

PRODUCT CATALOG

A) Thin Wall Tubing

H-2(Z)	125°C,  2:1 shrink ratio, flexible, & flame retardant	A01
H-2(3X)	125°C,  3:1 shrink ratio, flexible, & flame retardant	A02
H-2(CB)	Ultra thin wall, flexible, flame retardant	A03
H-2(HF)	Halogen free, low smoke, thin wall, flame retardant	A04
H-2R	135°C, MIL spec, semi-rigid, & flame retardant	A05
H-2F	135°C,  2:1 shrink ratio, MIL spec, high flexible, & flame retardant	A06
H-2F(3X)	135°C,  3:1 shrink ratio, MIL spec, high flexible, & flame retardant	A07
H-2F(4X)	135°C,  4:1 shrink ratio, MIL spec, high flexible, & flame retardant	A08
H-2F(Y/G)	135°C,  3:1 & 2:1 yellow & green striped, MIL spec, flexible, & flame retardant	A09
H-2(LS)	Very low shrink temperature, flexible	A10
H-1	General purpose, non flame retardant	A11
HB-1	General purpose, non flame retardant	A12
HBG	Flame retardant, thin wall	A13

B) Dual Wall Tubing

H-5(3X)(4X)	 3:1 & 4:1 shrink ratio, dual wall adhesive-lined, flexible, & flame retardant	B14
H-5(3X)-M	 3:1 shrink ratio, heavy dual wall adhesive-lined flame retardant	B15
HBK	4:1 shrink ratio, semi-rigid adhesive-lined, flame retardant	B16
H-5(2000)	Adhesive lined tubing for brake pipes protection	B17
H-5(3000)	3:1 shrink ratio, commercial grade, adhesive-lined polyolefin	B18
HBKS	Dual wall tubing for crimp sealing	B19
H-5(3X)(4X)-F	 3:1 & 4:1 shrink ratio, dual wall adhesive-lined, flexible, & flame retardant	B20

C) Medium & Heavy Wall Tubing

HR2	Medium wall tubing, without adhesive	C21
HRA2	Medium wall tubing, with hot melting adhesive	C22
HB2	Medium wall tubing, continue lengths, without adhesive	C23
HR3	Heavy wall tubing, without adhesive	C24
HRA3	Heavy wall tubing, with hot melting adhesive	C25
HFRA2	Flame retardant, medium wall tubing with hot melting adhesive	C26
HFRA3	Flame retardant, heavy wall tubing with hot melting adhesive	C27
HRA5	5.6:1 flame retardant, heavy wall tubing with hot melting adhesive	C28
HRA-6X	6:1 very high shrink ratio, heavy wall tubing, with hot melting adhesive	C29
HSTV	Medium wall, adhesive-lined tubing for CATV industry	C30
HRS	Medium wall tubing, with black sealant mastic for corrosion protection	C31
HFR5X	5.6:1 flame retardant tubing	C32

D) Medium Voltage Tubing & Tape

HAT	Anti-tracking insulation tubing, 5-36kV	D33
HBM	Bus-bar insulation tubing, 5-24kV	D34
HBT	Medium wall bus-bar insulation tubing, 5-24kV	D35
HBTH	Heavy wall bus-bar insulation tubing, 5-36kV	D36
HSCT	Semi-conductive tubing	D37
HSC-100	Stress control tubing, up to 24kV for cable joints and terminations	D38
HSC-360	Stress control tubing, up to 36kV for cable joints and terminations	D39
HBIT	Bus-bar insulation tape, 5-24kV	D40
HDWT	Semi-conducting/insulation dual wall tubing for cable joints up to 36kV	D41
HEDT	Semi-conducting/elastomeric insulation dual wall tubing for cable joints up to 36kV	D42
HGT	High insulation tubing, 5-36kV	D43
HOT	Oil resistance tubing, 5-36kV	D44

E) Moulded Parts

HSEC	Cable end caps, with spiral adhesive coating	E45
HCEC	Conductive cable end caps, with spiral adhesive coating and conductive mastic	E46
HAS	Anti-tracking rain shed, 5-36kV	E47
HCFT	Low voltage cable feed-throughs	E48
HLB-2	Low voltage breakout, 2 cores	E49
HLB-3	Low voltage breakout, 3 cores	E50
HLB-4	Low voltage breakout, 4 cores	E51
HLB-5	Low voltage breakout, 5 cores	E52
HMB	Anti-tracking medium voltage breakout, 3 cores	E53
HMR	Anti-tracking medium voltage right angle/straight cable boot	E54
HCB	Conductive breakout, 3 cores	E55

