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2009

KEHONG ELECTRONIC CO LTD



PRODUCT CATALOG

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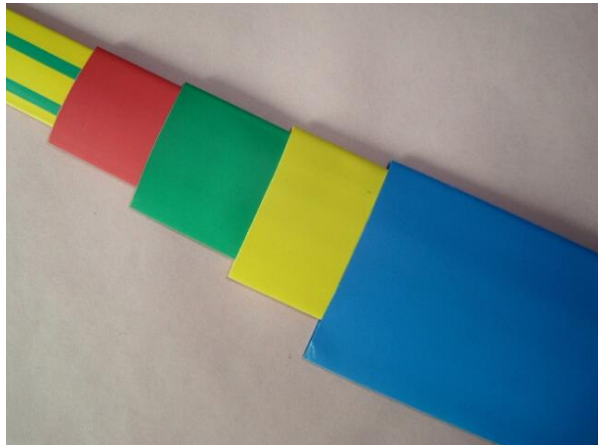
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Remark:

The following products also in production, and the data in other files

- 1) High temperature heat shrink marker tube;
- 2) Busbar cover, and busbar tubes;
- 3) Splices;
- 4) PTFE tubes;
- 5) Fiber glass silicon tube

A-1 Flexible, shiny general-purpose polyolefin tubing



1) Application

A-1 is a commercial grade, irradiated cross-linked polyolefin heat shrinkable tubing with general purpose applications such as insulation of wire bundles, wire-harness, insulation and strain relief of wire terminations and connections, capsule and anti-corrosion protection, etc. It is rated for use up to 105°C and 600V.

2) Features/Benefits

Shrink ratio: 2:1.

Flexible, low shrink temperature.

Excellent physical and electrical performance.

Conform to European RoHS environmental directive.

3) Operating Temperature Range

Operating temperature range: -55°C~105°C

Minimum shrink temperature: 60°C

Minimum full recovery temperature: 100°C

4) Product sizes

mm/inch

Size	Inside diameter		Wall thickness	Standard length (m/spool)
	As supplied(min.)	After recovery(max.)	After recovery	
3/64	1.2 (0.046)	0.6 (0.023)	0.40±0.08 (0.016±0.003)	200
1/16	1.6 (0.063)	0.8 (0.031)	0.43±0.08 (0.017±0.003)	200
3/32	2.4 (0.093)	1.2 (0.046)	0.51±0.08 (0.020±0.003)	200
1/8	3.2 (0.125)	1.6 (0.062)	0.51±0.08 (0.020±0.003)	200
3/16	4.8 (0.187)	2.4 (0.093)	0.51±0.08 (0.020±0.003)	100
1/4	6.4 (0.250)	3.2 (0.125)	0.64±0.08 (0.025±0.003)	100
3/8	9.5 (0.375)	4.8 (0.187)	0.64±0.08 (0.025±0.003)	100
1/2	12.7 (0.500)	6.4 (0.250)	0.64±0.08 (0.025±0.003)	100
3/4	19.1 (0.750)	9.5 (0.375)	0.76±0.08 (0.030±0.003)	50
1	25.4 (1.000)	12.7 (0.500)	0.89±0.12 (0.035±0.005)	50
1 1/4	31.8 (1.250)	15.9 (0.625)	1.02±0.15 (0.040±0.006)	50
1 1/2	38.1 (1.500)	19.1 (0.750)	1.02±0.15 (0.040±0.006)	50
2	50.8 (2.000)	25.4 (1.000)	1.14±0.16 (0.045±0.007)	50

A-2

Environment friendly, flexible, flame-retardant polyolefin tubing

**1) Application**

A-2 is flexible, flame-retardant, irradiated cross linking heat-shrinkable modified polyolefin tubing, this high-reliability product is widely used for insulation or jacketing of wire harness, strain relief of wire terminations and connections, protection of soldered points, insulation and capsule of electronic components, bundling of wire harness, anti-corrosive protection, identification and color coding, etc.

2) Features/Benefits

Shrink ratio: 2:1.

Very flexible, highly flame-retardant.

Low shrink temperature.

Good thermal stability.

Excellent physical, chemical and electrical properties.

Classified as environmentally hazardous substances. Conform to European RoHS environmental directive.

Wide range of sizes and colors.

3) Operating Temperature Range

Operating temperature range: -55°C~125°C

Minimum shrink temperature: 70°C

Minimum full recovery temperature: 110°C

4) Standards/Approvals

UL224, 125°C 600V VW-1

UL Approval,

5) Product sizes

mm/inch

Size	Inside diameter		Wall thickness	Standard length (m/spool)
	As supplied(min.)	After recovery(max.)	After recovery	
3/64	1.2 (0.046)	0.6 (0.023)	0.40±0.08 (0.016±0.003)	200
1/16	1.6 (0.063)	0.8 (0.031)	0.43±0.08 (0.017±0.003)	200
3/32	2.4 (0.093)	1.2 (0.046)	0.51±0.08 (0.020±0.003)	200
1/8	3.2 (0.125)	1.6 (0.062)	0.51±0.08 (0.020±0.003)	200
3/16	4.8 (0.187)	2.4 (0.093)	0.51±0.08 (0.020±0.003)	100
1/4	6.4 (0.250)	3.2 (0.125)	0.64±0.08 (0.025±0.003)	100
3/8	9.5 (0.375)	4.8 (0.187)	0.64±0.08 (0.025±0.003)	100
1/2	12.7 (0.500)	6.4 (0.250)	0.64±0.08 (0.025±0.003)	100
3/4	19.1 (0.750)	9.5 (0.375)	0.76±0.08 (0.030±0.003)	50
1	25.4 (1.000)	12.7 (0.500)	0.89±0.12 (0.035±0.005)	50
1 1/4	31.8 (1.250)	15.9 (0.625)	1.02±0.15 (0.040±0.006)	50
1 1/2	38.1 (1.500)	19.1 (0.750)	1.02±0.15 (0.040±0.006)	50
2	50.8 (2.000)	25.4 (1.000)	1.14±0.16 (0.045±0.007)	50

6) Ordering Information**Color**

Standard: Black (-BK), white (-WH), red (-RD), blue (-BL), yellow (-YL), green (-GR)

Nonstandard: Brown (-BR), orange (-OR), violet (-VT), gray (-GY), yellow & green stripe (-GYS)

Nonstandard size

Special sizes are available upon request.

Standard packaging

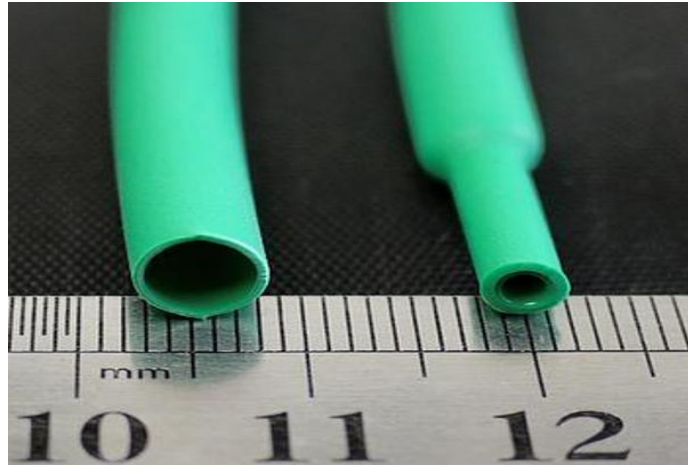
On spools. Cut pieces are available upon request.

Ordering description

Specify product type, size (mm or inch) and color.

A-3X (Without adhesive, 3:1 tube)

Flexible, flame-retardant, high-shrink-ratio polyolefin tubing

**1) Application**

A-3X is flexible, irradiated cross-linking, flame-retardant, heat-shrinkable modified polyolefin tubing. A-2(3:1) has 3:1 shrink ratio, the tube is used to cover larger size differences like harnesses with installed connectors. The tube used for insulation protection, bundling or capsule of wire terminals and components with larger size differences.

2) Features/Benefits

Shrink ratio: 3:1.

Flexible, highly flame-retardant.

Excellent physical, chemical and electrical properties and high reliability.

Abrasion and fluids resistance.

Conform to European RoHS (2002/95/EC) environmental directive.

