
125056	3/8"	7	7-14
325032	1/2"	8	8-16
325040	5/8"	10	10-20
325048	3/4"	12	12-24
320056	0.866	13	13-26
320064	1"	15	15-30
325056	1.024	17	17-32
325064	1.102	20	20-35
325072	1.181	23	23-40
325096	1.575	30	30-60
3250120	1.969	40	40-80
4250120	2.756	50	50-100

CB-TT- SERIES TEFLON NON-SHRINKABLE TUBING



CB-TT series PTFE tubing has high temperature (260°C) resistance, corrosion resistance, excellence insulation and mechanical strength properties. This tubing is being used widely in industries such as electrical, computer, chemical, aerospace, military and transmis-

sion system etc, where high temperature requirements are needed. This product has gained UL recognition (File No: E180908) and are also F mark.

SPECIFICATIONS

Item	Test Method	Unit	Specifications
Specific Gravity	ASTM D792	g/cm3	2.16
Tensile strength	ASTM D638	MPa	24.5
Ultimate Elongation	ASTM D638	%	350
Flexural Modulus	ASTM D790	M Pa	490
Impact Strength	ASTM D256+23°C -54°C j/m		No break, 107
Hardness	ASTM D2240	Shore D	55
Coefficient Of Dynamic Friction			0.1
Melting Point		°C	327
Service Temperature 20000h with 50% Retention Of Ultimate Elongation		°C	260
Flammability	UL-224		VW-1
Dielectric Constant At 103-106Hz	ASTM D150		2.1
Dissipation Factor At 106Hz	ASTM D150		0.0002
Arc Resistance	ASTMD495 (Stainless steel electrodes)	S	>300
Volume Resistivity	ASTM D257	Ω cm	>1018
Weather Resistance	"Weather-o- meter"(2000h)		No break
Solvent Resistance	ASTM D543		Excellent
Chemical Resistance	ASTM D543		Excellent

SIZE SELECT GUIDE

1.CB-TTL(THIN WALL)

SIZE	Supplied inside diameter(mm)	Supplied outside diameter (mm)
AWG 30	0.3	0.6
AWG28	0.38	0.68
AWG26	0.46	0.76
AWG24	0.56	0.86
AWG23	0.66	0.96
AWG22	0.71	1.01
AWG21	0.81	1.11
AWG20	0.86	1.16
AWG19	0.96	1.26
AWG18	1.07	1.37
AWG17	1.19	1.49
AWG16	1.34	1.64
AWG15	1.5	1.8
AWG14	1.68	2.08
AWG13	1.93	2.33
AWG12	2.16	2.56
AWG11	2.41	2.81
AWG10	2.69	3.09
AWG9	3	3.4
AWG8	3.38	3.78
AWG7	3.76	4.16
AWG6	4.22	4.72
AWG5	4.72	5.22
AWG4	5.28	5.78
AWG3	5.94	6.44
AWG2	6.68	7.18
AWG1	7.46	7.96
AWG0	8.38	8.88

Standard color: clear (natural)

(Continued next page)

CB-TT- SERIES PTFE NON-SHRINKABLE TUBING (Continued)

2.CB-TTT(MIDDLE WALL)

SIZE	Supplied inside diameter (mm)	Supplied outside diameter (mm)
AWG 30	0.3	0.76
AWG28	0.38	0.84
AWG26	0.46	0.92
AWG24	0.56	1.06
AWG23	0.66	1.16
AWG22	0.71	1.21
AWG21	0.81	1.31
AWG20	0.86	1.46
AWG19	0.96	1.56
AWG18	1.07	1.67
AWG17	1.19	1.79
AWG16	1.34	1.94
AWG15	1.5	2.1
AWG14	1.68	2.28
AWG13	1.93	2.53
AWG12	2.16	2.77
AWG11	2.41	3.01
AWG10	2.69	3.29
AWG9	3	3.76
AWG8	3.38	4.14
AWG7	3.76	4.52
AWG6	4.22	4.98
AWG5	4.72	5.48
AWG4	5.28	6.04
AWG3	5.94	6.7
AWG2	6.68	7.44
AWG1	7.46	8.22
AWG0	8.38	9.14

Standard color: clear (natural)

3.CB-TTS(THICK WALL)

SIZE	Supplied inside diameter (mm)	Supplied outside diameter (mm)
AWG 30	0.3	0.76
AWG28	0.38	0.84
AWG26	0.46	0.92
AWG24	0.56	1.16
AWG23	0.66	1.26
AWG22	0.71	1.31
AWG21	0.81	1.41
AWG20	0.86	1.66
AWG19	0.96	1.76
AWG18	1.07	1.87
AWG17	1.19	1.99
AWG16	1.34	2.14
AWG15	1.5	2.3
AWG14	1.68	2.48
AWG13	1.93	2.73
AWG12	2.16	2.96
AWG11	2.41	3.21
AWG10	2.69	3.49
AWG9	3	4
AWG8	3.38	4.38
AWG7	3.76	4.76
AWG6	4.22	5.22
AWG5	4.72	5.72
AWG4	5.28	6.28
AWG3	5.94	6.94
AWG2	6.68	7.68
AWG1	7.46	8.46
AWG0	8.38	9.38

Standard color: clear (natural)

CB-300/600PVC & CB-300/600PE- NON-SHRINKABLE TUBING



PVC tubing is a flexible flame-retardant non heat-shrinkable tubing which has excellent electrical and physical performances properties and outstanding acid fastness and corrosion resistivity. This tubing is suitable for insulation purpose of electronics, automotive components, terminal lugs, small electrical parts, lead wires on toy motors and transformers etc. The product has UL recognition and the file No is E180908.

CB-300PE/CB-600PE are halogen free, flexible, flame-retardant, non-shrinkable tubing which have excellent electrical and physical performances, and outstanding acid fastness and corrosion resistivity. PE tubing can replace PVC tubing and is suitable for insulation purpose of electronics, automotive parts, terminal lugs, small electrical parts, lead wires of toy motors and transformers etc. The product is UL listed under file E180908 and is also F-mark.

SPECIFICATION

Item	CB-300/600 (PVC) Specifications	CB-300/600 (PE) Specifications
Temperature Rating(°C)	105	125
Longitudinal Change	≤±5%	≤±5%
Tensile Strength(MPa)	≥10.4	≥10.4
Ultimate Elongation(%)	≥100	≥100
Aging in Circulating-air Oven	136.0±1.0°C, 168hrs	136.0±1.0°C, 168hrs
After aging	Tensile Strength/MPa	≥7.3
	Ultimate Elongation/%	≥100
Potential Rating/V	300V, 600V	300V, 600V
Volume Resistivity/Ωcm	≥10 ¹⁰	≥10 ¹⁰
Dielectric Strength/V	2500(60s), No breakdown	2500(60s), No breakdown
Corrosion of Bare Copper	No corrosion	No corrosion
Heat Shock	No cracking	No cracking
Cold Bend	No cracking	No cracking

SIZE (PE)

SIZE	Inside diameter (mm)	300PE Wall Thickness (mm)	600PE Wall Thickness (mm)
ø1.0	0.9-1.0	0.38±0.05	0.50±0.06
ø1.5	1.42-1.5	0.38±0.05	0.62±0.06
ø2.6	2.48-2.6	0.38±0.05	0.62±0.06
ø3.2	3.05-3.2	0.5±0.06	0.62±0.06
ø3.6	3.42-3.6	0.5±0.06	0.62±0.06
ø6	5.75-6	0.5±0.06	0.62±0.06
ø6.5	6.2-6.5	0.5±0.06	0.62±0.06
ø7	6.7-7.0	0.5±0.06	0.62±0.06
ø7.5	7.2-7.5	0.5±0.06	0.62±0.06
ø8	7.6-8.0	0.5±0.06	0.62±0.06
ø9	8.6-9.0	0.5±0.06	0.62±0.06
ø11	10.5-11	0.5±0.06	0.62±0.06
ø12	11.5-12	0.5±0.06	0.62±0.06
ø14	13.4-14	0.62±0.06	0.75±0.06
ø16	15.3-16	0.62±0.06	0.75±0.06
ø18	17.2-18	0.70±0.06	0.85±0.06
ø22	21.1-22	0.70±0.06	0.85±0.06
ø26	25.1-26	0.75±0.06	0.85±0.06

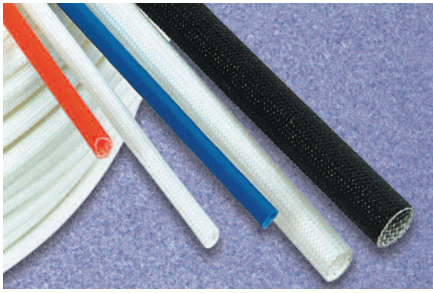
SIZE (PVC)

Number	Inside diameter(mm)	300 PVC Wall-thickness (mm)	600 PVC Wall-thickness (mm)
5/8"	15.9	0.7	±0.18
9/16"	14.3	0.7	±0.15
1/2"	12.7	0.57	±0.15
7/16"	11.1	0.57	±0.15
3/8"	9.53	0.57	±0.15
5/16"	7.92	0.57	±0.15
0#	8.38	0.45	±0.15
1#	7.47	0.45	±0.15
2#	6.68	0.45	±0.15
3#	5.94	0.45	±0.15
4#	5.28	0.45	±0.15
5#	4.72	0.45	±0.15
6#	4.22	0.45	±0.15
7#	3.87	0.45	±0.15
8#	3.38	0.45	±0.15
9#	3	0.45	±0.15
10#	2.69	0.35	±0.15
11#	2.41	0.35	±0.1
12#	2.16	0.35	±0.1
13#	1.93	0.35	±0.1
14#	1.68	0.35	±0.1
15#	1.5	0.35	±0.1
16#	1.34	0.35	±0.1
17#	1.19	0.35	±0.1
18#	1.07	0.35	±0.1
19#	0.96	0.35	±0.1
20#	0.86	0.35	±0.1
21#	0.79	0.35	±0.1

Note: Inside Diameter ±5%

Other sizes are available upon special order.

CB-SGS- FIBERGLASS TUBING



CB-SGS series tubing are flexible, flame-retardant and halogen free and comprised of silicone resin continuously coated on electrical-grade, braided fiberglass tubing. CB-SGS series are widely used in many consumer appliances, lighting fixtures, stoves, oven

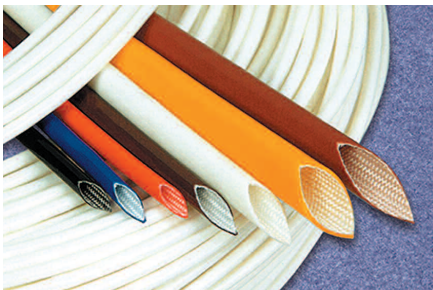
and furnace controls, relays, breaker panels, switchgear and other commercial and industrial applications.

SPECIFICATIONS

Products No.	Dielectric grade	Min. Ave. breakdown	Minimum Individual	Operation temperature
SGS-15	C-2	1500V	1000V	-10°C~200°C
SGS-25	C-1	2500V	1800V	-10°C~200°C
SGS-40	B	4000V	3000V	-10°C~200°C
SGS-70	A	7000V	5000V	-10°C~200°C

SIZE: SGS SERIES is available in size 0.5mm through 25mm.