F) Speciality Products

H-150K	150°C, UL V W-I, clear & black, modified thin wall PVDF tubing	F56
H-175K	175°C, UL V W-I, clear, semi-rigid PVDF tubing (kynar®)	F57
HDR	Diesel resistant, elastomer tubing	F58
HDR(TW)	Diesel resistant, thin wall very flexible elastomer tubing	F58
H-200E	200°C, UL V W-I, very flexible, modified fluoroelastomer tubing (Viton®)	F59
H-200E(TW)	200°C, UL V W-I, very flexible, modified fluoroelastomer tubing (Viton®)	F59
HTFE	260°C, chemically inert modified Teflon tubing	F60
H-2(XT)/H-2(XT)HF	Non-shrink flame retardant polyolefin tubing	F61
HFSP	Fiber optic splice protector	F62
Mastic Tape 55	Stress relief mastic	F63
Mastic Tape 65	Anti-tracking sealing mastic	F63
Mastic Tape 75	Black sealing mastic	F63

Section A

Thin Wall Tubing



FUZHOU CANWELL IMPORT & EXPORT CO., LTD.

Thin Wall Tubing

H-2(Z)

ENVIRONMENT FRIENDLY, FLEXIBLE,
FLAME RETARDANT TUBING
SHRINK RATIO 2:1

Features/Applications

Specially designed formulation ensure the tubing to meet the standard of UL224 and CSA C 22.2. Free from environment harmful substance as PBB's, PBBO's, PBBE's and toxic heavy metal in its components, makes it meet the requirement of environment protection. In case of burning no Dioxin is produced. The properties of low shrinking temperature, flexibility and superior mechanical strength make them widely used in the field of electronics, communication, automobile etc.

- Approval:  125°C VW-I 600V File No.E204071
 - Meet: RoHS, Sony-SS-00259
 - Minimum shrink temperature: 70°C
 - Minimum fully recovery temperature: 100°C
 - Standard color: Black, Red, Blue, Yellow, Green, White
- Other colors are available on request



Technical Data

Property	Test Method	Typical Data
Operating temperature	UL 224	-55°C to +125°C
Tensile strength	ASTM D 2671	> 14MPa
Ultimate elongation	ASTM D 2671	400%
Longitudinal shrinkage	UL 224	± 5%
Eccentricity	ASTM D 2671	< 30%
Heat aging Tensile strength Ultimate elongation	158°C/168hrs.	> 12MPa > 350%
Flammability	VW-I	Pass
Dielectric strength	IEC 243	> 20kV/mm
Volume resistance	IEC 93	> 10 ¹⁴ Ω.cm
Copper stability	UL 224	Pass

Product Dimensions

Normal size (inch)	As supplied (mm) Inside diameter (Min.)	After recovered (mm) Inside diameter (Max.)	Wall thickness (Min.)	Standard length (m/spool)
3/64	1.2	0.60	0.33	200
1/16	1.6	0.80	0.36	200
3/32	2.4	1.20	0.44	200
1/8	3.2	1.60	0.44	200
3/16	4.8	2.40	0.56	100
1/4	6.4	3.20	0.56	100
5/16	8.0	4.00	0.56	100
3/8	9.5	4.80	0.56	100
1/2	12.7	6.40	0.65	50
5/8	15.9	8.00	0.69	50
3/4	19.1	9.50	0.80	50
1 1/4	25.4	12.70	0.90	50
1	31.8	15.90	0.90	50
1 1/2	38.1	19.10	1.02	50
2	50.8	25.40	1.02	50
3	76.2	38.10	1.20	30
4	101.6	50.80	1.30	30
5	126.0	63.50	1.30	15
6	150.0	76.00	1.30	15

Product Dimensions

Normal size (inch)	As supplied (mm) Inside diameter (Min.)	After recovered (mm) Inside diameter (Max.)	Wall thickness (Min.)	Standard length (m/spool)
1.0	1.0	0.50	0.33	200
1.5	1.5	0.75	0.36	200
2.0	2.0	1.00	0.44	200
2.5	2.5	1.25	0.44	200
3.0	3.0	1.50	0.44	200
3.5	3.5	1.75	0.44	200
4.0	4.0	2.00	0.44	200
5.0	5.0	2.50	0.56	100
6.0	6.0	3.00	0.56	100
7.0	7.0	3.50	0.56	100
8.0	8.0	4.00	0.56	100
9.0	9.0	4.50	0.56	100
10	10.0	5.00	0.56	100
11	11.0	5.50	0.56	100
12	12.0	6.00	0.56	50
13	13.0	6.50	0.65	50
14	14.0	7.00	0.69	50
15	15.0	7.50	0.69	50
16	16.0	8.00	0.69	50
18	18.0	9.00	0.80	50
20	20.0	10.00	0.80	50
22	22.0	11.00	0.80	50
25	25.0	12.50	0.90	50
28	28.0	14.00	0.90	50
30	30.0	15.00	0.90	50
35	35.0	17.50	0.90	50
40	40.0	20.00	1.00	50
50	50.0	25.00	1.00	50
60	60.0	30.00	1.00	30
70	70.0	35.00	1.20	30
80	80.0	40.00	1.20	30
100	100.0	50.80	1.30	30
125	125.0	63.50	1.30	15
150	150.0	76.00	1.30	15

• Feet spool lengths are available subject to requirement.
Special size, cutting pieces are available on request.