3) Operating Temperature Range

Operating temperature range: -55°C~125°C

Minimum shrink temperature: 70°C

Minimum full recovery temperature: 110°C

4) Standards/Approvals

UL224 ,125°C 600V VW-1

UL Approval

AMS-DTL-23053/5 class 2 and class 3

5) Product sizes

Size (mm)	As supplied(mm)		After recovery(mm)		Standard length (m/spool))
	Inside diameter	Wall thickness	Inside diameter (max.)	Wall thickness	
1.5/0.5	1.8±0.3	0.20±0.05	0.5	0.50±0.10	200
3/1	3.3±0.3	0.20±0.05	1.0	0.60±0.10	200
6/2	6.5±0.3	0.25±0.05	2.0	0.70±0.10	100
9/3	9.5±0.4	0.30±0.06	3.0	0.80±0.15	100
12/4	12.5±0.4	0.30±0.06	4.0	0.85±0.15	100
18/6	18.5±0.5	0.35±0.06	6.0	1.00±0.15	50
24/8	26.0±1.0	0.40±0.10	8.0	1.20±0.20	50
40/13	41.5±1.0	0.45±0.10	13.0	1.25±0.20	50

6) Specification values

	Property	Requirement	Test method	Typical data
Physical:	Concentricity	70% min.	ASTM D 2671	≥70%
	Tensile strength	10.4MPa min.	ASTM D 638	≥14.0MPa
	Elongation	200% min.	ASTM D 638	≥400%
	Heat shock 250℃, 4hrs	No cracking, dripping or flowing	ASTM D 2671	Pass
	Low temperature flexibility -55℃, 4hrs	No cracking	ASTM D 2671	Pass
	Aging 175℃, 168hrs			
	Tensile strength after aging	70% of original min.	ASTM D 638	≥90%
	Elongation after aging	100% min.	ASTM D 638	≥300%
Electrical:	Dielectric voltage withstand	2500V, 60sec no breakdown	UL224	Pass
	Dielectric strength	19.7KV/mm min.	ASTM D 2671	25KV/mm
	Volume resistivity	10 ¹⁴ Ω·cm min.	ASTM D 876	≥10 ¹⁴ Ω·cm
Chemical:	Corrosion	No corrosion	ASTM D 2671	Pass
	Flammability	VW-1	UL224	Pass

A-2(NH)

No halogen, low smoking, flame-retardant polyolefin tubing

**1) Application**

A-2(NH) is a tube without halogen, low smoking flame-retardant irradiated cross linking polyolefin heat-shrinkable tubing, which contains no added halogens, and exhibits excellent fire safety characteristics combined with low evolution of acid gases, while retaining good mechanical and fluid resistance properties.

2) Features/Benefits

- Shrink ratio: 2:1.
 - Flexible, flame-retardant.
 - Low smoking, no added halogens.
 - Low evolution of acid gases.
- Conform to European RoHS environmental directive.

3) Operating Temperature Range

Operating temperature range: -55°C~125°C

Minimum shrink temperature: 70°C

Minimum full recovery temperature: 110°C

4) Standards/Approvals

UL224, 125°C 600V VW-1

UL Approval

5) Product sizes

Inch/mm

Size	Inside diameter		Wall thickness	Standard length (m/spool)
	As supplied(min.)	After recovery(max.)	After recovery	
3/64	1.2 (0.046)	0.6 (0.023)	0.40±0.08 (0.016±0.003)	200
1/16	1.6 (0.063)	0.8 (0.031)	0.43±0.08 (0.017±0.003)	200

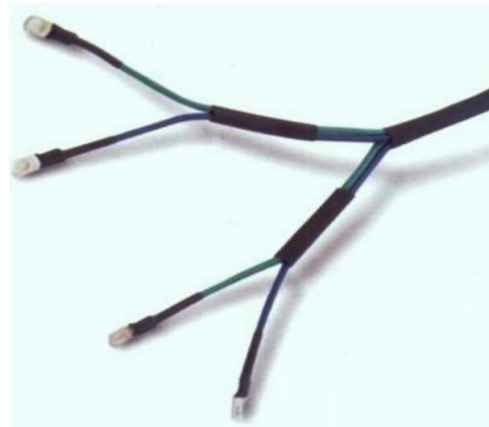
3/32	2.4 (0.093)	1.2 (0.046)	0.51±0.08 (0.020±0.003)	200
1/8	3.2 (0.125)	1.6 (0.062)	0.51±0.08 (0.020±0.003)	200
3/16	4.8 (0.187)	2.4 (0.093)	0.51±0.08 (0.020±0.003)	100
1/4	6.4 (0.250)	3.2 (0.125)	0.64±0.08 (0.025±0.003)	100
3/8	9.5 (0.375)	4.8 (0.187)	0.64±0.08 (0.025±0.003)	100
1/2	12.7 (0.500)	6.4 (0.250)	0.64±0.08 (0.025±0.003)	100
3/4	19.1 (0.750)	9.5 (0.375)	0.76±0.08 (0.030±0.003)	50
1	25.4 (1.000)	12.7 (0.500)	0.89±0.12 (0.035±0.005)	50
1 1/4	31.8 (1.250)	15.9 (0.625)	1.02±0.15 (0.040±0.006)	50
1 1/2	38.1 (1.500)	19.1 (0.750)	1.02±0.15 (0.040±0.006)	50
2	50.8 (2.000)	25.4 (1.000)	1.14±0.16 (0.045±0.007)	50

Metric size

Size(mm)	As supplied(mm)		After recovery (mm)		Standard length (m/spool)
	Inside diameter	Wall thickness	Inside diameter (max.)	Wall thickness (min.)	
φ0.8	1.0±0.2	0.15±0.05	0.50	0.25	200
φ1.0	1.5±0.3	0.20±0.05	0.60	0.33	200
φ1.5	2.0±0.3	0.20±0.05	0.75	0.36	200
φ2.0	2.5±0.3	0.20±0.05	1.00	0.44	200
φ2.5	3.0±0.3	0.25±0.05	1.25	0.44	200
φ3.0	3.5±0.3	0.25±0.05	1.50	0.44	200
φ3.5	4.0±0.3	0.25±0.05	1.75	0.44	200
φ4.0	4.5±0.3	0.25±0.05	2.00	0.44	200
φ4.5	5.0±0.3	0.25±0.05	2.25	0.44	200
φ5.0	5.5±0.3	0.25±0.05	2.50	0.56	100
φ6.0	6.5±0.3	0.28±0.05	3.00	0.56	100
φ7.0	7.6±0.3	0.30±0.06	3.50	0.56	100
φ8.0	8.6±0.3	0.30±0.06	4.00	0.56	100
φ9.0	9.6±0.3	0.30±0.06	4.50	0.56	100
φ10.0	10.7±0.4	0.30±0.06	5.00	0.56	100
φ11.0	11.7±0.4	0.30±0.06	5.50	0.56	100
φ12.0	12.7±0.4	0.30±0.06	6.00	0.56	100
φ13.0	13.7±0.4	0.35±0.07	6.50	0.69	100
φ14.0	14.7±0.4	0.35±0.07	7.00	0.69	100
φ15.0	15.7±0.5	0.35±0.07	7.50	0.69	100
φ16.0	16.7±0.5	0.35±0.07	8.00	0.69	100
φ18.0	19.0±0.5	0.40±0.10	9.00	0.77	100
φ20.0	21.0±0.5	0.40±0.10	10.00	0.77	50
φ22.0	23.0±0.5	0.40±0.10	11.00	0.77	50
φ25.0	26.0±1.0	0.45±0.10	12.50	0.87	50
φ28.0	29.0±1.0	0.45±0.10	14.00	0.87	50
φ30.0	31.5±1.0	0.45±0.10	15.00	0.87	50
φ35.0	36.5±1.0	0.50±0.10	17.50	0.97	50
φ40.0	41.5±1.0	0.50±0.10	20.00	0.97	50
φ50.0	51.5±1.0	0.55±0.10	25.00	0.97	50

A-2(TW)

Environment friendly, ultra thin-wall, flexible, flame-retardant, polyolefin tubing

**1) Application**

A-2 (TW) is ultra thin-wall, irradiated cross-linking, flexible, flame-retardant, heat-shrinkable modified polyolefin tubing. It is designed for applications that require an ultra thin wall for rapid shrinking and space saving. Low shrink temperature further reduces installation time and the risk of damage to temperature-sensitive components.

2) Features/Benefits

Shrink ratio: 2:1

Low shrink temperature.

Ultra thin-wall, rapid shrinking.

Very flexible, flame-retardant.

Conform to European RoHS environmental directive.

Wide range of sizes and colors.