CB-SRS HI-TEMPERATURE FLAME RETARDANT FIBERGLASS TUBING



CB-SRS series are flexible, flame-retardant and halogen free, and are coated with silicone rubber at high temperature. CB-SRS series provides good electrical insulation, which is widely used in many consumer appliances, lighting fixtures, stoves, oven and furnace con-

trols, relays, breaker panels, switchgear and other commercial and industrial applications.

SPECIFICATIONS

Products No.	Dielectric grade	Min. Ave. breakdown	Min. Individual	Operation temperature
SRS1	A	7000V	5000V	-10°C~200°C
SRS2	A	7000V	6000V	-10°C~200°C

SRS SERIES are available in size 1.0mm through 12mm.

CB-SRT EXTRUSION SILICONE RUBBER TUBING



Silicone rubber is ideally suited for many automotive, appliance, electrical/electronic, and aerospace custom rubber requirements where high resistance to both high and low temperature extremes are involved.

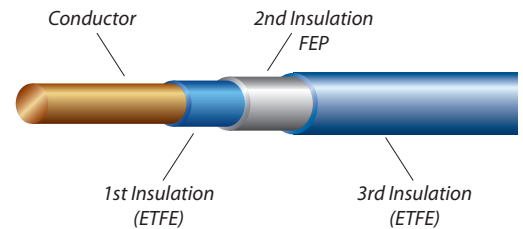
Size : from 1mm through 15mm
Wall thickness: 1mm

Basic colors: semi-transparent

TIW- SPECIALTY WIRE



TIW Series, triple insulated wire, is used in the production of transformers which are built in to personal computers, portable phones, inverters, IT equipment and other similar devices.



SCOPE

Conductor:
Metal wire, tin plated metal wire, enameled metal wire

Insulation Layers:
1) The first layer insulation: ETFE
2) The second layer insulation: FEP
3) The third layer insulation: ETFE

Rated Voltage:
600V (UL certificate)
1.41KV (TUV certificate & VDE certificate)

Rated Temperature:
130°C (UL certificate)
155°C (TUV certificate & VDE certificate)

Benefits:
1) Easy winding
2) High breakdown voltage
3) High speed winding is possible because of resistance to abrasion
4) Triple Insulated Wire offers extra protection against pinholes

Product Recognition :
UL certificate , File No: E249037
TUV certificate , File No: J50075930
VDE certificate, File No: 40018100

SIZE

Size	Conductor (mm)		Outer Diameter (mm)		Conductor. Resistance 20°C Ω/km
	Diameter	Tolerance	Normal	Tolerance	
TIW-B-0.20	0.2	±0.008	0.39	0~0.02	607.6
TIW-B-0.22	0.22	±0.008	0.41	0~0.02	498.4
TIW-B-0.23	0.23	±0.008	0.42	0~0.02	454.5
TIW-B-0.25	0.25	±0.008	0.44	0~0.02	382.5
TIW-B-0.30	0.3	±0.010	0.5	0~0.02	262.9
TIW-B-0.32	0.32	±0.010	0.52	0~0.02	230.3
TIW-B-0.35	0.35	±0.010	0.55	0~0.02	191.2
TIW-B-0.37	0.37	±0.010	0.57	0~0.02	170.6
TIW-B-0.40	0.4	±0.010	0.62	0~0.02	145.3
TIW-B-0.45	0.45	±0.010	0.67	0~0.02	114.2
TIW-B-0.50	0.5	±0.010	0.72	0~0.02	91.43
TIW-B-0.55	0.55	±0.020	0.77	0~0.02	78.15
TIW-B-0.60	0.6	±0.020	0.82	0~0.02	65.26
TIW-B-0.65	0.65	±0.020	0.87	0~0.02	55.31
TIW-B-0.70	0.7	±0.020	0.9	0~0.02	47.47
TIW-B-0.75	0.75	±0.020	0.95	0~0.02	41.19
TIW-B-0.80	0.8	±0.020	1	0~0.02	36.08
TIW-B-0.85	0.85	±0.020	1.05	0~0.02	31.87
TIW-B-0.90	0.9	±0.020	1.1	0~0.02	28.35
TIW-B-0.95	0.95	±0.020	1.15	0~0.02	25.38
TIW-B-1.00	1	±0.030	1.2	0~0.02	23.33

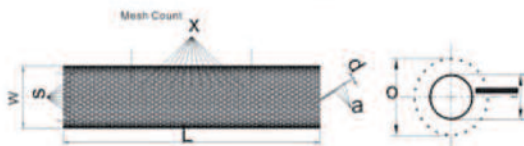
Application



Mainly used to cover cables, wire harnesses and industrial hoses



Drawing



FR Polyester expandable sleeving is flame-retardant and halogen-free. It offers durable abrasion resistance in a wide range of industrial applications. The open weave construction allows for easy installation on a bundle of hoses or cables, even with bulky or large connectors. Totally expanded, the sleeving can reach at least 1.5 times its initial dimension.



Technical data	
Material	Polyester
Operating range	-50°C - +150°C
Melt point	250±5°C
Flammability	VW-1
Standard color	Black and grey
Certificate	UL, CSA, RoHS, PFOS, REACH, Halogen Free
Cutting tool	Hot knife
  	

Datasheet					
Nominal size (W)		Part No.	Expanded range		Packing (L)
Inch	mm		Min.(I)	Max.(O)	Standard spool
1/8"	3	FR-003	1	6	1000m
1/4"	6	FR-006	3	9	500 m
5/16"	8	FR-008	5	16	350 m
3/8"	10	FR-010	7	19	350 m
1/2"	12	FR-012	8	24	300 m
5/8"	15	FR-016	10	27	250 m
3/4"	20	FR-019	14	30	200 m
1"	25	FR-025	18	35	200 m
1-1/4"	30	FR-032	20	50	150 m
1-1/2"	40	FR-038	30	60	100 m
1-3/4"	45	FR-045	35	75	100 m
2"	50	FR-050	40	80	100 m
2-1/2"	64	FR-064	45	105	100 m
3"	76	FR-076	64	120	100 m

Unit: mm

Notes:

1. Nominal size indicates the flat width.
2. The part No. will be followed with BK, GR and so on to indicate the color of sleeving.
3. This sleeving has expandable character, the following sizes are covered by the nearest: 16 mm =15 mm, 19 mm =20 mm, 32 mm =30 mm, 38 mm =40 mm, 51 mm =50 mm.
4. Special packages, sizes, and colors can be supplied upon request.
5. All numerical data are average or typical value, not including customized sizes.



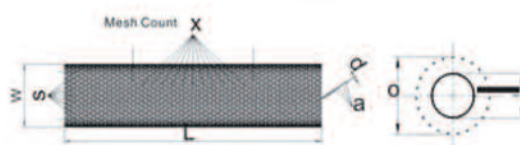
HFR is a high flame-retardant braided expandable sleeving derived from modified polyester monofilament. Manufactured to the standard UL94 V-0, HFR not only provides excellent flame retardant properties but also offers a high resistance to abrasion.

Application



Widely used to cover wires, cables, wire harnesses, pipes and industrial hoses where additional protection and high flame retardant properties are required.

Drawing



Datasheet

Nominal size (W)		Part No.	Expanded range		Packing (L)
Inch	mm		Min.(I)	Max.(O)	Standard spool
1/8"	3	HFR-003	1	6	1000m
1/4"	6	HFR-006	3	9	500m
5/16"	8	HFR-008	5	16	350m
3/8"	10	HFR-010	7	19	350m
1/2"	12	HFR-012	8	24	300m
5/8"	15	HFR-015	10	27	250m
3/4"	20	HFR-020	14	30	200m
1"	25	HFR-025	18	35	200m
1-1/4"	30	HFR-030	20	50	150m
1-1/2"	40	HFR-040	30	60	100m
1-3/4"	45	HFR-045	35	75	100m
2"	50	HFR-050	40	80	100m
2-1/2"	64	HFR-064	45	105	100m
3"	76	HFR-076	64	120	100m

Unit: mm

Notes:

1. Nominal size indicates the flat width.
2. The part No. will be followed with BK, GR and so on to indicate the color of sleeving.
3. This sleeving has expandable character, the following sizes are covered by the nearest: 16 mm = 15 mm, 19 mm = 20 mm, 32 mm = 30 mm, 38 mm = 40 mm, 51 mm = 50 mm.
4. Special packages, sizes, and colors can be supplied upon request.
5. All numerical data are average or typical value, not including customized sizes.

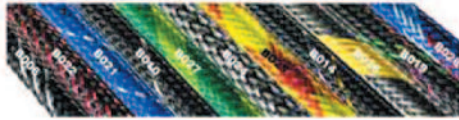


Technical data

Material	Polyester Monofilament
Operating Temperature	-50℃ ~ 150℃
Melt point	230℃
Flammability	UL94 V-0
Standard color	Black
Cutting tool	Scissor and hot knife
Approval	RoHS



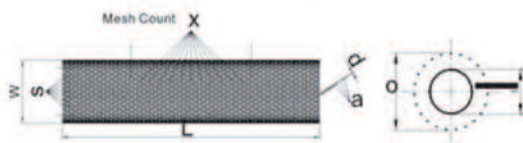
Application



Typically used for high grade A/V cables, HDMI cables, and other electronic cables where a unique personalization or brand identification is required.



Drawing



FRH expandable sleeving offers an excellent protection in many industrial applications and is available in a wide variety of patterns and colors.



Technical data

Material	Polyester
Operating range	-50°C - +150°C
Melt point	250±5°C
Flammability	VW-1
Standard color	Black and grey
Certificate	UL, CSA, RoHS, PFOS, REACH, Halogen Free
Cutting tool	Hot knife



Datasheet

Nominal size (W)		Part No.	Expanded range		Packing (L)
Inch	mm		Min.(I)	Max.(O)	Standard spool
1/8"	3	FRH-003	1	6	1000m
1/4"	6	FRH-006	3	9	500 m
5/16"	8	FRH-008	5	16	350 m
3/8"	10	FRH-010	7	19	350 m
1/2"	12	FRH-012	8	24	300 m
5/8"	15	FRH-016	10	27	250 m
3/4"	20	FRH-019	14	30	200 m
1"	25	FRH-025	18	35	200 m
1-1/4"	30	FRH-032	20	50	150 m
1-1/2"	40	FRH-038	30	60	100 m
1-3/4"	45	FRH-045	35	75	100 m
2"	50	FRH-050	40	80	100 m
2-1/2"	64	FRH-064	45	105	100 m
3"	76	FRH-076	64	120	100 m

Unit: mm

Notes:

- 1.Nominal size indicates the flat width.
- 2.The part No. will be followed with BK, GR and so on to indicate the color of sleeving.
- 3.This sleeving has expandable character, the following sizes are covered by the nearest: 16 mm =15 mm, 19 mm =20 mm, 32 mm =30 mm, 38 mm =40 mm, 51 mm =50 mm.
- 4.Special packages, sizes, and colors can be supplied upon request.
- 5.All numerical data are average or typical value, not including customized sizes.