Thin Wall Tubing

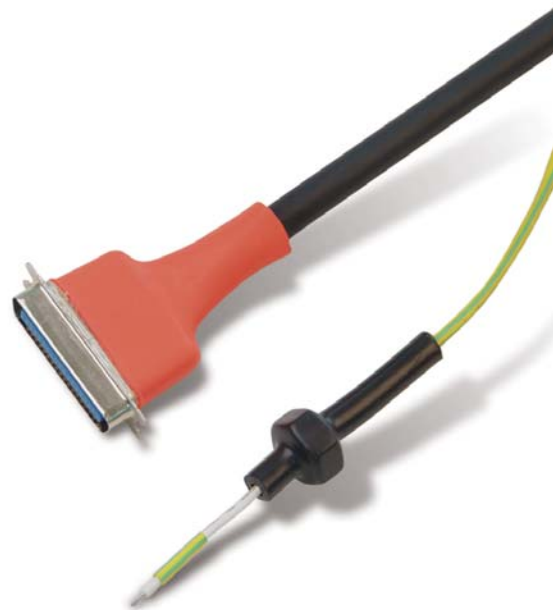
H-2(3X)

FLEXIBLE FLAME RETARDANT TUBING
SHRINK RATIO 3:1

Features/Applications

Widely used for electrical insulation and protects in-line components, disconnect terminals, and splices with its high insulation and excellent resilience. Bundles wires for very flexible light-duty harnesses. Identifies or color-codes to wires, cables, terminals and components. Specially designed formulations make the tubing completely meet the RoHS and Sony SS-00259 technical standards.

- Meet: UL 224, 125°C VW-I 600V
RoHS, Sony-SS-00259
- Minimum shrink temperature: 70°C
- Minimum fully recovery temperature: 100°C
- Standard color: Black, Red, Blue, Yellow, Green, White
Other colors are available on request



Technical Data

Property	Test Method	Typical Data
Operating temperature	UL 224	-55°C to +125°C
Tensile strength	ASTM D 2671	> 14MPa
Elongation at break	ASTM D 2671	> 400%
Longitudinal shrinkage	UL 224	0 to -10%
Eccentricity	ASTM D 2671	< 30%
Elongation at break after aging	158°C/168hrs.	> 300%
Flammability	VW-I	Pass
Dielectric strength	IEC 243	> 20kV/mm
Volume resistance	IEC 93	> 10 ¹⁴ Ω.cm
Copper stability	ASTM D 2671	Pass

Product Dimensions

Normal size		As supplied(mm)	After recovered (mm)		Standard length (m/spool)
(mm)	(inch)	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
1.5/0.5	1/16	1.6	0.5	0.45	200
3.0/1.0	1/8	3.2	1.0	0.55	200
4.5/1.5	3/16	4.8	1.5	0.60	100
6.0/2.0	1/4	6.4	2.0	0.65	100
9.0/3.0	3/8	9.5	3.0	0.75	100
12.0/4.0	1/2	12.7	4.0	0.80	50
18.0/6.0	3/4	19.1	6.0	0.90	50
24.0/8.0	1	25.4	8.0	1.00	50
39.0/13.0	1 1/2	39.0	13.0	1.25	50

- Special size, cutting pieces are available on request.

Thin Wall Tubing

H-2(CB)

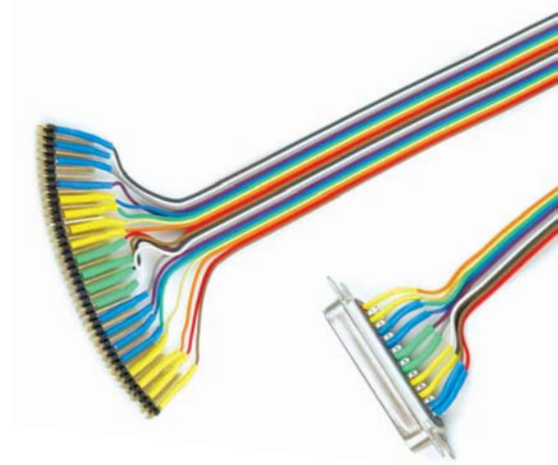
ULTRA THIN WALL, ENVIRONMENT FRIENDLY,
FLEXIBLE, FLAME RETARDANT TUBING
SHRINK RATIO 2:1

Features/Applications

Typically used where rapid shrinking and space saving are important. Low shrink temperature further reduces installation time and risk of damage to temperature-sensitive components.