3) Operating Temperature Range

Operating temperature range: -55°C~125°C

Minimum shrink temperature: 60°C

Minimum full recovery temperature: 100°C

4) Standards/Approvals

UL224, 125°C VW-1

UL Approval

5) Product sizes**Inch size**

Size (inch)	As supplied(mm)		After recovery(mm)		Standard length (m/spool)
	Inside diameter	Wall thickness (nominal)	Inside diameter (max.)	Wall thickness (min.)	
3/64	1.4±0.2	0.10	0.6	0.20	200
1/16	1.9±0.2	0.10	0.8	0.20	200
3/32	2.8±0.3	0.15	1.2	0.25	200
1/8	3.5±0.3	0.15	1.6	0.25	200
3/16	5.5±0.3	0.15	2.4	0.25	100
1/4	6.5±0.3	0.15	3.2	0.28	100
3/8	10.6±0.4	0.15	4.8	0.28	200
1/2	13.6±0.4	0.20	6.4	0.28	200
3/4	21.0±1.0	0.25	9.5	0.35	100
1	26.0±1.0	0.25	12.7	0.40	100

Metric size

Size (mm)	As supplied(mm)		After recovery(mm)		Standard length (m/spool)
	Inside diameter	Wall thickness	Inside diameter (max.)	Wall thickness (min.)	
φ 1.0	1.4±0.2	0.10±0.03	0.65	0.20	200
φ 1.5	1.9±0.2	0.10±0.03	0.75	0.20	200
φ 2.0	2.4±0.2	0.12±0.03	1.00	0.20	200
φ 2.5	2.8±0.3	0.13±0.05	1.25	0.25	200
φ 3.0	3.4±0.3	0.13±0.05	1.50	0.25	200
φ 3.5	3.9±0.3	0.13±0.05	1.75	0.25	200
φ 4.0	4.4±0.3	0.15±0.05	2.00	0.25	200
φ 5.0	5.5±0.3	0.15±0.05	2.50	0.25	100
φ 6.0	6.5±0.3	0.15±0.05	3.00	0.28	100
φ 7.0	7.5±0.3	0.15±0.05	3.50	0.28	200
φ 8.0	8.6±0.4	0.15±0.05	4.00	0.28	200
φ 9.0	9.6±0.4	0.15±0.05	4.50	0.28	200
φ 10.0	10.6±0.4	0.15±0.05	5.00	0.28	200
φ 11.0	11.6±0.4	0.18±0.05	5.50	0.28	200
φ 12.0	12.6±0.4	0.20±0.05	6.00	0.28	200
φ 13.0	13.6±0.4	0.20±0.05	6.50	0.30	200
φ 14.0	14.6±0.4	0.20±0.05	7.00	0.30	200
φ 15.0	15.6±0.5	0.20±0.05	7.50	0.32	200
φ 16.0	16.6±0.5	0.20±0.05	8.00	0.36	200
φ 18.0	18.6±0.5	0.22±0.05	9.00	0.36	200
φ 20.0	21.0±1.0	0.25±0.05	10.0	0.36	100
φ 22.0	23.0±1.0	0.25±0.05	11.0	0.40	100
φ 25.0	26.0±1.0	0.25±0.05	12.5	0.40	100

A-2(YG)

Yellow & green striped, flexible, flame-retardant polyolefin tubing

**1) Application**

A-2 (GY) is yellow & green striped, flame-retardant, flexible, irradiated cross linking heat-shrinkable modified polyolefin tubing. It is designed for use in earth sleeve. 3:1 shrink ratio is for more suitable for application to irregular, awkward shapes.

2) Features/Benefits

Shrink ratio: 2:1, 3:1.

Flexible, flame-retardant.

Excellent physical, chemical and electrical properties and high reliability.

Classified as environmentally hazardous substances. Conform to European RoHS environmental directive.

3) Operating Temperature Range

Operating temperature range: -55°C~125°C/135°C

Minimum shrink temperature: 70°C

Minimum full recovery temperature: 110°C

4) Standards/Approvals

UL224 ,125°C 600V VW-1

UL Approval

AMS-DTL-23053/5 class 2 and class 3

5) Product sizes**Inch size (2:1)**

Size (inch)	As supplied (mm)		After recovery (mm)		Standard length (m/spool)
	Inside diameter (min.)	Wall thickness (nominal)	Inside diameter (max.)	Wall thickness (min.)	
1/16	1.6	0.20	0.8	0.43±0.08	200
3/32	2.4	0.25	1.2	0.51±0.08	200
1/8	3.2	0.25	1.6	0.51±0.08	200
3/16	4.8	0.25	2.4	0.51±0.08	200
1/4	6.4	0.30	3.2	0.64±0.08	100
5/16	8.0	0.30	4.0	0.64±0.08	100
3/8	9.5	0.30	4.8	0.64±0.08	100
1/2	12.7	0.35	6.4	0.64±0.08	100
5/8	16.0	0.35	8.0	0.76±0.08	100
3/4	19.1	0.40	9.5	0.76±0.08	50
1	25.4	0.45	12.7	0.89±0.12	50
1 1/4	31.8	0.45	15.9	1.02±0.15	50
1 1/2	38.1	0.50	19.0	1.02±0.15	50
2	50.8	0.55	25.4	1.14±0.16	50

Inch size (3:1)

Size (inch)	As supplied (mm)		After recovery (mm)		Standard length (m/spool)
	Inside diameter (min.)	Wall thickness (nominal)	Inside diameter (max.)	Wall thickness (min.)	
1/16	1.6	0.20	0.5	0.51	200
3/32	2.4	0.25	0.8	0.51	200
1/8	3.2	0.25	1.0	0.55	200
3/16	4.8	0.25	1.6	0.60	200
1/4	6.4	0.30	2.1	0.65	100
3/8	9.5	0.30	3.2	0.75	100
1/2	12.7	0.30	4.2	0.75	100
3/4	19.1	0.40	6.4	0.90	50
1	25.4	0.45	8.5	1.00	50
1 1/2	39.0	0.50	13.0	1.15	50

Color

Standard: Yellow & green stripe

HSMS-HF**Heat-shrinkable identification marker sleeves****1) Application**

HSMS-HF is halogen free heat-shrinkable identification marker sleeves, designed to meet the requirements of high-performance identification of wire and cable, tools, hoses and equipment, sleeves can also be used as electrical insulation. Marks are permanent after printing.

2) Features/Benefits

Halogen free.

Markers can also provide insulation and strain relief.

Marks are permanent after printing; mark performance improves after shrinking.

Conform to RoHS and Sony-ss00259 environmental directive.

3) Operating Temperature Range

Operating temperature range: $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$

Minimum shrink temperature: 70°C

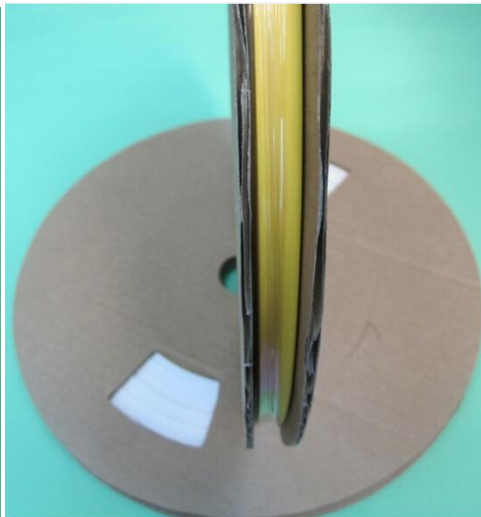
Minimum full recovery temperature: 110°C

4) Specifications/Standards

RoHS ,UL Approval



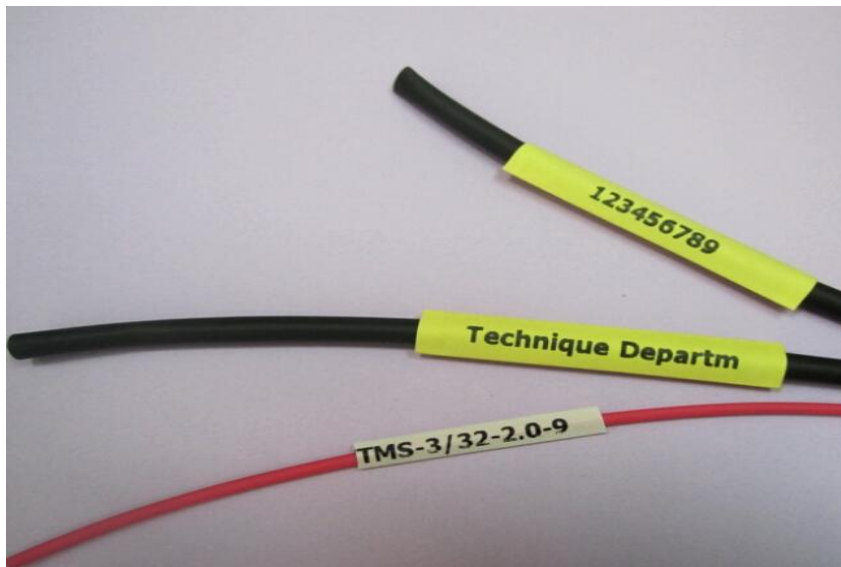
Packing in Ladder Style

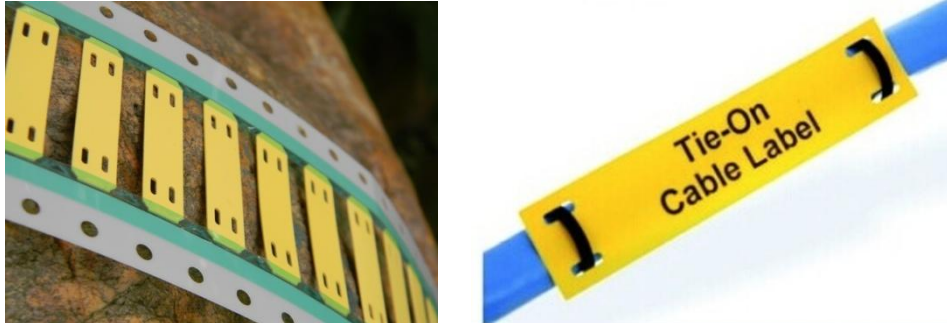


Spool Packing

5) Product sizes

Size (inch)	Inside diameter		Recommended use range
	As supplied (min.)	After recovery (max.)	
3/32	2.4 (0.093)	0.8 (0.031)	0.9-2.0 (0.035-0.079)
1/8	3.2 (0.125)	1.0 (0.042)	1.1-2.7 (0.044-0.105)
3/16	4.8 (0.187)	1.6 (0.062)	1.8-4.1 (0.069-0.160)
1/4	6.4 (0.250)	2.1 (0.083)	2.3-5.5 (0.091-0.215)
3/8	9.5 (0.375)	3.2 (0.125)	3.5-8.0 (0.137-0.320)
1/2	12.7 (0.500)	4.2 (0.166)	4.7-10.8 (0.183-0.425)
3/4	19.1 (0.750)	6.35 (0.250)	7.0-16.3 (0.275-0.640)
1	25.4 (1.000)	8.5 (0.333)	9.3-21.6 (0.366-0.850)
1 1/2	38.1 (1.500)	19.1 (0.750)	21.0-33.0 (0.825-1.300)
2	50.8 (2.000)	25.4 (1.000)	27.0-48.0 (1.063-1.890)