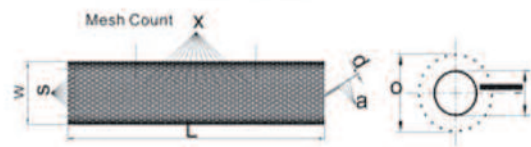
PPS expandable braided sleeving is made of Poly Phenylene Sulfide (PPS) monofilament and manufactured to the standard UL94 V-0. Commonly used in high temperature environments, PPS provides high resistance to both abrasion and chemicals, has low moisture absorption, performs well under high temperature and maintains excellent dimensional stability.

Application



Used mainly in automotive, railways, aerospace, telecom, and military applications. Provides a solution for both flame-retardant and high temperature resistance requirements.

Drawing



Datasheet					
Nominal size (W)		Part No.	Expanded range		Packing (L) Standard spool
Inch	mm		Min.(I)	Max.(O)	
1/8"	3	PPS-003	1	6	1000m
1/4"	6	PPS-006	3	9	500 m
5/16"	8	PPS-008	5	16	350 m
3/8"	10	PPS-010	7	19	350 m
1/2"	12	PPS-012	8	24	300 m
5/8"	15	PPS-016	10	27	250 m
3/4"	20	PPS-019	14	30	200 m
1"	25	PPS-025	18	35	200 m
1-1/4"	30	PPS-032	20	50	150 m
1-1/2"	40	PPS-038	30	60	100 m
1-3/4"	45	PPS-045	35	75	100 m
2"	50	PPS-050	40	80	100 m
2-1/2"	64	PPS-064	45	105	100 m
3"	76	PPS-076	64	120	100 m

Unit: mm

Notes:

1. Nominal size indicates the flat width.
2. The part No. will be followed with BK, GR and so on to indicate the color of sleeving.
3. This sleeving has expandable character, the following sizes are covered by the nearest: 16 mm = 15 mm, 19 mm = 20 mm, 32 mm = 30 mm, 38 mm = 40 mm, 51 mm = 50 mm.
4. Special packages, sizes, and colors can be supplied upon request.
5. All numerical data are average or typical value, not including customized sizes.



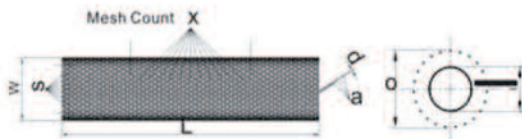
Technical data	
Material	PPS (Polyphenylene sulfide)
Operating range	- 70°C - + 200°C
Melt point	285°C
Flammability	UL 94V-0
Standard color	Black and grey
Cutting tool	Hot Knife
Certified	RoHS
Other features	Acids, solvents and fuels resistant

Application



Most commonly used to protect wire harnesses, cable assemblies, air-conditioned pipes, fluid pipes in automotive, aerospace and military applications.

Drawing



PA braided sleeving is made of nylon 6.6 and offers excellent performance where resistance to abrasion is a requirement. Uniquely shaped monofilament provides smooth, soft, slick surface resisting snags when dragged over rough surfaces. PA sleeving maintains a high degree of flexibility and is resistant to many chemical agents.



Technical data

Material	Polyamide 6.6
Operating range	- 60°C - +160°C
Melt point	256°C
Flammability	VW-1
Certificate	RoHS
Standard color	Black and grey
Cutting tool	Hot knife

Datasheet

Nominal size (W)		Part No.	Expanded range		Packing (L)
Inch	mm		Min.(I)	Max.(O)	Standard spool
1/8"	3	PA-003	1	6	1000m
1/4"	6	PA-006	3	9	500 m
5/16"	8	PA-008	5	16	350 m
3/8"	10	PA-010	7	19	350 m
1/2"	12	PA-012	8	24	300 m
5/8"	15	PA-016	10	27	250 m
3/4"	20	PA-019	14	30	200 m
1"	25	PA-025	18	35	200 m
1-1/4"	30	PA-032	20	50	150 m
1-1/2"	40	PA-038	30	60	100 m
1-3/4"	45	PA-045	35	75	100 m
2"	50	PA-050	40	80	100 m
2-1/2"	64	PA-064	45	105	100 m
3"	76	PA-076	64	120	100 m

Unit: mm

Notes:

- 1.Nominal size indicates the flat width.
- 2.The part No. will be followed with BK, GR and so on to indicate the color of sleeving.
- 3.This sleeving has expandable character, the following sizes are covered by the nearest: 16 mm =15 mm, 19 mm =20 mm, 32 mm =30 mm, 38 mm =40 mm, 51 mm =50 mm.
- 4.Special packages, sizes, and colors can be supplied upon request.
- 5.All numerical data are average or typical value, not including customized sizes.



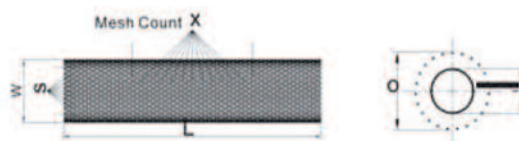
Application



Commonly used as a tough durable protective solution for harnesses, cable assemblies, tubes and hoses in automotive, marine and military applications.

PAM is braided from tight woven nylon multifilament yarn and will not only protect but will also enhance the appearance of any wire assembly. PAM sleeving is extremely flexible, resistant to abrasion and offers good resistance to both acids and alkalis.

Drawing



Datasheet				
Part No.	Nominal size (W)	Expanded range		Packing (L)
		Min.(I)	Max.(O)	
PAM-003	3	2	8	350m
PAM-006	6	4	11	350m
PAM-008	8	5	13	350m
PAM-010	10	6	15	350m
PAM-012	12	8	17	300m
PAM-016	16	10	21	250m
PAM-019	19	12	24	200m
PAM-023	23	15	28	200m
PAM-025	25	16	30	200m
PAM-032	32	20	37	150m
PAM-038	38	24	43	100m
PAM-050	50	32	55	100m
PAM-063	63	40	68	100m

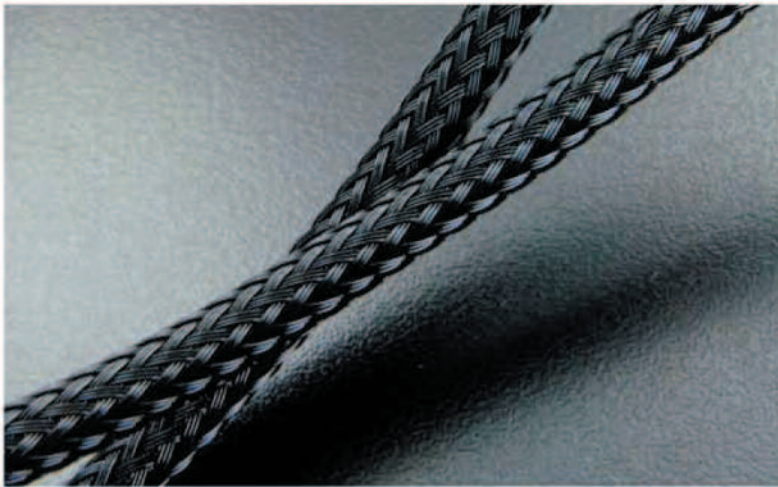
Unit: mm

Notes:

1. Nominal size indicates the flat width.
2. The part No. will be followed with BK, GR and so on to indicate the color of sleeving.
3. This sleeving has expandable character, the following sizes are covered by the nearest: 16 mm = 15 mm, 19 mm = 20 mm, 32 mm = 30 mm, 38 mm = 40 mm, 51 mm = 50 mm.
4. Special packages, sizes, and colors can be supplied upon request.
5. All numerical data are average or typical value, not including customized sizes.



Technical data	
Material	Polyamide
Operating range	- 60°C - +160°C
Melt point	256°C
Flammability	VW-1
Certificate	RoHS
Standard color	Black
Cutting tool	Hot knife



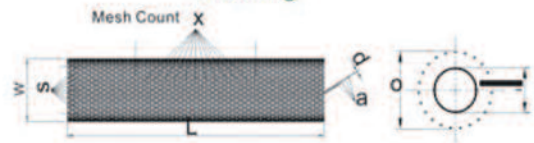
Application



High anti-abrasion braided sleeving commonly used for covering rubber hoses, railway underground wire bundles, protects forklift lines, welding machines and hydraulic lines on heavy equipment.

FRL sleeving offers abrasion resistance greater than 300% more than standard Polyester expandable sleeving making it a good choice where conflict between different parts and components may occur. FRL sleeving offers exceptional mechanical characteristics is quite flexible and provides high resistance to abrasion. Its unique design allows for cables to be easily inserted into the sleeving

Drawing



Datasheet					
Nominal size (W)		Part No.	Expanded range		Packing (L)
Inch	mm		Min.(I)	Max.(O)	Standard spool
1/8"	3	FRL-003	1	6	1000m
1/4"	6	FRL-006	3	9	500 m
5/16"	8	FRL-008	5	16	350 m
3/8"	10	FRL-010	7	19	350 m
1/2"	12	FRL-012	8	24	300 m
5/8"	15	FRL-016	10	27	250 m
3/4"	20	FRL-019	14	30	200 m
1"	25	FRL-025	18	35	200 m
1-1/4"	30	FRL-032	20	50	150 m
1-1/2"	40	FRL-038	30	60	100 m
1-3/4"	45	FRL-045	35	75	100 m
2"	50	FRL-050	40	80	100 m
2-1/2"	64	FRL-064	45	105	100 m
3"	76	FRL-076	64	120	100 m

Unit: mm



Technical data	
Material	Polyester
Operating range	- 50°C - +150°C
Melt point	230°C ±5
Flammability	VW-1
Standard color	Black and grey
Certificate	UL, CSA, RoHS, REACH, Halogen free
Cutting tool	Hot knife

Notes:

- 1.Nominal size indicates the flat width.
2. The part No. will be followed by BK, GR and so on to indicate the color of sleeving.
- 3.This sleeving has expandable character, the following sizes are covered by the nearest:16 mm= 15 mm, 19 mm =20 mm, 32 mm =30 mm,38 mm =40mm,51mm =50 mm.
- 4.Special packages, sizes, and colors can be supplied upon request.
- 5.All numerical data are average or typical value, not including customized sizes.

Application



Abrasion resistant braided sleeving that can be used in applications such as automotive, marine and construction to protect lines on forklifts, welding machines and hydraulic heavy equipment.