- Meet: UL 224, 125°C VW-I 300V
RoHS, Sony-SS-00259
- Minimum shrink temperature: 70°C
- Minimum fully recovery temperature: 100°C
- Standard color: Black

Other color are available on request



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +125°C
Tensile strength	ASTM D 2671	> 14MPa
Elongation at break	ASTM D 2671	> 400%
Longitudinal shrinkage	UL 224	0 to ±5%
Eccentricity	ASTM D 2671	< 30%
Elongation at break after aging	158°C/168hrs.	> 300%
Flammability	VW-I	Pass
Dielectric strength	IEC 243	> 20kV/mm
Volume resistance	IEC 93	> 10 ¹⁴ Ω.cm
Copper stability	UL 224	Pass

Product Dimensions

Normal size (mm)	As supplied(mm)	After recovered (mm)		Standard length (m/spool)
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
1.0	1.0	0.50	0.20	200
1.5	1.5	0.75	0.20	200
2.0	2.0	1.00	0.20	200
2.5	2.5	1.25	0.25	200
3.0	3.0	1.50	0.25	200
3.5	3.5	1.75	0.25	200
4.0	4.0	2.00	0.25	200
5.0	5.0	2.50	0.28	100
6.0	6.0	3.00	0.28	100
7.0	7.0	3.50	0.28	100
8.0	8.0	4.00	0.28	100
9.0	9.0	4.50	0.28	100
10	10.0	5.00	0.28	100

● Special size, cutting pieces are available on request.

Product Dimensions

Normal size (mm)	As supplied(mm)	After recovered (mm)		Standard length (m/spool)
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
3/64	1.2	0.6	0.20	200
1/16	1.6	0.8	0.20	200
3/32	2.4	1.2	0.25	200
1/8	3.2	1.6	0.25	200
3/16	4.8	2.4	0.25	100
1/4	6.4	3.2	0.28	100
3/8	9.5	4.8	0.28	100
1/2	12.7	6.4	0.28	50

Thin Wall Tubing

H-2(HF)

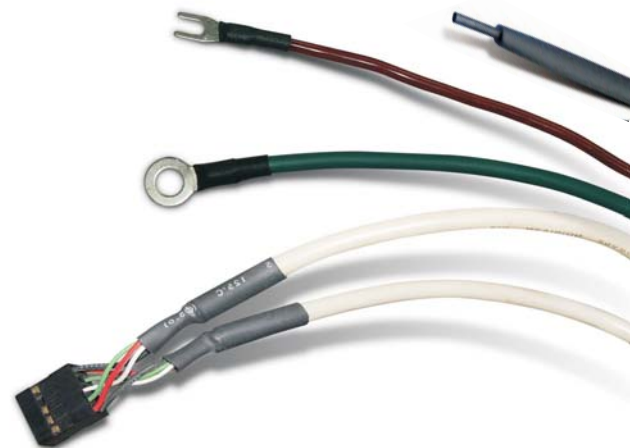
HALOGEN FREE, FLAME RETARDANT TUBING
SHRINK RATIO 2:1

Features/Applications

As a kind of fully environmental friendly heat-shrinkable tube, it is made with specially designed halogen free polyolefin. It produces neither toxic smoke nor harmful substance when burning, which meets the growing demand of environmental protection all over the world. Except the common fine physical and chemical specifications, the tube also shows excellent flame-retardant, insulation, low temperature shrinking and flexible properties and thus be widely used in electron, communication and automobile industry.

- Operating temperature: -55°C to +105°C
- Minimum shrink temperature: 70°C
- Minimum fully recovery temperature: 100°C
- Standard color: Black, White

Other color are available on request



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +105°C
Tensile strength	ASTM D 2671	> 10.4MPa
Elongation at break	ASTM D 2671	> 200%
Longitudinal shrinkage	UL 224	± 5%
Eccentricity	ASTM D 2671	≤ 30%
Heat shock	250°C/4hrs.	No cracking
Heat aging Tensile strength Ultimate elongation	136°C/168hrs.	9.0MPa > 150%
Flammability	SAE-AMS-DTL-23053/5	Pass