CMT Cable Marker Tags with Cable tie slots**Low Fire Hazard Marker Tags**

1) Material: Radiation Cross –linked polyolefin

2) Features and Benefits:

Permanent identification sleeves, Good fluid resistant, Computer-Printable
Low smoke and Rosh criterion, Lightweight for aerospace applications
Quick Recovery for heat sensitive areas, For space flight, and Railway

3) Application:

The cable Marker Tag are made from zero halogen, low smoke, low toxicity, radiation cross-linked, UV stabilized polyolefin sheet, formed into punched organized cable markers on a paper carrier, They are used for identification of cables and wire bundles by computer-based printing onto markers, Markers are attached using cable ties, this marker tag are ideal for applications where limited fire hazard characteristics are necessary, can be used in wide variety, The marker tags are good fluid, fuel, lube resistant performance and permanent immediately after printing and remain legible even when exposed to abrasion, aggressive cleaning solvents, and military fuels and oils

4) Color and Operating temperature range:

-40 to 125°C, White/Yellow

5) Specification/Approval

UL Recognized, Military SAE AS 81531 4.6.2. MIL-STD-202 method 215J

Meet the performance requirements of SAE-ASM-DTL-23053/5 Class 1

Industry ASTM D2671, BS 6853. DIN 5510-2

6) Printer Information:

Thermal transfer printer, such as Panduit

7) Products Size:

Ordering Size	Marker Dimensions(WXH)		Printable Area(WXH)	
	(mm)	(inch)	(mm)	(inch)
45x10.4	45x10.4	1.8x0.4	25x10.4	1.0x0.4
70x10.4	70x10.4	2.75x0.4	50x10.4	2.0*0.4
70x20.3	70x20.3	2.75x0.8	50x20.3	2.0x0.8

8) Packing: 1000Pcs or 500Pcs per roll.

Cable Marker Tags with Cable tie slots-CMT-2**Description:**

Marker Tag is made of the environment-friendly polyolefin by means of bombardment and cross-linked of high energy electron bunch, marker tags are non-adhesive that can be used to identify large cables and wires bundles, such as to identify EMU for High-speed, subways, submarine and aerospace, marker tags are attached on large cables and wire bundles with cable ties and keep permanent identification.

There are three options for materials:

Material 1) tag is military grade, operating temperature -55°C----135°C.

Material 2) tag is military grade, fluid resistant, operating temperature -55°C----135°C.

Material 3) tag is halogen free, operating temperature -40°C----125°C.

Marker tags are printed by computer-driven with heavy duty dot matrix, thermal transfer printers and laser graver printers and providing several advantages in terms of reduced errors, cycle time and cost.

Characteristics

- 1) Side entry marker tags to big size cables and wire bundles retrofit and repair capability, without broken power circuit and run down the machines
- 2) Easy installation, only standard cable tie-wraps are needed to install
- 3) Marker tags, no extra steps required
- 4) Highly flame –retardant, low smog density
- 5) Highly resistant to abrasion, mechanical abuses, fluids, lubricants and solvents.
- 6) Low vacuum out gassing for outer space applications,
- 7) Computer-printable, any characters and logo are easy to design
- 8) No melting at high temperature, no brittle in freezer.

Color: Yellow, White and Other colors

CMT-2 Specification and size

NO.	Pack size (pcs/coil)	Marker height (mm)	Marker length (mm)	Printable range (mm)		Recommended use range (mm)
				high	length	
1	2000	10.4	45	6.4	25	5.08~12.7
2	2000	10.4	53	6.4	33	5.08~12.7
3	2000	10.4	64	6.4	44	5.08~12.7
4	2000	10.4	76	6.4	56	5.08~12.7
5	2000	10.4	90	6.4	70	5.08~12.7
6	2000	12	102	8	82	12.7~19.1
7	1500	15	45	11	25	12.7~19.1
8	1500	15	53	11	33	12.7~19.1
9	1500	15	64	11	44	12.7~19.1
10	1500	15	76	11	56	12.7~19.1
11	1500	15	90	11	70	12.7~19.1
12	1000	20.3	45	16.3	25	19.1~25.4
13	1000	20.3	53	16.3	33	19.1~25.4
14	1000	20.3	64	16.3	44	19.1~25.4
15	1000	20.3	76	16.3	56	19.1~25.4
16	1000	20.3	90	16.3	70	19.1~25.4
17	1000	25.4	45	21.4	25	25.4 and up
18	1000	25.4	53	21.4	33	25.4 and up
19	1000	25.4	64	21.4	44	25.4 and up
20	1000	25.4	76	21.4	56	25.4 and up
21	1000	25.4	90	21.4	70	25.4 and up

CMT-2, Physic and chemical electronic performance

Property	States	Quota	Test method
Tensile strength (MPa)	unaged	≥10.3MPa	ASTM D2671
	Heat-aged	≥6.9MPa	
Ultimate elongation (%)	unaged	≥200%	
	Heat-aged	≥100%	
Voltage withstand(V)	unaged	2500 V,60s,Pass	UL224
Dielectric strength (MV/m)	unaged	≥19.7	ASTM D2671
	Heat-aged	≥15.8	
Volume resistivity (Ω-cm)		≥10 ¹⁴	ASTM D2671
Water absorption(%)	Unaged	≤1.0	ASTM D 570
Corrosion	Unaged	Pass	UL 224
Heat shock	Unaged	No flowing or dripping	UL 224
Low temperature flexibility	Unaged	No cracks	UL 224
Flammability	unaged	S3	DIN 5510-2

Heat Shrinkable Cable End Caps - with Spiral Adhesive Coating

1) Applications

CEC offers an economical sealing at the end of power cable with a completely watertight seal. The internal surface of the end cap has a layer of spiral coated hot melt adhesive, which retains its flexible properties after recovery. The cap is recommended for application both in open air and on underground power distribution cables.



2) Features

- Offering protection against oxidation, Ozone, UV-radiation
- Coated with hot melt adhesive to ensure environment seal
- Easily to fit into the cable end
- Minimum fully shrink temperature: 120°C

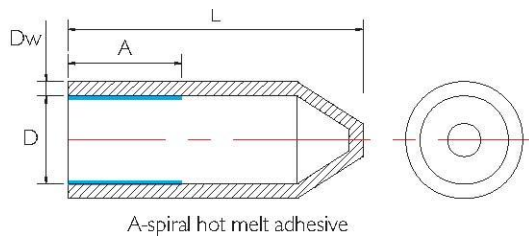
3) Product Size

Sizes(mm)	ID before Shrink(Min.mm)	ID after shrink(Max.mm)	After shrinking adhesive Length A (+/-10%,mm)	After shrinking Total Length L (+/-10%,mm)	After shrink Thickness DW(mm)	Cable Dia(mm)
CEC-12/4	12	4	15	40	2.6	4-10.
CEC-14/5	14	5	18	45	2.2	5-12.
CEC-20/6	20	6	25	55	2.8	6-16.
CEC-25/8.5	25	8.5	30	68	2.8	10-20.
CEC-35/16	35	16	35	83	3.3	17-30
CEC-40/15	40	15	40	83	3.3	18-32
CEC-55/26	55	26	50	103	3.5	28-48
CEC-75/36	75	36	55	120	4	45-68
CEC-100/52	100	52	70	140	4	55-90
CEC-120/60	120	60	70	150	4	65-110
CEC-145/60	145	60	70	150	4	70-130
CEC-160/82	160	82	70	150	4	90-150
CEC-200/90	200	90	70	160	4.2	100-180

Extended length end caps

CEC-L-14/5	14	5	30	55	2.2	5-12
CEC-L-42/15	42	15	40	110	3.3	18-34
CEC-L-55/23	55	23	70	140	3.8	25-48
CEC-L-62/23	62	23	70	140	3.8	25-55
CEC-L-75/32	75	32	70	150	4.0	40-68
CEC-XL-75/36	75	36	70	170	4.2	45-68
CEC-L-105/45	105	45	65	150	4.0	50-90

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55 to +110 °C °C
Tensile strength	ASTM D 638	>14MPa
Elongation at break	ASTM D 638	>400%
Density	ASTM D 792	1.05
Elongation at break after aging	150 /168hrs. °C	>300%
Dielectric strength	IEC 243	>15kV/mm
Volume resistance	IEC 93	>10 ¹⁴ Ω. cm



G-2 (2:1)

Dual wall, flexible polyolefin tubing with glue



1) Application

G2 (2:1) is a flexible, dual wall, irradiated heat-shrinkable, flame-retardant, manufactured by co-extrusion of polyolefin and hot-melt adhesive, adhesive coated with good stickness and outer is flexible, irradiated cross-linked polyolefin. The adhesive can stick the material of both sides of connecting entirely and seal the point connecting. It is widely used to seal and protect interconnections, joints and components from fluids, moisture and corrosion and repair damaged wire insulation, etc.