Drawing



PAF braided sleeving consists of tough, strong Nylon 6.6 flat filaments which exceeds the durability of other plastic sleeving in abrasion comparison tests without losing its attractive appearance and its flexible feel. Uniquely shaped monofilament provides soft and smooth surface and is resistant to snags when dragged over a rough object



Technical data

Material	Polyamide 6.6
Operating range	-60°C~+160°C
Melt point	256°C
Flammability	VW-1
Standard color	Black and grey
Certificate	RoHS
Cutting tool	Hot knife
Other features	UV and chemical resistance

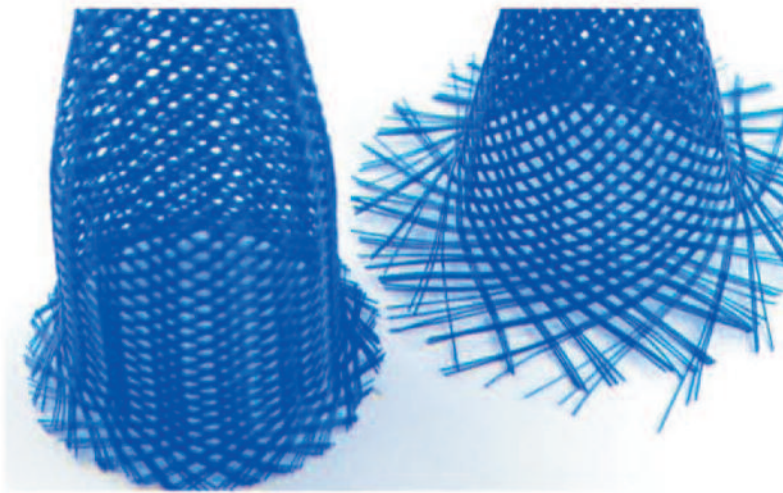
Datasheet

Part No.	Nominal size (W)	Expanded range		Packing (L)
		I.D.(I)	O.D.(O)	
PAF-012	12	9	16	100m/Spool
PAF-019	19	16	25	100m/Spool
PAF-032	32	25	42	100m/Spool
PAF-045	45	38	59	100m/Spool
PAF-064	64	45	83	100m/Spool

Unit: mm

Notes:

1. Nominal size indicates the flat width.
2. The part No. will be followed by BK, GR and so on to indicate the color of sleeving.
3. This sleeving has expandable character, the following sizes are covered by the nearest: 16 mm= 15 mm, 19 mm =20 mm, 32 mm =30 mm, 38 mm=40 mm, 51 mm =50 mm.
4. Special packages, sizes, and colors can be supplied upon request
5. All numerical data are average or typical value, not including customized sizes.



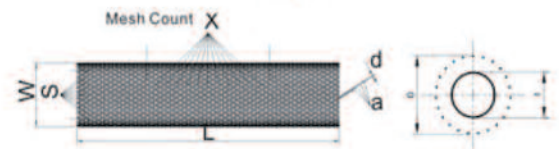
Application



For fieldwork when a hot knife isn't available.

CC cold-cut sleeving can be cut with a common pair of scissors without any obvious detection of fray. CC sleeving has the same characteristics as standard Polyester sleeving plus some additional advantages including a softer material easier to use in the field.

Drawing



Datasheet					
Nominal size (W)		Part No.	Expanded range		Packing (L)
Inch	mm		Min.(I)	Max.(O)	Standard spool
1/8"	3	CC-003	1	5	1000m
1/4"	6	CC-006	3	8	500 m
5/16"	8	CC-008	5	10	350 m
3/8"	10	CC-010	7	12	350 m
1/2"	12	CC-012	8	14	300 m
5/8"	15	CC-016	10	18	250 m
3/4"	20	CC-019	14	23	200 m
1"	25	CC-025	18	28	200 m
1-1/4"	30	CC-032	20	35	150 m
1-1/2"	40	CC-038	30	42	100 m
1-3/4"	45	CC-045	35	48	100 m
2"	50	CC-050	40	54	100 m
2-1/2"	64	CC-064	45	70	100 m
3"	76	CC-076	64	80	100 m

Unit: mm



Technical data	
Material	Polyester
Operating range	- 50°C - +150°C
Melt point	230°C ±5
Flammability	VW-1
Standard color	Black and grey
Certificate	UL, CSA, RoHS
Cutting tool	Scissors



Notes:

- 1.Nominal size indicates the flat width.
- 2.The part No. will be followed by BK, GR and so on to indicate the color of sleeving.
- 3.This sleeving has expandable character, the following sizes: are covered by the nearest: 16 mm= 15 mm, 19 mm =20 mm, 32 mm =30 mm, 38 mm=40 mm, 51 mm =50 mm.
- 4.Special packages, sizes, and colors can be supplied upon request
- 5.All numerical data are average or typical value, not including customized sizes.

Application

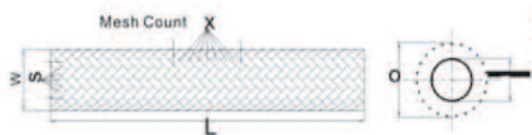


Provides a metallic surface with durable protective covering over cables, wires, tubes and non-metallic objects.



MCR is made of Polyester but offers a dazzling metallic look and provides full coverage without transparent elements in the braided construction. The result is lightweight tubing that is smooth, flexible and offers a continuous metallic shine.

Drawing



Technical data

Material	Polyester
Operating range	-50°C - +150°C
Melt point	250±5°C
Standard color	Silver , golden
Certificate	RoHS, Halogen free
Cutting tool	Hot knife

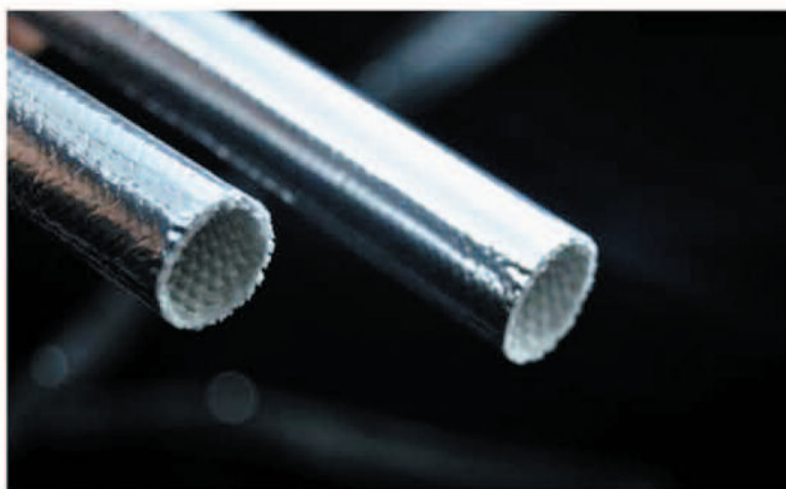
Datasheet

Part No.	Nominal size (W)	Expanded range		Packing (L)
		I.D.(I)	O.D.(O)	
MCR-006	6	5	8	100m/Spool
MCR-008	8	7	10	100m/Spool
MCR-012	12	10	16	100m/Spool
MCR-019	19	18	26	100m/Spool
MCR-032	32	31	42	100m/Spool
MCR-038	38	37	49	100m/Spool

Unit: mm

Notes:

- 1.Nominal size indicates the flat width.
- 2.The part No. will be followed by BK, GR and so on to indicate the color of sleeving.
- 3.This sleeving has expandable character, the following sizes are covered by the nearest: 16 mm= 15 mm, 19 mm =20 mm, 32 mm =30 mm, 38 mm=40 mm, 51 mm =50 mm.
- 4.Special packages, sizes, and colors can be supplied upon request.
- 5.All numerical data are average or typical value, not including customized sizes.



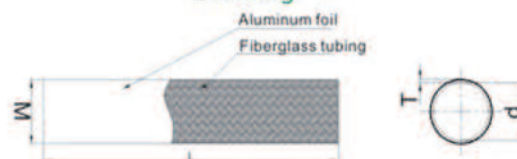
AFRS is a special designed sleeving made from laminating an aluminum metallic heat shield to a layer of strong and tightly braided yarn. A special manufacturing process permits the sleeve to boast a virtually seamless and non-fraying construction, which reflects more than 95% of the radiant energy that hits the material surface allowing the underlying cables and hoses to remain cool.

Application



Offers perfect protection for industrial wire, cable, hydraulic hoses, pipes, tubing and equipment that is in close to intense radiant sources such as hot metal slabs, liquid and molten metals or glass, open flame or engine exhaust manifolds.

Drawing



Datasheet				
Part No.	I.D(d)	Wall thickness(T)	Max. bundle dia	Packing (L)
AFRS-010	10.0	0.6	9.0	25m/roll
AFRS-018	18.0	0.6	17.0	25m/roll
AFRS-026	26.0	0.6	25.0	25m/roll
AFRS-034	34.0	0.6	33.0	25m/roll
AFRS-042	42.0	0.8	40.0	10m/roll
AFRS-050	50.0	0.8	48.0	10m/roll
AFRS-058	58.0	0.8	56.0	10m/roll
AFRS-065	66.0	0.8	63.0	10m/roll

Unit: mm



Technical data	
Material of outer layer	Aluminum foil
Material of inner layer	Fiberglass sleeving
Operating range	- 50℃+200℃
Melt point	600℃
Flammability	VW-1
Standard color	Silvery white
Certificate	UL, RoHS
Cutting tool	Fluid and chemical resistance

Notes:

- 1.Special packages and sizes can be supplied upon request.
- 2.All numeric data shows average or typical values, not including customized sizes.
- 3.Normally, it will be supplied in flat shape. Round shape need to be made upon request.

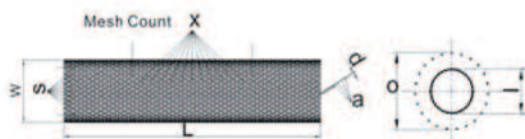
Application



Widely used for communication, electronic, medical and military equipment.



Drawing



SES copper foil shielding is woven with copper foil filament and is used for various electrical and industrial field installations where EMI shielding is required. SES sleeving is highly flexible, easy to install, offers excellent protection, is lighter in weight than tinned copper braided sleeving and offers the perfect combination of economy and durability.



Technical data

Material	Copper filament
Operating range	-40°C - +150°C
Flammability	VW-1
Standard color	Tinned color
Certificate	RoHS
Cutting tool	Scissors
Other features	Resists gasoline and engine chemicals

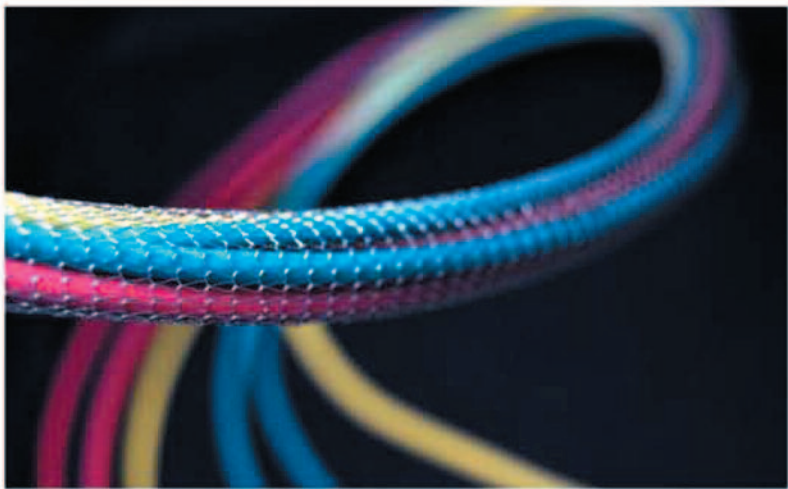
Datasheet

Part No.	Nominal size (W)	Expanded range (I to O)	Packing (L)
SES-003	3.0	1.0 --- 5.0	200 m/spool
SES-006	6.0	4.0 --- 8.0	150 m/spool
SES-008	8.0	5.0 --- 10.0	150 m/spool
SES-010	10.0	7.0 --- 16.0	150 m/spool
SES-012	12.0	8.0 --- 20.0	100 m/spool
SES-015	15.0	10.0 --- 23.0	100 m/spool
SES-020	20.0	13.0 --- 30.0	100 m/spool
SES-025	25.0	18.0 --- 35.0	100 m/spool
SES-030	30.0	20.0 --- 40.0	50 m/spool
SES-040	40.0	30.0 --- 50.0	50 m/spool
SES-050	50.0	40.0 --- 60.0	50 m/spool

Unit: mm

Notes:

1. Nominal size indicates the flat width.
2. Special packages and sizes can be supplied upon request.
3. All numeric data shows average or typical values, not including customized sizes.