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Standard length (m/spool)
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
1.0	1.0	0.50	0.33	200
1.5	1.5	0.75	0.36	200
2.0	2.0	1.00	0.44	200
2.5	2.5	1.25	0.44	200
3.0	3.0	1.50	0.44	200
3.5	3.5	1.75	0.44	200
4.0	4.0	2.00	0.44	200
5.0	5.0	2.50	0.56	100
6.0	6.0	3.00	0.56	100
7.0	7.0	3.50	0.56	100
8.0	8.0	4.00	0.56	100
9.0	9.0	4.50	0.56	100
10	10.0	5.00	0.56	100
11	11.0	5.50	0.56	100
12	12.0	6.00	0.56	50
13	13.0	6.50	0.65	50
14	14.0	7.00	0.69	50
15	15.0	7.50	0.69	50
16	16.0	8.00	0.69	50
18	18.0	9.00	0.80	50
20	20.0	10.00	0.80	50
22	22.0	11.00	0.80	50
25	25.0	12.50	0.90	50
28	28.0	14.00	0.90	50
30	30.0	15.00	0.90	50
35	35.0	17.50	0.90	50
40	40.0	20.00	1.00	50
50	50.0	25.00	1.00	50
60	60.0	30.00	1.00	30
70	70.0	35.00	1.20	30
80	80.0	40.00	1.20	30
100	100.0	50.00	1.30	30
125	125.0	60.00	1.30	15
150	150.0	75.00	1.30	15

● Special size, cutting pieces are available on request.

Thin Wall Tubing

H-2R

SEMI-RIGID, MULTI-PURPOSE FLAME RETARDANT TUBING
SHRINK RATIO 2:1

Features/Applications

H-2R tubing is manufactured with specially developed formulation and technology, which makes the tubing to be excellent abrasion resistant. The outstanding physical, chemical and electrical properties make it widely used in some important fields such as military, aerospace and fine electronic instruments for insulating of harness, and connectors.

- Meet: UL 224, VW-I, 125°C 600V
SAE-AMS-DTL-23053/5 Class I & 3
- Meet: RoHS, Sony-SS-00259
- Resistant to common fluids and solvents
- Operating temperature: -55°C to +135°C
- Minimum fully recovery temperature: 130°C
- Standard color: Black, Clear (Non flame retardant)



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	16MPa
Elongation at break	ASTM D 2671	500%
Tensile strength after aging (175°C/168hrs.)	ASTM D 2671	14MPa
Elongation after aging (175°C/168hrs.)	ASTM D 2671	250%
Flammability	Self-extinguish in 30sec.	Pass
Heat shock (250°C/4hrs.)	ASTM D 2671	No cracking
Cold bend test (-55°C/4hrs.)	ASTM D 2671	No cracking
Dielectric strength	ASTM D 150	20kV/mm
Volume resistance	ASTM D 876	10 ¹⁴ Ω.cm
Copper corrosion	UL 224	Pass
Water absorption	ASTM D 570	0.15%
Chemical resistance	SAE-AMS-DTL-23053/5	Pass
Longitudinal shrinkage	UL 224	0±5%
Eccentricity	UL 224	<30%

Product Dimensions

Normal size (inch)	As supplied (mm)	After recovered (mm)		Standard length (m/spool)
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
3/64	1.2	0.6	0.4	200
1/16	1.6	0.8	0.4	200
3/32	2.4	1.2	0.5	200
1/8	3.2	1.6	0.5	200
3/16	4.8	2.4	0.5	100
1/4	6.4	3.2	0.6	100
3/8	9.5	4.8	0.6	100
1/2	12.7	6.4	0.6	50
5/8	16.0	8.0	0.7	50
3/4	19.1	9.5	0.7	50
1	25.4	12.7	0.9	50

- Special size, cutting pieces are available on request.

Thin Wall Tubing

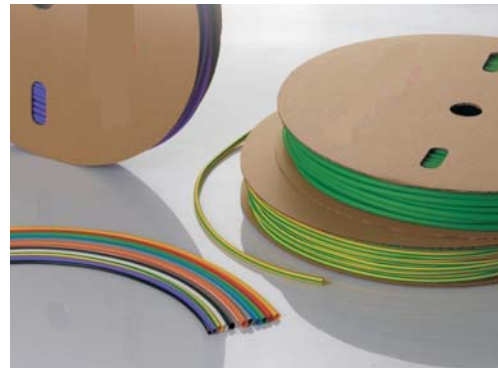
H-2F

ENVIRONMENT FRIENDLY, FLEXIBLE,
HIGHLY FLAME RETARDANT TUBING
SHRINK RATIO 2:1

Features/Applications

Provide both commercial and military applications, electrical insulation and protects in line components, disconnect terminals and splices with its high strength and excellent resilience, bundle wires for very flexible light-duty harnesses. Identifies for color codes, terminals and components.