2) Features/Benefits

Shrink ratio: 2:1.

Flexible of both outer tubing and inner adhesive.

Adhesive bonds to outer tubing and surface below to form a positive environmental seal.

Good mechanical, electrical and chemical properties.

Adhesive bonds to a wide variety of plastics, rubbers and metals.

Conform to European RoHS (2002/95/EC) environmental directive.

3) Operating Temperature Range

Operating temperature range: -55°C~110°C

Minimum shrink temperature: 80°C

Minimum full recovery temperature: 110°C

4) Specifications/Standards

UL224 125°C 600V

UL Approval

AMS-DTL-23053/4 class2

5) Product sizes

Size (inch)	As supplied (mm)		After recovery (mm)			Standard length (m/length, m/spool)
	Inside diameter (min.)	Wall thickness* (nominal)	Inside diameter (max.)	Wall thickness* (nominal)	Adhesive wall thickness (nominal)	
1/8	3.2	0.4	1.6	0.70	0.2	1.22/200
3/16	4.8	0.4	2.4	0.70	0.2	1.22/100
1/4	6.4	0.4	3.2	0.75	0.2	1.22/100
3/8	9.5	0.4	4.8	0.75	0.2	1.22
1/2	12.7	0.4	6.4	0.75	0.2	1.22
3/4	19.1	0.5	9.5	0.90	0.2	1.22
1	25.4	0.5	12.7	1.10	0.2	1.22
1 1/4	31.8	0.6	15	1.15	0.25	1.22
1 1/2	38.1	0.6	19.1	1.20	0.25	1.22

Wall thickness includes adhesive wall thickness.

6) Specification values

	Property	Requirement	Test method	Typical value
Physical:	Tensile strength	10.3MPa min.	ASTM D 638	≥12MPa
	Elongation	200% min.	ASTM D 638	≥400%
	Heat shock 250℃, 4hrs	No cracking, dripping or flowing of outer wall	ASTM D 2671	Pass
	Low temperature flexibility -55℃, 4hrs	No cracking	ASTM D 2671	Pass
	Aging 158℃, 168hrs			
	Tensile strength after aging	70% of original min.	ASTM D 638	≥90%
	Elongation after aging	100% min.	ASTM D 638	≥300%
Electrical:	Dielectric voltage withstand	2500V, 60sec no breakdown	ASTM D 2671	Pass
	Volume resistivity	$10^{14}\Omega\cdot\text{cm}$ min.	ASTM D 876	$\geq 10^{14}\Omega\cdot\text{cm}$
Chemical:	Copper corrosion 158℃, 168hrs	No corrosion	ASTM D 2671	Pass
	Flammability	ALL TUBING FLAME TEST	UL224	Pass

G-3 (3:1) Dual Wall Adhesive-Lined Heat-Shrink Polyolefin Tubing**Application**

Adhesive lined heat shrink tubing with environmental sealing capability for a wide variety of electrical applications, including automotive and marine wire harness, wire splices, breakouts, and connector-to-cable transitions.

**Features**

1. 3:1 shrink ratio
2. Longitudinal shrink ratio: $\leq +8\%$
3. Out jacket flame retardant, inner adhesive self-extinguished
4. Super sealing against water, moisture or other contaminants
5. Continuous operating temperature: $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$
6. Shrink temperature: 120°C

Dimensions

Size		As supplied	After recovery (mm)			Standard Package
Inch	mm	Internal Diameter (mm)	Internal Diameter	Total Wall Thickness	Wall Thickness of Adhesive	m/spool
1/8.	3.2	3.2	1	0.90±0.15	0.35±0.10	200
3/16	4.8	4.8	1.6	1.00±0.15	0.40±0.10	100
1/4	6.4	6.4	2.2	1.25±0.15	0.45±0.12	100
5/16	7.9	7.9	2.7	1.30±0.15	0.50±0.12	100
3/8	9.5	9.5	3.2	1.40±0.15	0.50±0.12	50
1/2	12.7	12.7	4.2	1.70±0.15	0.50±0.12	36.6
5/8	15	15	5.2	1.80±0.15	0.55±0.15	30.5
3/4	19.1	19.1	6.3	1.95±0.15	0.55±0.15	30.5
1	25.4	25.4	8.5	2.05±0.20	0.55±0.15	30.5
1- 1/4	30	30	10.2	2.20±0.20	0.60±0.15	24.4
1- 1/2	39	39	13.5	2.50±0.20	0.60±0.15	18.3

2	50	50	17	2.80±0.25	0.70±0.15	12.2
5/2	64	64	21	3.00±0.25	0.70±0.15	6.1
3	75	75	25	3.00±0.30	1.00±0.20	1.22
7/2	90	90	30	3.00±0.30	1.00±0.20	1.22
4	100	100	34	3.00±0.30	1.00±0.20	1.22
5	125	125	42	3.00±0.30	1.00±0.20	1.22

Technical Data:

Test Item	Test Method	Test Result
Tensile Strength(Mpa)	ASTM D2671	≥10.4
Elongation%	ASTM D2671	≥300
Tensile Strength after Aging (Mpa)	UL 224 158×168hr	≥7.3
Elongation after Aging%	UL 224 158℃×168hr	≥200
Dielectric Strength	IEC 243	≥ 15
Volume Resistance(Ω.cm)	ASTM D876	≥ 10 ¹⁴ Ω.cm

Hot Melting Adhesive Property

Test Item	Test Method	Test Result
Water absorption ratio:	ASTM-D570	<0.2%
Softing point	ASTM-E8	95℃
Strength of pearling(PE)	ASTM-D1000	120N/25m
Strength of pearling(AL)	ASTM-D1000	80N/25m

G-4 (4:1)**Dual Wall Adhesive-Lined Heat-Shrink Polyolefin Tubing****Application**

Adhesive lined heat shrink tubing with environmental sealing capability for a wide variety of electrical applications, including automotive and marine wire harness, wire splices, breakouts, and connector-to-cable transitions.

Features

1. 4:1 Very high shrink ratio
2. Longitudinal shrink ratio: $\leq +8\%$
3. Out jacket flame retardant, inner adhesive self-extinguished
4. Super sealing against water, moisture or other contaminants
5. Continuous operating temperature: $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$
6. Shrink temperature: 120°C

Dimensions

Size		As supplied	After recovery (mm)			Standard Package
Inch	mm	Internal Diameter(mm)	Internal Diameter	Total Wall Thickness	Wall Adhesive thickness of Adhesive	m/spool
5/32	4	4	1	1.1 ± 0.15	0.4 ± 0.15	200
1/4	6	6	1.5	1.5 ± 0.15	0.5 ± 0.15	100
5/16	8	8	2	1.7 ± 0.15	0.5 ± 0.15	50
1/2	12	12	3	2.0 ± 0.15	0.6 ± 0.15	1.22m/pc
5/8	16	16	4	2.3 ± 0.25	0.6 ± 0.15	1.22m/pc
25/32	20	20	5	2.6 ± 0.25	0.6 ± 0.15	1.22m/pc
1	24	24	6	3.0 ± 0.30	0.7 ± 0.15	1.22m/pc
3/2	32	32	8	3.0 ± 0.30	0.7 ± 0.15	1.22m/pc
2	52	52	13	3.3 ± 0.30	0.7 ± 0.15	1.22m/pc

Technical Data:

Property	Test Method	Standard
Tensile Strength(Mpa)	ASTM D2671	≥10.4
Elongation	ASTM D2671	≥300
Tensile Strength after Aging (Mpa)	UL 224 158×168hr	≥7.3
Elongation after Aging(%)	UL 224 158℃×168hr	≥200
Dielectric Strength(kv/mm)	IEC 243	≥ 15
Volume Resistance(Ω·cm)	ASTM D876	≥1× 10 ¹⁴
Hot Melting Adhesive Property		
Property	Test Method	Standard
Water absorption ratio:	ASTM-D570	<0.2%
Softening point	ASTM-E8	95℃
Strength of peeling(PE)	ASTM-D1000	120N/25m
Strength of peeling(AL)	ASTM-D1000	80N/25m

HRA2-M MEDIUM WALL HEAT SHRINKABLE TUBEING

With / without adhesive

Features/ Applications

HRA2-M is a Medium wall heat shrinkable tubing with excellent insulating, environmental sealing, and resistant to impact and abrasion, inner wall with/ without adhesive line, it is designed for applications to seal / protect electrical splices, cable terminations and joints where electrical insulation and water proof are required, 3:1 shrink ratio allows it easily fit over irregular shape and large connectors.