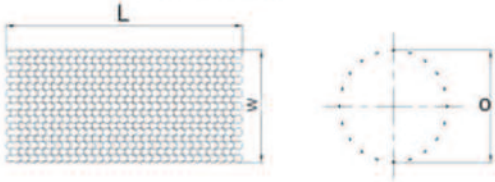
SS tinned copper braided sleeving offers a good solution when lightweight material and EMI shielding are required at the same time. SS sleeving is extremely flexible and also provides exceptional abrasion and cut through resistance.

Application



Used in a variety of industrial applications including high-speed trains, underground construction, aerospace and high-tech special products.

Drawing



Datasheet			
Part No.	O.D.(O)	Width(W)	Packing (L)
SS-030	30.0	47.0	300M-500M
SS-035	35.0	55.0	300M-500M
SS-040	40.0	62.0	300M-500M
SS-045	45.0	70.0	300M-500M
SS-050	50.0	78.0	300M-500M

Unit: mm

Notes:

- 1.Special packages and sizes can be supplied upon request.
- 2.All numeric data shows average or typical value.



Technical data	
Material	Tinned copper
Operating range	- 60℃ - + 420℃
Melt Point	1084℃
Flammability	Non-flammability
Standard color	Silver
Certificate	RoHS
Cutting tool	Scissors



NSSP Polyester non-heat shrinkable weave sleeving is made using polyester multifilament yarns. Constructed using a tight woven design, NSSP sleeving is resistive to many forms of chemical fluids. Its smooth inner wall reduces both noise and friction and provides for easy installation when passing wires throughout the length of the sleeving.

Application



Widely used in the industrial and construction fields to protect wire harnesses from damage.

Drawing



Datasheet				
Part No.	Flat Width (W)	Round ID	Wall Thickness (T)	Packing (L)
NSSP-018	20	12	1.1	100m/spool
NSSP-021	25	15	1.1	100m/spool
NSSP-023	30	19	1.1	100m/spool
NSSP-025	35	22	1.1	50m/spool
NSSP-028	40	25	1.1	50m/spool
NSSP-031	45	28	1.1	50m/spool
NSSP-034	50	31	1.1	50m/spool
NSSP-040	60	38	1.1	50m/spool
NSSP-044	70	44	1.1	50m/spool
NSSP-052	80	50	1.1	50m/spool
NSSP-060	90	57	1.1	50m/spool
NSSP-064	115	60	1.1	50m/spool
NSSP-072	145	70	1.1	50m/spool
NSSP-084	176	176	1.1	50m/spool
NSSP-092	200	200	1.1	50m/spool

Unit: mm

Notes:

1. Special packages and sizes can be supplied upon request.
2. All numeric data shows average or typical value.



Technical data	
Material	Polyester Multifilament
Operating Temperature	-50 °C ~ 150 °C
Melting point	230 °C
Flammability	VW-1
Standard color	Black
Cutting tool	Scissor and hot knife
Approval	RoHS

Application



Widely used in the industrial and construction fields to protect wire harnesses from damage.



Drawing



NSSN nylon non-heat shrinkable weave sleeving is made using nylon multifilament yarns. Constructed using a tight woven design, NSSN sleeving is extremely flexible and resistive to many forms of chemical fluids. Its smooth inner wall reduces both noise and friction and provides for easy installation when passing wires throughout the length of the sleeving.



Technical data	
Material	Nylon Multifilament
Operating Temperature	-60°C ~ 160°C
Melting point	256°C
Flammability	VW-1
Standard color	Black
Cutting tool	Scissor and hot knife
Approval	RoHS

Datasheet

Part No.	Flat Width (W)	Wall Thickness (T)	Packing (L)
NSSN-018	18	1.15	100m/spool
NSSN-021	21	1.15	100m/spool
NSSN-023	23	1.15	100m/spool
NSSN-025	25	1.15	50m/spool
NSSN-028	28	1.15	50m/spool
NSSN-031	31	1.15	50m/spool
NSSN-034	34	1.15	50m/spool
NSSN-040	40	1.15	50m/spool
NSSN-044	44	1.15	50m/spool
NSSN-052	52	1.15	50m/spool
NSSN-060	60	1.15	50m/spool
NSSN-064	64	1.15	50m/spool
NSSN-072	72	1.15	50m/spool
NSSN-084	84	1.15	50m/spool
NSSN-092	92	1.15	50m/spool

Unit: mm

Notes:

1. Nominal size indicates the flat width.
2. The part No. will be followed by BK, GR and so on to indicate the color of sleeving.
3. Special packages, sizes and colors can be supplied upon request.
4. All numerical data are average or typical values, not including customized sizes.

Application



For high-tech applications including aerospace and military, these durable protective sleeving are perfect for wires, wire bundles and harnesses, cable assemblies, flat ribbon cable and tubing and hoses.

Drawing



CB sleeving is made from carbon fiber yarn, which is lightweight, has amazing strength qualities and is highly resistant to heat. Our carbon fiber sleeving will form itself to accommodate uneven or asymmetrical surfaces while providing full radial stability and torsion strength.



Technical data	
Material	Carbon fiber
Operating range	-269°C - +650°C
Flammability	VW-1
Standard color	Black
Certificate	RoHS
Cutting tool	Scissors
Others features	Conductive character

Datasheet			
Part No.	Nominal size (W)	Expanded range (I to O)	Packing (L)
CB-003	3.0	1.0 --- 4.0	500 m/spool
CB-006	6.0	5.0 --- 8.0	500 m/spool
CB-008	8.0	6.0 --- 10.0	350 m/spool
CB-010	10.0	7.0 --- 13.0	350 m/spool
CB-012	12.0	8.0 --- 16.0	300 m/spool
CB-015	15.0	10.0 --- 20.0	250 m/spool
CB-020	20.0	14.0 --- 26.0	200 m/spool
CB-025	25.0	18.0 --- 33.0	200 m/spool
CB-030	30.0	20.0 --- 39.0	150 m/spool
CB-040	40.0	30.0 --- 52.0	100 m/spool
CB-050	50.0	40.0 --- 65.0	100 m/spool

Unit: mm

Notes:

1. Nominal size indicates the flat width. I.D indicates the round inner diameter.
2. Special packages and sizes can be supplied upon request.
3. All numeric data shows average or typical values, not including customized sizes.



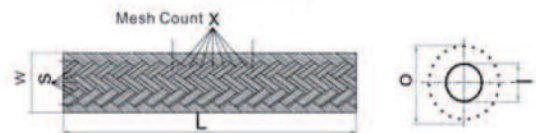
KL kevlar sleeving has excellent characteristics including high thermal stability, outstanding tensile strength and superior toughness: up to 20 times stronger than the same diameter steel wire. KL fiber yarn offers great resistance to chemicals and heat and will protect your cables in the most extreme environments.

Application



Popular for military and high-tech applications, this sleeving also offers excellent tension strength. Uses include the manufacturing of bulletproof vests and protective covering for cables and hoses.

Drawing



Datasheet

Part No.	Nominal size (W)	Expanded range (I to O)	Packing (L)
KL-003	3	1---4	500 m/spool
KL-006	6	5 ---8	500 m/spool
KL-008	8	6 ---10	350 m/spool
KL-010	10	7 ---13	350 m/spool
KL-012	12	8 ---16	300 m/spool
KL-015	15	10 ---20	250 m/spool
KL-020	20	14 ---26	200 m/spool
KL-025	25	18 ---33	200 m/spool
KL-030	30	20 ---39	150 m/spool
KL-040	40	30 ---52	100 m/spool
KL-050	50	40 ---65	150 m/spool

Unit: mm



Technical data	
Material	Kevlar fiber
Operating range	-170℃ - +250℃
Melt point	No melt
Flammability	UL94V-0
Standard color	Yellow
Certificate	RoHS
Cutting tool	Shears
Others features	Resist organic solvents

Notes:

- 1.Nominal size indicates the flat width. I.D indicates the round inner diameter.
- 2.Special packages, sizes and colors can be supplied upon request.
- 3.All numeric data shows average or typical values, not including customized sizes.
- 4.Kevlar is a trademark of Dupont.

Application



Widely used in metallurgy, chemical industry and aviation for protecting hoses, oil tubes, cables or as a cover.



Drawing



BS basalt braided sleeving has outstanding properties including its resistance to high temperatures, chemical corrosion and as an electrical insulator. BS sleeving provides insulating solutions when extreme environmental conditions are present and serviceability is required.



Technical data	
Material	Basalt fiber
Operating range	-269°C+650°C
Melt point	1400°C
Flammability	94V-0
Standard color	Brown
Certificate	RoHS
Cutting tool	hears
Others features	Durability to the attack of water, salts, alkalis and acids

Datasheet			
Part No.	Nominal size (W)	Expanded range (I to O)	Packing (L)
BS-003	3.0	1.0---4.0	500 m/spool
BS-006	6.0	5.0 ---8.0	500 m/spool
BS-008	8.0	6.0 ---10.0	350 m/spool
BS-010	10.0	7.0 ---13.0	350 m/spool
BS-012	12.0	8.0 ---16.0	300 m/spool
BS-015	15.0	10.0 ---20.0	250 m/spool
BS-020	20.0	14.0 ---26.0	200 m/spool
BS-025	25.0	18.0 ---33.0	200 m/spool
BS-030	30.0	20.0 ---39.0	150 m/spool
BS-040	40.0	30.0 ---52.0	100 m/spool
BS-050	50.0	40.0 ---65.0	100 m/spool

Unit: mm

Notes:

- 1.Nominal size indicates the flat width. I.D indicates the round inner diameter.
- 2.Special packages and sizes can be supplied upon request.
- 3.All numeric data shows average or typical values, not including customized sizes.



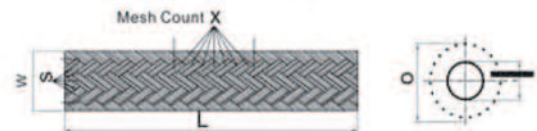
NM consists of 100% continuous nomex fiber. Although it has a soft feel and smooth appearance, nomex sleeving is extremely tough, provides cables with both thermal protection and high abrasion resistance. Nomex can retain its integrity at temperatures over 245 degrees C point of nylon and performs well under high humidity and when moisture is present.

Application



Used in a wide range of applications including military, aerospace, racing cars, fire department equipment or anywhere that wire cabling comes within contact of intense flame and heat.