- Approval:  125°C VW-I 600V File No.E204071
- Meet: SAE-AMS-DTL-23053/5 Class I&3
- Meet: RoHS, Sony-SS-00259
- Very flexible, highly flame retardant(except clear)
- Resistant to common fluids and solvents
- Operating temperature: -55°C to +135°C
- Minimum shrink temperature: 70°C
- Minimum fully recovery temperature: 100°C
- Standard color: Black, Red, Blue Yellow, Green, White, Clear(class 2)



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	14MPa
Elongation at break	ASTM D 2671	600%
Elongation after aging (175°C/168hrs.)	ASTM D 2671	350%
Flammability	UL 224 VW-I SAE-AMS-DTL-23053/5	Pass
Heat shock (250°C/4hrs.)	ASTM D 2671	No cracking
Cold bend test (-55°C/4hrs.)	ASTM D 2671	No cracking
Dielectric strength	ASTM D 150	20kV/mm
Volume resistance	ASTM D 876	10 ¹⁴ Ω.cm
Copper corrosion	UL 224	Pass
Water absorption	ASTM D 570	0.15%
Chemical resistance	SAE-AMS-DTL-23053/5	Pass
Longitudinal shrinkage	UL 224	0±5%
Eccentricity	UL 224	>30%

Product Dimensions

Normal size (inch)	As supplied (mm)	After recovered (mm)		Standard length (m/spool)
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
3/64	1.2	0.60	0.40	200
1/16	1.6	0.80	0.40	200
3/32	2.4	1.20	0.48	200
1/8	3.2	1.60	0.48	200
3/16	4.8	2.40	0.48	100
1/4	6.4	3.20	0.56	100
5/16	8.0	4.00	0.62	100
3/8	9.5	4.80	0.62	100
1/2	12.7	6.40	0.62	50
5/8	15.9	8.00	0.68	50
3/4	19.1	9.50	0.68	50
1	25.4	12.70	0.87	50
1 1/4	31.8	15.90	1.00	50
1 1/2	38.1	19.10	1.00	50
2	50.8	25.40	1.10	50
3	76.2	38.10	1.20	30
4	102.0	50.80	1.35	30
5	125.0	63.50	1.40	15
6	151.0	75.00	1.40	15

- Feet spool lengths are available subject to requirement
- Special size, cutting pieces are available on request.

Thin Wall Tubing

H-2F(3X)

HIGHLY FLEXIBLE, FLAME RETARDANT TUBING
SHRINK RATIO 3:1

Features/Applications

With outstanding physical, chemical and electrical property, it widely used for electrical insulation, bundling to prevent corrosion and provid mechanical protection. 3:1 shrink ratio more suitable for application to irregular , awkward shapes.

- Approvals:  US 125°C VW-I 600V File No.E204071
- Meet: SAE-AMS-DTL-23053/5 Class I&3
- Meet: RoHS, Sony-SS-00259
- Very flexible, highly flame retardant(except clear)
- Operating temperature: -55°C to +135°C
- Minimum shrink temperature: 70°C
- Minimum fully recovery temperature: 100°C
- Standard color: Black
- Special color: Red, Blue Yellow, Green, Clear(class 2)



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	14MPa
Elongation at break	ASTM D 2671	800%
Tensile strength after aging (175°C/168hrs.)	ASTM D 2671	14MPa
Elongation after aging (175°C/168hrs.)	ASTM D 2671	350%
Flammability	UL 224 VW-I SAE-AMS-DTL-23053/5	Pass
Heat shock (250°C/4hrs.)	ASTM D 2671	No cracking
Cold bend test (-55°C/4hrs.)	ASTM D 2671	No cracking
Dielectric strength	ASTM D 150	20kV/mm
Volume resistance	ASTM D 876	10 ¹⁴ Ω.cm
Copper corrosion	UL 224	Pass
Water absorption	ASTM D 570	0.15%
Chemical resistance	SAE-AMS-DTL-23053/5	Pass
Longitudinal shrinkage	UL 224	0±5%
Eccentricity	UL 224	>30%

Product Dimensions

Normal size		As supplied (mm)	After recovered (mm)		Standard length (m/spool)
(mm)	(inch)	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
1.5/0.5	1/16	1.6	0.5	0.45	200
3.0/1.0	1/8	3.2	1.0	0.55	200
4.5/1.5	3/16	4.8	1.5	0.60	100
6.0/2.0	1/4	6.4	2.0	0.65	100
9.0/3.0	3/8	9.5	3.0	0.75	100
12.0/4.0	1/2	12.7	4.0	0.80	50
18.0/6.0	3/4	19.1	6.0	0.90	50
24.0/8.0	1	25.4	8.0	1.20	50
39.0/13.0	1 1/2	39.0	13.0	1.25	50

● Special size, cutting pieces are available on request.