Resistant to UV-radiation

High electrical insulation

Superior mechanical property

Minimum fully recovery temperature:120°C

Standard color: Black

Technical data

Property	Test Method	Typical Data
Operation temperature	IEC216	-55°C to 110°C
Tensile strength	ASTMD2671	≥14MPa
Tensile strength after aging (150°C/168hrs)	ASTMD2671	≥12MPa
Elongation break	ASTMD2671	≥400%
Elongation at break after aging (150°C/168hrs)	ASTMD2671	≥300%
Density	ASTMD792	1.05g/cm ³
Longitudinal shrinkage	UL224	0 to-10%
Dielectric strength	IEC243	≥20kv/mm
Volume resistance	IEC93	>10 ¹⁴ Ω.cm
Eccentricity	ASTMD2671	<30%
Copper stability	ASTMD2671	Pass
Resistance to stress cracking (50°C)	ASTMD1693	No cracking
Water absorption(23°C/14days)	ISO62	<0.15%

Normal size (mm)	As supplied(mm)	After recovered (mm)	
	ID(Min.)	ID(Max.)	Wall thickness Min
HRA2-M 8/2	8	2	1.7
HRA2-M 12/3	12	3	2.0
HRA2-M 16/5	16	5	2.2
HRA2-M 19/5	19	5	2.5
HRA2-M 22/6	22	6	2.5
HRA2-M 28/6	28	6	2.5
HRA2-M 33/8	33	8	2.5

HRA2-M 40/12	40	12	2.5
HRA2-M 55/16	55	16	2.7
HRA2-M 65/19	65	19	2.8
HRA2-M 75/22	75	22	3.0
HRA2-M 85/25	85	25	3.0
HRA2-M 95/25	95	25	3.0
HRA2-M 115/34	115	34	3.0
HRA2-M 140/42	140	42	3.0
HRA2-M 160/50	160	50	3.0
HRA2-M 180/58	180	58	3.0
HRA2-M 205/65	205	65	3.0
HRA2-M 235/65	235	65	3.0
HRA2-M 265/75	265	75	3.0
HRA2-M 300/85	300	85	3.0
HRA2-M 350/100	350	100	3.0

Tube shape: round, Cutting length: 1.0 m-1.22meter per piece

HRA3-H HEAVY WALL HEAT SHRINKABLE TUBEING

With / without adhesive

Features/ Applications

With excellent insulating, environmental sealing, and resistant to impact and abrasion for applications to seal and protect electrical and communication connections, HRA3-H providing excellent mechanical protection to cable terminations and joints, 3:1 shrink ratio allows it easily fit over irregular shape and large connectors, recommended to apply for light cable and wire harnesses, waterproofing, protection of connector components, and seals components contained within the tubing.

Resistant to UV-radiation

High electrical insulation

Superior mechanical property

Minimum fully recovery temperature: 120°C

Standard color: Black

Product Size

Normal size (mm)	As supplied (mm) ID(Min.)	After recovered (mm) ID (Max.)	Wall thickness (mm)(Min.)
HRA3-H 9/3	6	3	1.8
HRA3-H 13/4	13	4	2.4
HRA3-H 22/6	22	6	2.7
HRA3-H 33/8	33	8	3.2
HRA3-H 40/12	40	12	4.1
HRA3-H 45/12	45	12	4.1
HRA3-H 55/16	55	16	4.1
HRA3-H 75/22	75	22	4.1
HRA3-H 85/25	85	25	4.3
HRA3-H 95/30	95	30	4.3
HRA3-H 105/30	105	30	4.3
HRA3-H 130/36	130	36	4.3
HRA3-H 160/50	160	50	4.3
HRA3-H 180/50	180	50	4.3
HRA3-H 200/60	200	60	4.3

Products Technical data

Property	Test Method	Typical Data
Operation temperature	IEC216	-55℃to110℃
Tensile strength	ASTMD2671	≥14MPa
Tensile strength after aging (150℃/168hrs)	ASTMD2671	≥12MPa
Elongation at break	ASTMD2671	≥400%
Elongation at break after aging (150℃/168hrs)	ASTMD2671	≥300%
Density	ASTMD792	1.05g/cm ³
Longitudinal shrinkage	UL224	0 to-10%
Dielectric strength	IEC243	≥20kv/mm
Volume resistance	IEC93	>10 ¹⁴ Ω .cm
Eccentricity	ASTMD2671	<30%
Copper stability	ASTMD2671	Pass
Resistance to stress cracking (50℃)	ASTMD1693	No cracking
Water absorption(23℃/14days)	ISO62	<0.15%

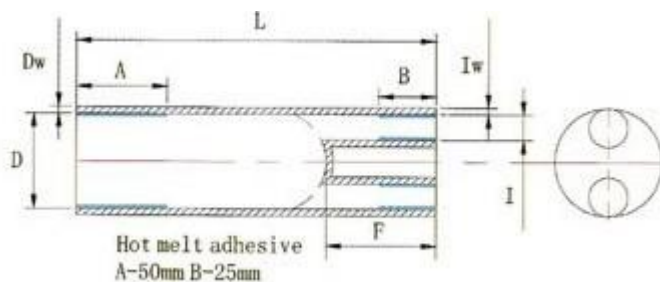
CBO-2 Low voltage 2 cores cable breakout**Features/Applications**

Made from radiation cross-linked polyolefin, and suitable for applications up to 1KV, The properties of electrical insulation, UV resistant and water proof made HSBO-2 widely used in electric power industry to provide insulation and seal over the crutch of multi-core cables.

Minimum shrink temperature: 110°C

Minimum fully recovery temperature: 130°C

Standard color: Black

**Technical Data**

Property	TEST Method	Typical Data
Operation temperature	IEC 216	-55°C to +110°C
Tensile strength	ASTM D 2671	13MPa (min.)
Tensile strength after thermal aging (120°C /168hrs.)	ASTM D 2671	10MPa (min.)
Elongation at break	ASTM D 2671	300% (min.)
Elongation at break after thermal aging (120°C/168hrs.)	ASTM D 2671	250% (min.)
Dielectric strength	IEC 243	15kv/mm (min.)
Volume resistance	IEC 93	10 ¹³ Ω.cm (min.)
Water absorption	ISO 62	1% (max.)

Product Dimensions

Size(mm)	D(mm)		l(mm)		Recovered length±10%		Recovered wall ±10%	
	a(min.)	b(max.)	a(min.)	b(max.)	L(mm)	F(mm)	Dw(mm)	lw (mm)
CBO -22/8	22	8	9	3.5	55	18	2.2	1.8
CBO -30/12	30	12	14	4.5	93	23	2.6	2.2
CBO -40/16	40	16	15	5.0	125	35	2.1	2.1
CBO -60/23	60	23	25	7.5	118	29	2.6	2.6
CBO -60/23L	60	23	25	7.5	155	45	2.6	2.6
CBO -90/60	90	60	30	8.5	190	50	3.0	3.0
CBO -150/90	150	90	20	6.5	150	70	3.0	3.0

3, 4, 5 cores cable breakout are also in our production area, Product data provide up on requirement.

AT-150

Clear, flame-retardant, flexible PVDF tubing

**1) Application**

AT150 is high-performance, flame-retardant, flexible fluoropolymer (PVDF) heat shrinkable tubing designed to protect wire and cable markers while permitting full inspectability. It provides bundling and jacketing of wires and cables, protecting them from mechanical and chemical abuse. It reliably protects electronic components while permitting their identification and inspection.

2) Features/Benefits

Shrink ratio: 2:1

Good clarity and clarity stability.

Chemical resistance, cut-through resistance and excellent physical properties.

High flame-resistance, high-temperature performance.

Conform to European RoHS environmental directive.

3) Operating Temperature Range

Operating temperature range: -55°C~150°C

Minimum shrink temperature: 125°C

Minimum full recovery temperature: 150°C

4) Specifications/Standards

UL224, UL Approval, 150°C 600V VW-1

AMS-DTL-23053/18, Class 2

5) Product Size

Size	Inside diameter		Wall thickness	Standard length
	As supplied (min.)	After recovery (max.)	After recovery	
3/64	1.2 (0.046)	0.6 (0.023)	0.25±0.05 (0.010±0.002)	1.2
1/16	1.6 (0.063)	0.8 (0.031)	0.25±0.05 (0.010±0.002)	1.2
3/32	2.4 (0.093)	1.2 (0.046)	0.25±0.05 (0.010±0.002)	1.2
1/8	3.2 (0.125)	1.6 (0.063)	0.25±0.05 (0.010±0.002)	1.2
3/16	4.8 (0.187)	2.4 (0.093)	0.25±0.05 (0.010±0.002)	1.2
1/4	6.4 (0.250)	3.2 (0.125)	0.30±0.08 (0.012±0.003)	1.2
3/8	9.5 (0.375)	4.8 (0.187)	0.30±0.08 (0.012±0.003)	1.2
1/2	12.7 (0.500)	6.4 (0.250)	0.30±0.08 (0.012±0.003)	1.2
3/4	19.1 (0.750)	9.5 (0.375)	0.43±0.08 (0.017±0.003)	1.2
1	25.4 (1.000)	12.7 (0.500)	0.48±0.08 (0.019±0.003)	1.2
1 1/2	38.1 (1.500)	19.1 (0.750)	0.51±0.08 (0.020±0.003)	1.2
2	50.8 (2.000)	25.4 (1.000)	0.58±0.08 (0.023±0.003)	1.2

Kynar-175

High-temperature, semi-rigid, PVDF tubing

**1) Application**

Kynar-175, is semi-rigid, excellent flame retardant, cut-through resistance, chemical and solvent resistance and high-temperature performance. It is especially suitable for applications requiring high-temperature performance. It is also used for insulation and strain relief of soldered joints, identification and inspection of covered components.