Drawing



Datasheet			
Part No.	Nominal size (W)	Expanded range (I to O)	Packing (L)
NM-003	3.0	1.0 --- 4.0	500m/roll
NM-006	6.0	5.0 --- 8.0	500m/roll
NM-008	8.0	6.0 --- 10.0	500m/roll
NM-010	10.0	7.0 --- 13.0	500m/roll
NM-012	12.0	8.0 --- 16.0	500m/roll
NM-015	15.0	10.0 --- 20.0	500m/roll
NM-020	20.0	14.0 --- 26.0	500m/roll
NM-025	25.0	18.0 --- 33.0	500m/roll
NM-030	30.0	20.0 --- 39.0	500m/roll
NM-040	40.0	30.0 --- 52.0	500m/roll
NM-050	50.0	40.0 --- 65.0	500m/roll

Unit: mm



Technical data	
Material	Nomex fiber
Operating range	-196°C - +350°C
Melt point	No melt
Flammability	UL94V-0
Standard color	White
Certificate	RoHS, Halogen free
Cutting tool	Shears
Others features	Resistant to most acids, alkalis, bleaching agents, unaffected by freon, gasoline, jet fuel, ethylene glycol and methyl alcohol.

Notes:

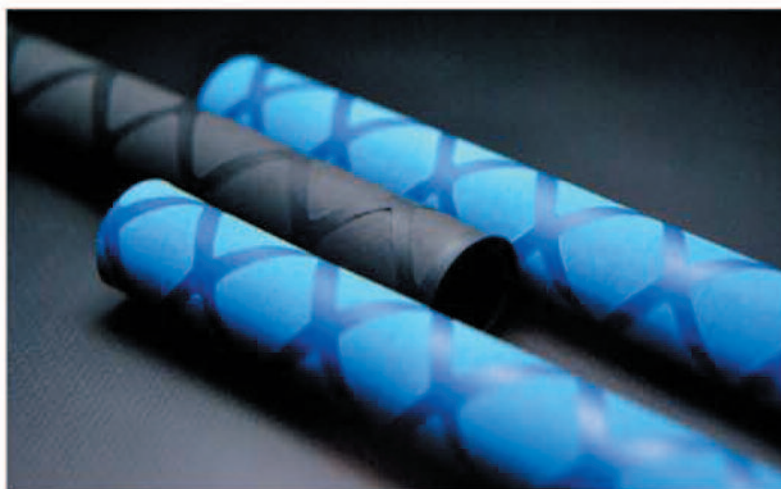
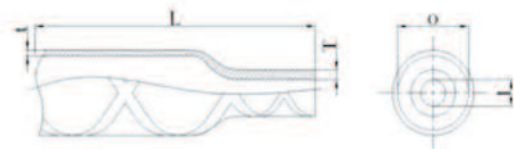
1. Nominal size indicates the flat width. I.D indicates the round inner diameter.
2. The Part No. will be followed by GN to indicate the color of sleeving.
3. Special packages, sizes and colors can be supplied upon request.
4. All numerical data shows average or typical value, not including customized sizes.
5. Nomex is a trademark of Dupont.

Application



Used widely in the sporting goods industry when adding a skid proof surface is required.

Drawing



MFHG skid-proof heat shrinkable tubing is decorative, provides excellent sweat absorption and is resistant to durable abrasion. MFHG tubing is friendly to the environment, provides good flexibility, skid proof, and offers fast stable shrinkage at low temperatures.



Technical data

Material	Ethylene vinyl acetate
Operating range	-55°C - +105°C
Shrinking temperature	Start at 70°C and shrunk totally at 100°C
Tensile Strength	10.4Mpa
Shrinking ratio	2:1
Flammability	VW-1
Certificate	RoHS
Color	Black/blue/green
Tool	Heat gun, oven

Datasheet

Part No.	As supplied		After recovered		Packing (L)
	O.D.(O)	Wall thickness (t)	I.D.(I)	Wall thickness (t)	
MFHG-015	15.00	0.45	8.00	0.85	1.0m/pcs
MFHG-020	20.00	0.50	11.00	0.90	0.8/1.0/1.6m/ pcs
MFHG-022	22.00	0.50	12.50	0.90	
MFHG-025	25.00	0.50	14.50	1.0	
MFHG-028	28.00	0.50	15.50	1.0	
MFHG-030	30.00	0.60	17.50	1.2	
MFHG-035	35.00	0.60	20.00	1.2	
MFHG-040	40.00	0.60	23.00	1.2	
MFHG-045	45.00	0.65	25.00	1.25	
MFHG-050	50.00	0.65	28.00	1.25	

Unit: mm

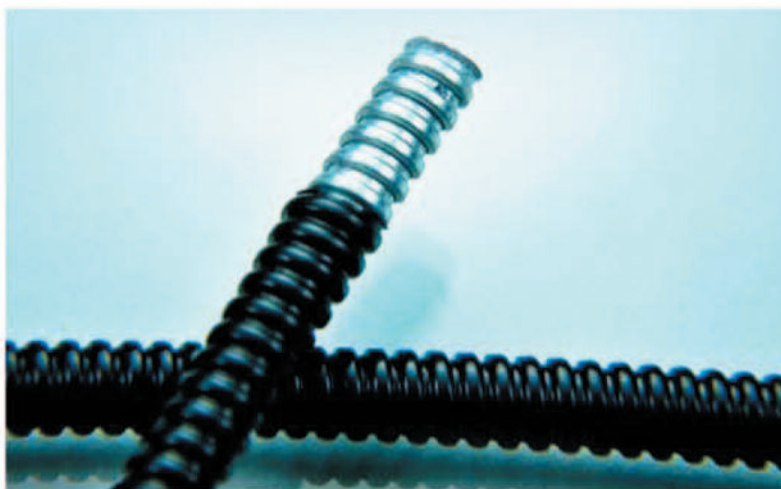
Notes:

- 1.The part No. will be followed by BK, BL, GN and so on to indicate the color of tube.
- 2.Special packages, sizes and colors can be supplied upon request.
- 3.Skid-proof heat shrinkable tube can be shrunk by hot water easily and fast for mass production in order to save labor cost

Application

Widely used in power plants, power transmission systems and transportation systems for protecting electrical wires.

Drawing



MBWG PVC coated galvanized flexible steel conduit is made from a galvanized steel strip and coated with a refined PVC covering. MBWG is water-proof, corrosion resistant, UV resistant and flame retardant. The smooth inner structure and flexibility of the conduit allows wires and cables to pass easily through the tubing and acts as an ideal material for static and dynamic applications requiring high mechanical protection.



Technical data

Tube material	Steel
Coating material	Polyvinyl chloride
Operating range	-10℃~+80℃,100℃ in short time
Standard color	Black , grey
Certificate	RoHS
Cutting tool : pliers	Pliers

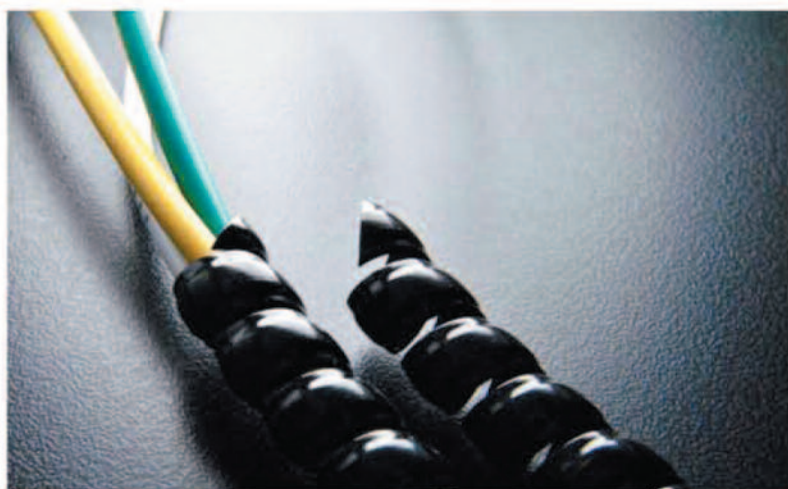
Notes:

- 1.The part No. will be followed by BK, GR and so on to indicate the color of flexible conduit .
- 2.Special packages, sizes and colors can be supplied upon request.
- 3.All numeric data shows average or typical values, not including customized sizes.

Datasheet

Part No.	I.D. (d)	O.D. (D)	Bending radius (R±10%)	Packing (L)
MBWG-004	4.0	7.0	30.0	200m/roll
MBWG-006	6.0	9.0	40.0	200 m/roll
MBWG-008	8.0	11.8	45.0	100 m/roll
MBWG-010	10.0	14.5	55.0	100 m/roll
MBWG-012	12.0	16.5	60.0	100 m/roll
MBWG-013	13.0	17.5	65.0	100 m/roll
MBWG-015	15.0	20.2	80.0	100 m/roll
MBWG-016	16.0	21.2	85.0	100 m/roll
MBWG-019	19.0	24.5	95.0	50 m/roll
MBWG-020	20.0	25.5	100.0	50 m/roll
MBWG-025	25.0	31.7	115.0	50 m/roll
MBWG-032	32.0	39.6	140.0	50 m/roll
MBWG-038	38.0	46.6	160.0	50 m/roll
MBWG-051	51.0	59.5	190.0	25 m/roll
MBWG-064	64.0	73.5	280.0	20 m/roll or 10 m/roll
MBWG-075	75.0	84.5	320.0	20 m/roll or 10 m/roll
MBWG-100	100.0	109.0	340.0	20 m/roll or 10 m/roll
MBWG-125	125.0	136.0	360.0	5 m/roll
MBWG-150	150.0	161.0	400.0	5 m/roll

Unit: mm



MXLG spiral wrap provides maximum protection against abrasion and has a high resistance against ultra violet weathering in a wide variety of temperature ranges. MXLG is easy to install without the need of removing connectors or terminals and dramatically increases serviceable life while reducing costly repairs.

Application



Used as a simple solution for covering wires and wire harnesses

Drawing



Datasheet					
Part No.	I.D.	Wall thickness		Width (W)	Bundle diameter range
		(T)	(t)		
MLXG-008	8.0	1.2	0.4	8.0	8.0-11.0
MLXG-010	10.0	1.3	0.4	10.0	10.0-13.0
MLXG-012	12.0	1.5	0.5	12.0	12.0-15.0
MLXG-016	16.0	2	0.5	15.0	15.0-18.0
MLXG-018	19.0	2	0.5	16.0	18.0-21.0
MLXG-020	20.0	2.5	0.5	18.0	19.0-25.0
MLXG-025	25.0	2.5	0.7	21.0	23.0-29.0
MLXG-028	28.0	3.0	0.7	22.0	26.0-32.0
MLXG-030	30.0	3.0	1.0	22.0	28.0-35.0
MLXG-032	32.0	3.0	1.0	23.0	30.0-37.0
MLXG-035	35.0	3.5	1.0	24.0	32.0-40.0
MLXG-038	38.0	3.5	1.0	25.0	35.0-43.0
MLXG-042	42.0	3.5	1.0	25.5	39.0-47.0
MLXG-045	45.0	3.5	1.0	26.0	42.0-50.0
MLXG-050	50.0	3.5	1.2	27.0	46.0-55.0
MLXG-060	60.0	4.0	2.0	28.0	55.0-66.0
MLXG-074	74.0	4.4	2.2	29.0	68.0-70.0
MLXG-088	88.0	4.9	2.4	31.0	82.0-95.0
MLXG-100	100.0	5.2	2.5	33.0	94.0-110.0

2m

Unit: mm



Technical data	
Material	Modified Polypropylene
Operating range	-10°C - +105°C
Tensile strength	25 MPa at normal temperature
Standard color	Black
Certificate	RoHS
Other features	Impervious to oils, solvents

Notes:

- 1.The part No. will be followed by BK, GR and so on to indicate the color .
- 2.Special package, sizes and colors can be supplied upon request.
- 3.All numeric data shows average or typical values, not including customized sizes.