Thin Wall Tubing

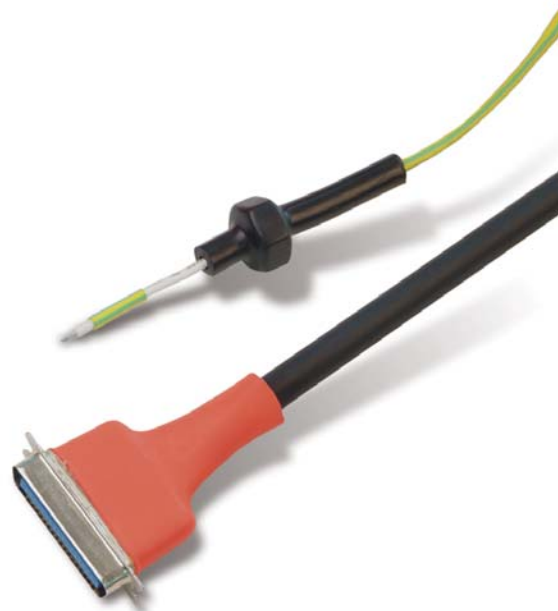
H-2F(4X)

HIGHLY FLEXIBLE, FLAME RETARDANT TUBING
HIGH SHRINK RATIO 4:1

Features/Applications

Tubing is manufactured with specially developed formulation and Technology, it can be easily fit a large diameter connector or transition, and then shrink down onto a smaller diameter jacket. Outstanding physical, chemical and electrical properties make it widely used in some important fields such as military, aerospace and fine electronic Instruments for insulating or repairing harness, cables and connectors.

- Approvals:  US 125°C VW-I 600V File No.E204071
- Meet: SAE-AMS-DTL-23053/5 Class I&3
- Meet: RoHS, Sony-SS-00259
- Operating temperature: -55°C to +135°C
- Minimum shrink temperature: 70°C
- Minimum fully recovery temperature: 100°C
- Standard color: Black
- Special color: Red, Blue, Yellow, Green



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	14MPa
Elongation at break	ASTM D 2671	800%
Tensile strength after aging (175°C/168hrs.)	ASTM D 2671	14MPa
Elongation after aging (175°C/168hrs.)	ASTM D 2671	350%
Flammability	UL 224 VW-I SAE-AMS-DTL-23053/5	Pass
Heat shock (250°C/4hrs.)	ASTM D 2671	No cracking
Cold bend test (-55°C/4hrs.)	ASTM D 2671	No cracking
Dielectric strength	ASTM D 150	20kV/mm
Volume resistance	ASTM D 876	10 ¹⁴ Ω.cm
Copper corrosion	UL 224	Pass
Water absorption	ASTM D 570	0.15%
Chemical resistance	SAE-AMS-DTL-23053/5	Pass
Longitudinal shrinkage	UL 224	0±5%
Eccentricity	UL 224	>30%

Product Dimensions

Normal size		As supplied (mm)	After recovered (mm)		Standard length
(mm)	(inch)	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
19.1/4.6	3/4	19.1	4.6	1.7	1.22m
25.4/7.0	1	25.4	7.0	1.7	1.22m
38.1/9.5	1 1/2	38.1	9.5	1.7	1.22m
50.8/14.0	2	50.8	14.0	1.7	1.22m
76.2/20.6	3	76.2	20.6	1.7	1.22m
102/26.7	4	102.0	26.7	1.7	1.22m
115/36.8	4 1/2	115.0	36.8	1.7	1.22m

- Special size, cutting pieces are available on request.

Thin Wall Tubing

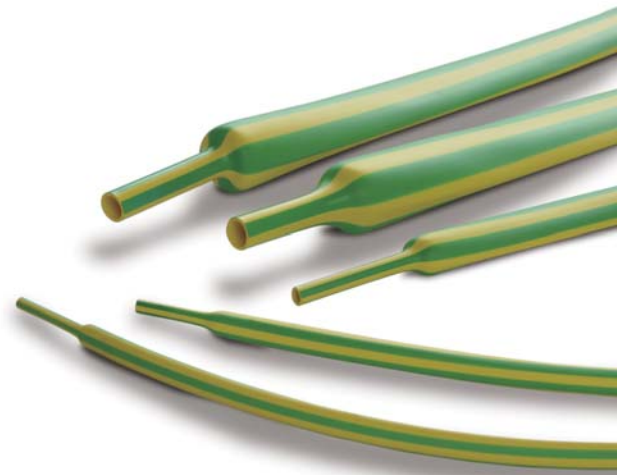
H-2F(YG)

YELLOW & GREEN STRIPED, FLEXIBLE,
FLAME RETARDANT TUBING
SHRINK RATIO 2:1, 3:1

Features/Applications

Outstanding physical, chemical and electrical properties make it easily to install and identify to ground conductors. Free from environment harmful substance as PBB's, PBBO's, PBBE's and toxic heavy metal compounds in its components.