2) Features/Benefits

- Shrink ratio: 2:1.
- Tough, semi-rigid, thin-wall insulation.
- High flame-resistance; high-temperature performance.
- Outstanding chemical and solvent resistance.
- Conform to European RoHS (2002/95/EC) environmental directive.

3) Operating Temperature Range

- Operating temperature range: -55°C~175°C
- Minimum shrink temperature: 155°C
- Minimum full recovery temperature: 175°C

4) Specifications/Standards

- UL224, UL Approval, 150°C 600V VW-1
- AMS-DTL-23053/8

5) Specification values

	Property	Requirement	Test method	Typical value
Physical:	Tensile strength	34.5MPa min.	ASTM D 638	≥35MPa
	Elongation	150% min.	ASTM D 638	≥200%
	Heat shock 300℃, 4hrs	No cracking, dripping or flowing	ASTM D 2671	Pass
	Low temperature flexibility -55℃, 4hrs	No cracking	ASTM D 2671	Pass
	Aging 250℃, 168hrs			
	Elongation after aging	50%	ASTM D 638	≥50%
Electrical:	Dielectric voltage withstand	2500V, 60sec, no breakdown	ASTM D 2671	Pass
	Volume resistivity	$10^{13}\Omega\cdot\text{cm}$ min.	ASTM D 876	$\geq 10^{13}\Omega\cdot\text{cm}$
Chemical:	Corrosion	No corrosion	ASTM D 2671	Pass
	Flammability	VW-1	UL224	Pass

6) Product Size

mm/inch				
Size	Inside diameter		Wall thickness	Standard length
	As supplied (min.)	After recovery (max.)	After recovery	
3/64	1.2 (0.046)	0.6 (0.023)	0.25±0.05 (0.010±0.002)	1.2
1/16	1.6 (0.063)	0.8 (0.031)	0.25±0.05 (0.010±0.002)	1.2
3/32	2.4 (0.093)	1.2 (0.046)	0.25±0.05 (0.010±0.002)	1.2
1/8	3.2 (0.125)	1.6 (0.063)	0.25±0.05 (0.010±0.002)	1.2
3/16	4.8 (0.187)	2.4 (0.093)	0.25±0.05 (0.010±0.002)	1.2
1/4	6.4 (0.250)	3.2 (0.125)	0.30±0.08 (0.012±0.003)	1.2
3/8	9.5 (0.375)	4.8 (0.187)	0.30±0.08 (0.012±0.003)	1.2
1/2	12.7 (0.500)	6.4 (0.250)	0.30±0.08 (0.012±0.003)	1.2
3/4	19.1 (0.750)	9.5 (0.375)	0.43±0.08 (0.017±0.003)	1.2
1	25.4 (1.000)	12.7 (0.500)	0.48±0.08 (0.019±0.003)	1.2
1 1/2	38.1 (1.500)	19.1 (0.750)	0.51±0.08 (0.020±0.003)	1.2
2	50.8 (2.000)	25.4 (1.000)	0.58±0.08 (0.023±0.003)	1.2

DR-150

Diesel-resistant, flexible, flame-retardant elastomer tubing

**1) Application**

With resistance to aviation and diesel fuels, hydraulic fluids, and lubricating oils, DR is ideal for applications require resistance to fuels, fluids and solvents. It is particularly suitable for protecting and bundling of high-performance cables and wiring harnesses.

2) Features/Benefits

Shrink ratio: 2:1

Outstanding fluid and heat resistance.

Abrasion resistance and excellent mechanical properties.

Flexible, flame-retardant.

Conform to European RoHS environmental directive.

3) Operating Temperature Range

Operating temperature range: -75°C~150°C

Minimum full recovery temperature: 175°C

4) Specifications/Standards

AMS-DTL-23053/16

5) Product sizes

mm/inch

Size	Inside diameter		Wall thickness	Standard length (m/spool)
	As supplied (min.)	After recovery (max.)	After recovery	
1/8	3.2 (0.125)	1.6 (0.062)	0.76±0.15 (0.030±0.006)	100
3/16	4.8 (0.187)	2.4 (0.093)	0.84±0.15 (0.033±0.006)	100
1/4	6.4 (0.250)	3.2 (0.125)	0.89±0.15 (0.035±0.006)	100
3/8	9.5 (0.375)	4.8 (0.187)	1.02±0.20 (0.040±0.008)	50
1/2	12.7 (0.500)	6.4 (0.250)	1.22±0.20 (0.048±0.008)	30
3/4	19.1 (0.750)	9.5 (0.375)	1.45±0.28 (0.057±0.011)	30
1	25.4 (1.000)	12.7 (0.500)	1.78±0.28 (0.070±0.011)	30
1 1/2	38.1 (1.500)	19.0 (0.750)	2.41±0.41 (0.095±0.016)	15
2	50.8 (2.000)	25.4 (1.000)	2.79±0.41 (0.110±0.016)	22

VITON-200

Flexible, high-temperature, solvent-resistant Viton tubing



1) Application

With superior resistance to high and low temperature, fluids, solvents and corrosive chemical, VITON-200 is particularly suitable for applications that require heat resistance, such as electric and hydraulic systems near engines and fuel tanks of airplanes and vehicles, and resistance to chemical solvents. It is particularly used in applications require high temperature (200°C) resistance or in chemically exposed environments. It can be used in applications where additional protection against weather, ultraviolet radiation and ozone degradation is needed. Used for insulation and strain relief on appliances and for protection of electronic components.

2) Features/Benefits

Shrink ratio: 2:1

Excellent resistance to high temperatures, fluids, solvents, corrosive chemicals and radiation.

Extreme resistance to fuels.

High flame-retardance.

Conform to European RoHS environmental directive.

3) Operating Temperature Range

Operating temperature range: -65°C~200°C

Minimum shrink temperature: 150°C

Minimum full recovery temperature: 220°C

4) Specifications/Standards

AMS-DTL-23053/13

5) Product sizes

m

m/inch

Size	Inside diameter		Wall thickness	Standard length (m/spool)
	As supplied (min.)	After recovery (max.)	After recovery	
1/8	3.2 (0.125)	1.6 (0.062)	0.76±0.13 (0.030±0.005)	50
3/16	4.8 (0.187)	2.4 (0.093)	0.89±0.18 (0.035±0.007)	50
1/4	6.4 (0.250)	3.2 (0.125)	0.89±0.18 (0.035±0.007)	50
3/8	9.5 (0.375)	4.8 (0.187)	0.89±0.18 (0.035±0.007)	50
1/2	12.7 (0.500)	6.4 (0.250)	0.89±0.18 (0.035±0.007)	30
3/4	19.1 (0.750)	9.5 (0.375)	1.07±0.21 (0.042±0.008)	30
1	25.4 (1.000)	12.7 (0.500)	1.25±0.30 (0.049±0.011)	30
1 1/2	38.1 (1.500)	19.0 (0.750)	1.40±0.38 (0.055±0.015)	30
2	50.8 (2.000)	25.4 (1.000)	1.65±0.43 (0.055±0.017)	30

6) Ordering Information**Color**

Standard: Black (-BK)

Nonstandard colors can be available upon request.

Nonstandard size

Nonstandard sizes are available upon request.

Standard packaging

On spools.

Ordering description

Specify product type, size (mm or inch) and color.

NSHST Non slip heat shrink tube**Feature:**

Skid proof flower lined heat shrink tubing is made of high-polymer with scientific formula, via advanced technology processing. It has the advantage of environment friendly, good flexibility, skidproof, perfect appearance, fast shrinkage, and stable performance.

Application range:

Functional usage: Widely used in fishing and sports.
fishing tackles, sports fittings, health equipment and commodities, etc.

1. Shrink ratio: 2:1
2. Shrinking temperature: Start at 70°C, and full recovery at 110°C
3. Operating temperature: -55°C~105°C
4. Soft, non-slip, perfect appearance, fast shrinkage and stable performance.