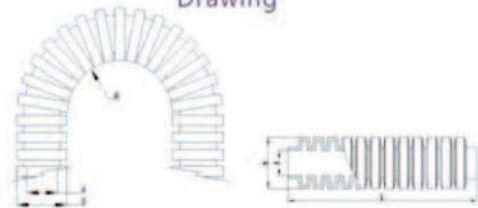
MELG corrugated flexible conduit can be used in a wide range of applications and provides an extra layer of safety against mechanical damage, UV radiation, weathering and chemicals. The flexible body allows wires and cables to pass through the tubing quickly and without snagging and it can be easily molded or bent to fit the required installation.

Application



Used for insulating wires and cable harnesses in a variety of applications including automotive, railway and also for protecting hydraulic hoses.

Drawing



Datasheet

PE material Part No.	PA material Part No.	PP material Part No.	I.D*O.D (d*D)	Bending radius (R±10%)	Packing (L)
MELG-7	MNLG-7	MDLG-7	4.5×7.0	5.0	200 m/roll
MELG-8.5	MNLG-8.5	MDLG-8.5	5.5×8.5	8.0	100 m/roll
MELG-10	MNLG-10	MDLG-10	7.0×10.0	10.0	100 m/roll
MELG-12	MNLG-12	MDLG-12	8.5×11.5	15.0	100 m/roll
MELG-13	MNLG-13	MDLG-13	10.0×13.0	20.0	100 m/roll
MELG-15.8	MNLG-15.8	MDLG-15.8	12.0×15.8	30.0	100 m/roll
MELG-18.5	MNLG-18.5	MDLG-18.5	14.3×18.5	40.0	100 m/roll
MELG-21.2	MNLG-21.2	MDLG-21.2	17.0×21.2	45.0	100 m/roll
MELG-25	MNLG-25	MDLG-25	21.0×25.0	50.0	100 m/roll
MELG-28.5	MNLG-28.5	MDLG-28.5	23.0×28.5	55.0	50 m/roll
MELG-34.5	MNLG-34.5	MDLG-34.5	29.0×34.5	60.0	50 m/roll
MELG-42.5	MNLG-42.5	MDLG-42.5	36.0×42.5	70.0	25 m/roll
MELG-54.5	MNLG-54.5	MDLG-54.5	48.0×54.5	80.0	25 m/roll

Unit:mm



Technical data

Material	1) MELG :PE 2) MNLG :PA 3) MDLG :PP
Operating range	1) MELG : 2) MNLG : 3) MDLG :
Standard color	Black and grey.
Certificate	RoHS
Other features	Highly abrasion resistance, resist acids, solvents and fuels resistant.

Notes:

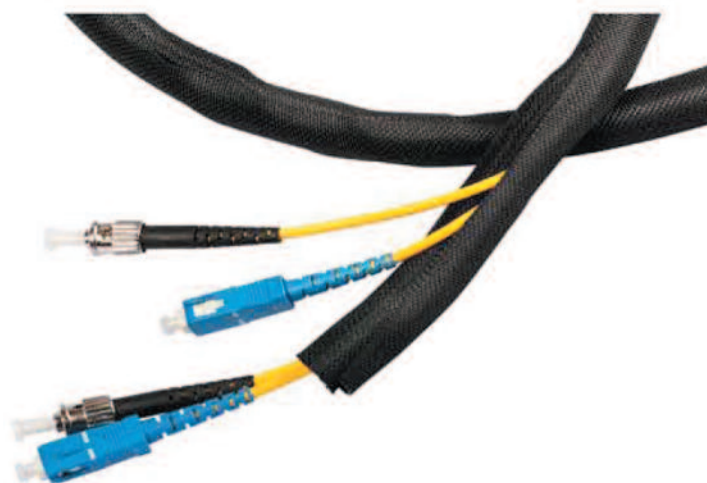
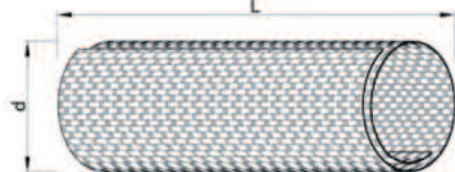
- 1.The part No. will be followed by BK, GR and so on to indicate the color of flexible conduit.
- 2.Special packages, sizes and colors can be supplied upon request.
- 3.All numeric data shows average or typical values, not including customized sizes.

Application



Most commonly used to protect wire harnesses, cable assemblies, flat ribbon cables, tubes and hoses to provide a tough, durable protection in automotive equipment, railways and panel boards.

Drawing



SCS self-closing wrap is a non-expandable sleeving woven from monofilament (weft) and multifilament (warp) polyester yarns. It provides a lightweight, cost effective and tough solution for the protection of a wide range of components. Its inherent flexibility allows it to bend, coil and conform to irregular shapes, while its open design allows it to be installed on completed assemblies.



Technical data	
Material	Polyester monofilament and multifilament
Operating range	- 50°C - +150°C
Melt point	250°C ± 5
Flammability	VW-1
Certificate	RoHS, Halogen free
Standard color	Black and grey
Cutting tool	Scissors

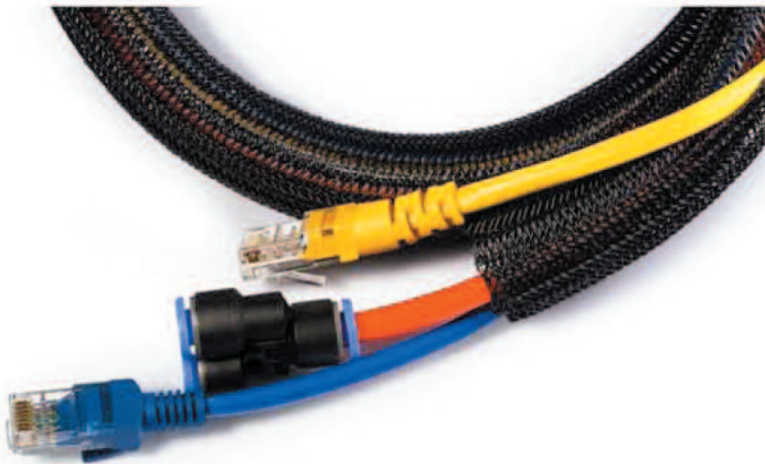
Datasheet

Part No.	Size (d)	Max. bundle Dia.	Packing (L)
SCS-005	5.0	6.0	100m
SCS-008	8.0	9.0	100 m
SCS-010	10.0	11.0	100 m
SCS-013	13.0	14.0	50 m
SCS-019	19.0	20.0	25 m
SCS-025	25.0	27.0	25 m
SCS-029	29.0	31.0	25 m
SCS-032	32.0	34.0	25 m
SCS-038	38.0	40.0	25 m
SCS-050	50.0	52.0	25 m

Unit: mm

Notes:

1. The part No. will be followed by BK, GR and so on to indicate the color of wrap.
2. Special packages, sizes and colors can be supplied upon request.
3. All numeric data shows average or typical values, not including customized sizes.



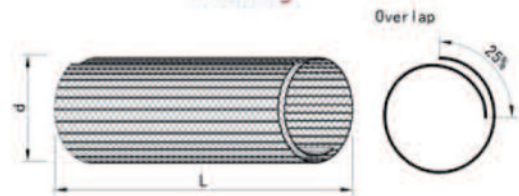
Application



Ideal for applications in wire harnesses, automatic equipment, railways, general manufacturing industry where wires and tubes need a tough durable protection.

SCW self-closing wrap offers an innovative solution for the protection of breakout areas and allows for easy cable removal when inspection or maintenance is required. The special open structure allows it to be installed after other components such as connectors or terminals have been applied to the cable. SCW wrap offers a strong resilience to abrasion and is flame resistant.

Drawing



Datasheet				
Part No.	I.D (d)	Overlap (%)	Max. bundle Dia.	Packing (L)
SCW-003	3	25%	4	200 m/spool
SCW-006	6		7	200 m/spool
SCW-009	9		10	100 m/spool
SCW-013	13		14	50 m/spool
SCW-019	19		20	25 m/spool
SCW-025	25		26	25 m/spool
SCW-032	32		33	25 m/spool
SCW-038	38		40	25 m/spool
SCW-050	50		52	25 m/spool

Unit: mm



Technical data	
Material	Polyester
Operating range	-50°C - +150°C
Melt point	250±5°C
Flammability	VW-1
Standard color	Black
Certificate	RoHS, Halogen Free
Cutting tool	Hot knife

Notes:

1. The part No. will be followed by BK, GR and so on to indicate the color of wrap.
2. Special packages, sizes and colors can be supplied upon request.
3. All numeric data shows average or typical values, not including customized sizes.

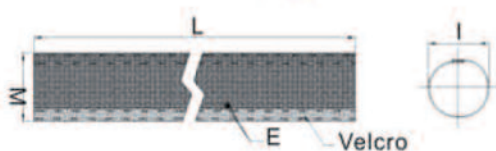
Application



Widely used in industrial machinery, electrical appliances, shipbuilding, railway vehicles, aerospace and automotive industries.



Drawing



PVTW Velcro multifilament wrap is a non-expandable sleeving woven from polyester multifilament yarns. PVTW is lightweight, high-strength and offers excellent abrasion and flame resistant properties. Wraps easily over cable bundles or for quick break-outs, just bring the cables out through the Velcro.



Technical data

Wrap material	Polyester
Velcro material	Polyamide
Operating range	-50°C - +150°C
Melt point	230°C ±5
Flammability	VW-1
Standard color	Black, white, grey
Certificate	RoHS, Halogen free
Cutting tool	Hot knife

Datasheet

Part No.	I.D (I)	Spread width (W)	Packing (L)
PVTW-20	20	80	50 m/roll
PVTW-25	25	95	
PVTW-30	30	115	
PVTW-35	35	130	
PVTW-40	40	146	25 m/roll
PVTW-45	45	162	
PVTW-50	50	178	

Unit: mm

Notes:

1. I.D indicates round inner diameter. Nominal size indicates the flat width.
2. The part No. will be followed by BK, WH, GR and so on to indicate the color of wrap.
3. Special packages, sizes and colors can be supplied upon request.
4. All numerical data are average or typical value, not including customized sizes.



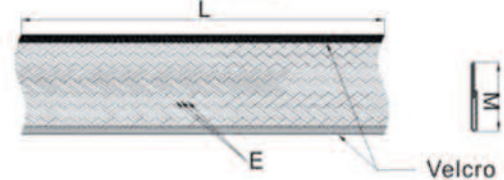
Application



Velcro braided wrap is widely used for management of home theater A/V cables, computer cables and power cords.

VCW Velcro braided wrap can help to create a tidy and well regulated environment and its open weave design easily conforms to many irregular shapes. VCW can be easily wrapped and closed over harness assemblies and then re-opened quickly to manage cables being added or removed. Breakouts can be made simply by bringing cables out through the Velcro.

Drawing



Datasheet

Part No.	Nominal size	Velcro width	Max. bundle dia	Packing (L)
VCW-013	13	10	8	50 m/roll
VCW-019	19	10	12	50 m/roll
VCW-032	32	20	20	50 m/roll
VCW-051	51	20	32	50 m/roll
VCW-064	64	20	40	50 m/roll

Unit : mm



Technical data

Wrap material	Polyester
Velcro material	Polyamide
Operating range	-50°C - +150°C
Melt point	230°C ±5
Flammability	VW-1
Standard color	Black, white, grey
Certificate	RoHS , Halogen free
Cutting tool	Hot knife

Notes:

1. I.D indicates round inner diameter. Nominal size indicates the flat width.
2. The part No. will be followed by BK, WH, GR and so on to indicate the color of wrap.
3. Special packages, sizes and colors can be supplied upon request.
4. All numerical data are average or typical value, not including customized sizes.

Application



Widely used in industrial areas, office, high traffic areas to protect lying wires and cables from damage.



Drawing



DHS double hook wrap consists of polyester multifilament and nylon Velcro. The special construction makes it easy to be installed and removed and is resistant to abrasion; an easy solution for protecting wire and cables exposed in carpeted areas.



Technical data	
Material	Polyester multifilament
Operating Temperature	- 50°C - +150°C
Melting point	230°C
Flammability	VW-1
Standard color	Black
Cutting tool	Scissor and hot knife
Approval	RoHS
  	

Datasheet

Part No.	Nominal size (W)	Wall Thickness (T)	Packing (L)
DHS-076	76	0.7	25 m/roll
DHS-100	100	0.7	25 m/roll

Unit: mm

Notes:

1. I.D indicates round inner diameter. Nominal size indicates the flat width.
2. The part No. will be followed by BK, WH, GR and so on to indicate the color of wrap.
3. Special packages, sizes and colors can be supplied upon request.
4. All numerical data are average or typical value, not including customized sizes.

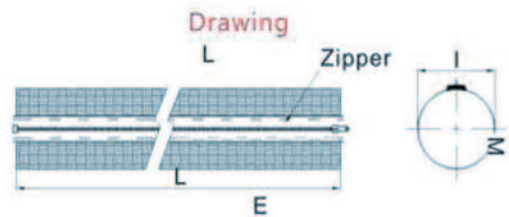


Application



Provides a tough durable protection to wires, wire bundles and harnesses, computer power cords, tubes and hoses.

PZTW zipper multifilament wrap is very flexible, available in a wide variety of sizes and offers the same features and more than the "Zipper Braided Wrap". Easy installation and removal of wires, anti abrasion protective covering and in addition, the tight weave construction offers better dust protection than its counterpart.



Datasheet				
Part No.	I.D (I)	Spread width	Max. bundle Dia.	Packing (L)
PZTW-25	25	88	27	50 m/roll
PZTW-30	30	104	32	
PZTW-35	35	120	37	
PZTW-40	40	135	42	
PZTW-45	45	151	47	25 m/roll
PZTW-50	50	170	52	
PZTW-60	60	198	62	

Unit: mm



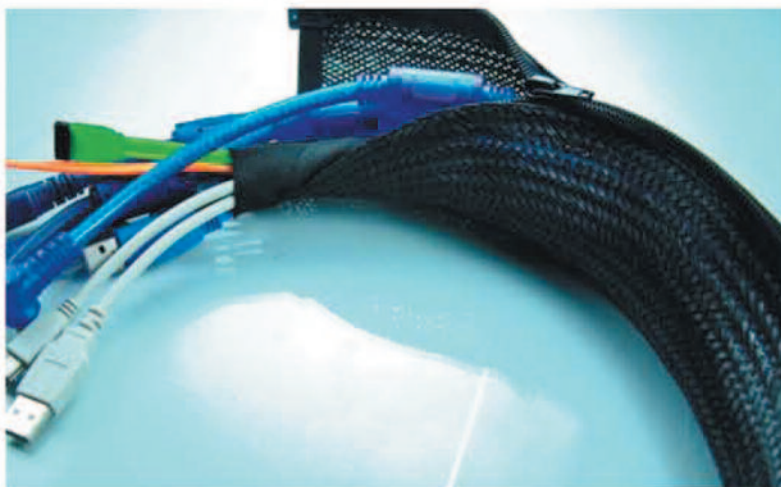
Technical data	
Wrap material	Polyester multifilament
Operating range	- 50°C - +150°C
Melt point	230°C ± 5
Flammability	VW-1
Standard color	Black, grey, white
Certificate	RoHS, Halogen free

Notes:

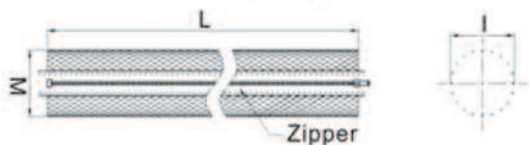
1. I.D indicates the round inner diameter. Nominal size indicates the flat width.
2. Spread Width means the opened wrap dimension.
3. The part No. will be followed by BK, GR, WH and so on to indicate the color of wrap.
4. Special packages, sizes and colors can be supplied upon request.
5. All numeric data shows average or typical values, not including customized sizes.

Application

Used as a protective covering for wires, wire bundles and harness cable assemblies, flat ribbon cable, tubing and hoses.



Drawing



ZW sleeving is as easy to use as zipping-up your coat. Removal or addition of cables from the sleeving is an easy task due to the special design structure which also provides additional protection against abrasion and flame.



Technical data

Material	Polyester
Operating range	- 50°C-150°C
Melt point	230°C ±5
Standard color	Black
Flammability	VW-1
Certificate	RoHS, Halogen free

Datasheet

Part No.	Nominal size (W)	Max. bundle Dia. (I)	Packing (L)
ZW-12	12	8	On request
ZW-20	20	15	
ZW-30	30	20	
ZW-50	50	35	
ZW-64	64	45	

Unit: mm

Notes:

1. The part No. will be followed by BK, GR and so on to indicate the color of tube.
2. Special packages, sizes and colors can be supplied upon request.
3. All numeric data shows average or typical values, not including customized sizes.



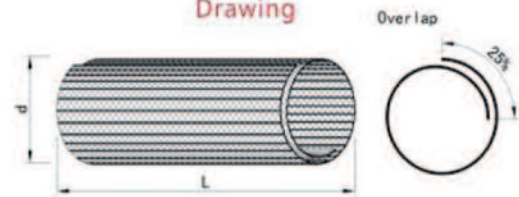
Application



Used as a protective sleeving in automotive, railway and industrial machinery applications to cover wire harnesses, cable assemblies, flat ribbon cable, tubing and hoses at a reduced noise level

SSCW noise resistant braided wrap is woven using both Polyester monofilament and Polyester multifilament material. The special structure of the wrap offers excellent noise reduction properties and the side entry design makes it easy to add or remove wire harnesses or cables especially in difficult or hard to reach areas such as door panels or dashboards. This material offers the same protection as other common expandable sleeving products adding noise reduction to its feature set.

Drawing



Datasheet				
Part No.	I.D (d)	Overlap (%)	Max. bundle Dia.	Packing (L)
SSCW-005	5	25%	6	200 m/spool
SSCW-009	9		10	100 m/spool
SSCW-013	13		14	50 m/spool
SSCW-019	19		20	25 m/spool
SSCW-025	25		26	25 m/spool
SSCW-032	32		33	25 m/spool

Unit: mm



Technical data	
Material	PET monofilament and multifilament
Operating	-50°C - +150°C
Melt point	230°C ±5
Flammability	VW-1
Standard color	Black
Certificate	RoHS, Halogen free
Cutting tool	Hot knife

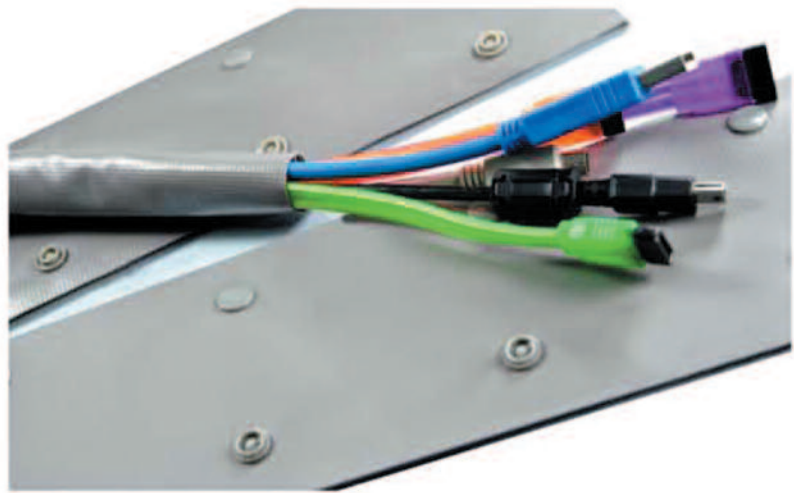
Notes:

1. The part No. will be followed by BK, GR and so on to indicate the color of wrap.
2. Special packages, sizes and colors can be supplied upon request.
3. All numeric data shows average or typical values, not including customized sizes.

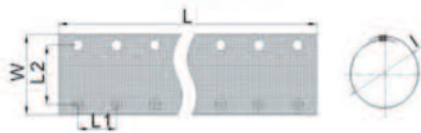
Application



For bundling and protecting wire harnesses and cables on panel boards, computers, cable television and other electronic assemblies.



Drawing



BWS PVC button wrap can quickly and easily tidy up and beautify wiring harnesses and wire bundles. BWS PVC is reusable, has excellent insulation and abrasion characteristics and is great for all types of harness assembly work. Snap construction allows breakouts of single or multiple wires and makes re-routing or replacement of cables as easy as one, two, three.



Technical data

Material	PVC
Flammability	UL 94V-0
Standard color	Black and grey
Certificate	RoHS
Cutting tool	Scissors

Datasheet

Part No.	I.D(I)	Width (W)	Packing(L)
BWS-010	10	61	100 m/roll
BWS-012	12	67	100 m/roll
BWS-015	15	77	100 m/roll
BWS-020	20	92	100 m/roll
BWS-025	25	108	100 m/roll
BWS-030	30	124	80 m/roll
BWS-035	35	138	80 m/roll
BWS-040	40	155	80 m/roll
BWS-045	45	171	80 m/roll
BWS-050	50	187	50 m/roll
BWS-060	60	218	50 m/roll
BWS-070	70	250	50 m/roll
BWS-080	80	281	50 m/roll

Unit: mm

Notes:

1. The part No. will be followed by BK, GR and so on to indicate the color of wrap. B/G indicate one side is black, another side is grey.
2. Special packages, sizes, colors, L1 and L2 (in drawing) can be supplied upon request.
3. All numeric data shows average or typical values, not including customize sizes.