Product Size:

Size	As supplied(mm)		After recovery(mm)		Standard package (M/pcs)
	ID	Average. W.T.	Max I.D.	Average. W.T.	
φ15	≥15	0.45±0.15	8	0.85±0.15	1.0
φ20	≥20	0.50±0.15	11	0.90±0.15	0.8/1.0/1.6
φ22	≥22	0.50±0.15	12.5	0.90±0.15	0.8/1.0/1.6
φ25	≥25	0.50±0.15	14.5	1.00±0.15	0.8/1.0/1.6
φ28	≥28	0.50±0.15	15.5	1.00±0.15	0.8/1.0/1.6
φ30	≥30	0.60±0.15	17.5	1.20±0.15	0.8/1.0/1.6
φ35	≥35	0.60±0.15	20.0	1.20±0.15	0.8/1.0/1.6
φ40	≥40	0.60±0.15	23.0	1.20±0.15	0.8/1.0/1.6
φ45	≥45	0.65±0.15	25.0	1.25±0.15	0.8/1.0/1.6
φ50	≥50	0.65±0.15	28.0	1.25±0.15	0.8/1.0/1.6

PVC Flexible Tube**1) Application**

Designed for bundling wires of home appliances, automobiles, motorcars. The insulating protection of electronic components.

2) Features/Benefits

Outstanding electrical and mechanical properties.

105℃, VW-1, 300V/600V, Conform to ROHS

3) Operating Temperature Range

-30℃~105℃

4) Approvals: UL224 UL approval**5) Specification Values**

Property	Value
Tensile strength <MPa>	≥10.4
Elongation <%>	≥100
Tensile strength after aging <MPa>	≥7.3
Elongation after aging <%>	≥100
Flexibility after aging	No crack, distortion, keep flexible
Insulating voltage<2500V 60S>	pass
Minimum Volume resistivity	≥10 ¹⁰
Cool bending< -30℃ 1h >	No crack
Radial shrinkage<%>	≤±5
Heat shock	No crack

6) Sizes/colors

Inside diameter: Φ3.0mm~Φ30.0mm **Thickness:**0.3mm~2.0mm

Colors: All colors are available.

SSCT Self-locking Stainless steel cable tie

The technical data of stainless steel cable tie completely meet with the standard of “plastic armored metal cable tie and “steel marine ship classification and construction regulations”.

The normal working temperature is from -25 Degree C to 50 Degree C, working temperature with in 85 degree C, pulling force from 1200N to 2200N, paint layer is PVC, it is performance, corrosion resistance, radiation and flame proof, it can well protect cables.

型号 Type	规格 Specifications (W×L) (mm)	宽度 Width (mm)	最大捆绑范围 Maxi bundled diameter(mm)	厚度 Thickness (mm)	拉力 Tensile strength (N)	包装 (只/包) Packing pcs/bag
SX-z	4.6×100	4.6	22	0.25	900	100
SX-z	4.6×150	4.6	35	0.25	900	100
SX-z	4.6×200	4.6	50	0.25	900	100
SX-z	4.6×250	4.6	65	0.25	900	100
SX-z	4.6×300	4.6	82	0.25	900	100
SX-z	4.6×350	4.6	90	0.25	900	100
SX-z	4.6×400	4.6	105	0.25	900	100
SX-z	4.6×450	4.6	130	0.25	900	100
SX-z	4.6×500	4.6	140	0.25	900	100
SX-z	4.6×550	4.6	162	0.25	900	100
SX-z	4.6×600	4.6	185	0.25	900	100
SX-z	4.6×700	4.6	205	0.25	900	100
SX-z	4.6×750	4.6	223	0.25	900	100
SX-z	4.6×800	4.6	235	0.25	900	100
SX-z	4.6×850	4.6	250	0.25	900	100
SX-z	4.6×900	4.6	260	0.25	900	100
SX-z	4.6×950	4.6	272	0.25	900	100
SX-z	4.6×1000	4.6	290	0.25	900	100
SX-z	4.6×1050	4.6	300	0.25	900	100
SX-z	4.6×1100	4.6	310	0.25	900	100
SX-z	4.6×1150	4.6	320	0.25	900	100

型号 Type	规格 Specifications (W×L) (mm)	宽度 Width (mm)	最大捆绑范围 Maxi bundled diameter(mm)	厚度 Thickness (mm)	拉力 Tensile strength N	包装 (只/包) Packing pcs/bag
SX-z	7.9×100	7.9	35	0.25	1800	100
SX-z	7.9×150	7.9	50	0.25	1800	100
SX-z	7.9×200	7.9	65	0.25	1800	100
SX-z	7.9×250	7.9	82	0.25	1800	100
SX-z	7.9×300	7.9	90	0.25	1800	100
SX-z	7.9×350	7.9	105	0.25	1800	100
SX-z	7.9×400	7.9	130	0.25	1800	100
SX-z	7.9×450	7.9	140	0.25	1800	100
SX-z	7.9×500	7.9	162	0.25	1800	100
SX-z	7.9×550	7.9	185	0.25	1800	100
SX-z	7.9×600	7.9	190	0.25	1800	100
SX-z	7.9×700	7.9	205	0.25	1800	100
SX-z	7.9×750	7.9	223	0.25	1800	100
SX-z	7.9×800	7.9	235	0.25	1800	100
SX-z	7.9×850	7.9	250	0.25	1800	100
SX-z	7.9×900	7.9	260	0.25	1800	100
SX-z	7.9×950	7.9	272	0.25	1800	100
SX-z	7.9×1000	7.9	290	0.25	1800	100
SX-z	7.9×1050	7.9	300	0.25	1800	100
SX-z	7.9×1100	7.9	310	0.25	1800	100
SX-z	7.9×1150	7.9	320	0.25	1800	100

EPDM Cold Shrink Tube

Made of EPDM rubber

Easy and fast installation

Can meet a variety of configuration requirements

Provide sealing protection over multi-core cable ends

Used to seal cable during installation or storage, protecting cable ends against

**Features**

Simple and fast installation, no tools required.

Accommodating size ranges from 13mm – 70mm.

Sealing tight, high rebound even after prolonged years of aging and exposure.

Water-resistant.

No mastic or tape required.

No torches or heat required.

Resists fungus.

Resists acids and alkalis.

Resists ozone.

Easily removed.

No training required for installation.

Selection Table

ID as Supplied (Min) /mm	ID after Recovered (Max) /mm	Wall Thickness after Recovered (Nom) /mm	Application Range/mm	Length/mm (±10%)
Ø20	Ø12	2.5	Ø13- Ø16	70
Ø28	Ø16	2.5	Ø18- Ø24	70
Ø47	Ø23	2.6	Ø25- Ø38	70
Ø80	Ø46	2.6	Ø48- Ø70	70

Technical Data

Property	Test Method	Standard Value
300% Modulus	ASTM D-412-75	4.2MPa
Ultimate Tensile	ASTM D-412-75	10.05MPa
Ultimate Elongation	ASTM D-412-75	600%
Tear strength	ASTM D-624C-73	28.3KN/m
Fungus Resistance	ASTM G-21	28 days exposure No Growth
Moisture Absorption 7 days@ 90°C in H ₂ O		3.0% wt. Gain

SRT- Silicone Rubber Tube**Application**

General insulating protection for various household appliances, light fitting, machines, electronic instruments, etc.

Features

1. Operating Temperature: $-60^{\circ}\text{C} \sim 200^{\circ}\text{C}$
2. RoHS Compliant; UL approved for food industry
3. Good flexibility and arc resistance performance
4. Non- poisonous
5. Red, Blue, White, Grey, Green, Clear (White color is flame- retardant type)

Dimensions

Size (mm)	Internal Diameter	Average Wall Thickness (mm)				Standard Package (M/Coil)
		2500V	4000V(mm)	6000V	7000V	
0.8	0.8 ± 0.10	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	200
1	1.0 ± 0.10	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	200
1.5	1.5 ± 0.10	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	200
2	2.0 ± 0.10	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	100
2.5	2.5 ± 0.10	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	100
3	3.0 ± 0.10	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	100
3.5	3.5 ± 0.10	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	100
4	4.0 ± 0.10	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	100
4.5	4.5 ± 0.10	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	100
5	5.0 ± 0.20	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	50

5.5	5.5±0.20	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	50
6	6.0±0.20	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	50
6.5	6.5±0.20	0.5 ± 0.10	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	50
7	7.0±0.20	/	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	50
7.5	7.5±0.20	/	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	50
8	8.0±0.25	/	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	50
9	9.0±0.25	/	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	25
10	10.0±0.25	/	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	50
11	11.0±0.30	/	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	25
12	12.0±0.30	/	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	25
13	13.0±0.30	/	1.0 ± 0.15	1.5 ± 0.20	2.0 ± 0.25	50
14	14.0±0.30	/	/	1.5 ± 0.20	2.0 ± 0.25	50
15	15.0±0.30	/	/	1.5 ± 0.20	2.0 ± 0.25	25
20	20.0±0.30	/	/	/	2.0 ± 0.30	10

Technical Data

Property	Test Method	Standard Required
Dielectric strength (kV/mm)	IEC 243	≥18
Volume resistance (Ω. Cm)	IEC 93	≥1X10 ¹⁴
Tensile Strength (Mpa)	ASTM D412	≥3.5 Mpa
Elongation (%)	ASTM D412	≥201
Flammability (White color only)	ISO 1210	FV-1