- Approvals:  125°C VW-I 600V File No.E204071
- Meet: SAE-AMS-DTL-23053/5 Class I&3
Meet: RoHS, Sony-SS-00259
- Operating temperature: -55°C to +135°C
- Minimum shrink temperature: 70°C
- Minimum fully recovery temperature: 100°C
- Standards colors: Yellow & Green striped



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	14MPa
Elongation at break	ASTM D 2671	800%
Tensile strength after aging (175°C/168hrs.)	ASTM D 2671	14MPa
Elongation after aging (175°C/168hrs.)	ASTM D 2671	350%
Flammability	UL 224 VW-I SAE-AMS-DTL-23053/5	Pass
Heat shock (250°C/4hrs.)	ASTM D 2671	No cracking
Cold bend test (-55°C/4hrs.)	ASTM D 2671	No cracking
Dielectric strength	ASTM D 150	20kV/mm
Volume resistance	ASTM D 876	> 10 ¹⁴ Ω.cm
Copper corrosion	UL 224	Pass
Water absorption	ASTM D 570	0.15%
Chemical resistance	SAE-AMS-DTL-23053/5	Pass
Longitudinal shrinkage	UL 224	0±5%
Eccentricity	UL 224	>30%

Product Dimensions 2:1

Normal size (inch)	As supplied(mm)	After recovered (mm)		Standard length (m/spool)
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
3/64	1.2	0.6	0.33	200
1/16	1.6	0.8	0.36	200
3/32	2.4	1.2	0.44	200
1/8	3.2	1.6	0.44	200
3/16	4.8	2.4	0.56	100
1/4	6.4	3.2	0.56	100
5/16	8.0	4.0	0.56	100
3/8	9.5	4.8	0.56	100
1/2	12.7	6.4	0.65	50
5/8	16.0	8.0	0.69	50
3/4	19.1	9.5	0.80	50
1	25.4	12.7	0.90	50
1 1/4	31.8	15.9	0.90	50
1 1/2	38.1	19.1	1.02	50
2	50.8	25.4	1.02	50
3	76.2	38.1	1.20	30
4	101.6	50.8	1.30	30

Product Dimensions 3:1

Normal size		As supplied(mm)	After recovered (mm)		Standard length (m/spool)
(mm)	(inch)	Inside diameter	Inside diameter (Max.)	Wall thickness (Min.)	
1.6/0.5	1/16	1.6	0.5	0.51	200
2.4/0.8	3/32	2.4	0.8	0.51	200
3.2/1.0	1/8	3.2	1.0	0.55	200
4.8/1.5	3/16	4.8	1.5	0.60	100
6.4/2.0	1/4	6.4	2.0	0.65	100
9.5/3.0	3/8	9.5	3.0	0.75	100
12.7/4.0	1/2	12.7	4.0	0.75	50
19.1/6.0	3/4	19.1	6.0	0.85	50
25.4/8.0	1	25.4	8.0	1.00	50
39/13	1 1/2	39.0	13.0	1.15	50

● Special size, cutting pieces are available on request.

Thin Wall Tubing

H-2(LS)

VERY LOW SHRINK TEMPERATURE, FLEXIBLE,
HALOGEN FREE TUBING
SHRINK RATIO 2:1

Features/Applications

H-2(LS) is manufactured with modified radiation cross-linked polyolefin. The specially designed halogen free formulation makes the tubing very flexible and shrinking at lower temperature. Suitable for applications where heat sensitive components and quick shrinkage is required.

- Meet: RoHS, Sony-SS-00259
- Operating temperature: -45°C to +125°C
- Minimum shrink temperature: 65°C
- Minimum fully recovery temperature: 95°C
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	13MPa
Elongation at break	ASTM D 2671	450%
Tensile strength after aging (158°C/168hrs.)	ASTM D 2671	11MPa
Elongation after aging (158°C/168hrs.)	ASTM D 2671	300%
Heat shock (250°C/4hrs.)	ASTM D 2671	No cracking
Cold bend test (-55°C/4hrs.)	ASTM D 2671	No cracking
Copper corrosion	UL 224	Pass
Flammability	MVSS 302	Pass
Fluid resistance	23°C for 24hrs. ISO 37 Tensile strength Elongation	11MPa 200%
Longitudinal shrinkage	UL 224	0±5%

- To ensure dimensional stability, H-2(LS) should be stored at temperature below 40°C.

Product Dimensions

Normal size (inch)	As supplied (mm)	After recovered (mm)		Standard length (m/spool)
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
1/16	1.6	0.8	0.50	200
3/32	2.4	1.2	0.50	200
1/8	3.2	1.6	0.50	200
3/16	4.8	2.4	0.50	200
1/4	6.4	3.2	0.60	100
5/16	8.0	4.0	0.60	100
3/8	9.5	4.8	0.60	100
1/2	12.7	6.4	0.60	50
5/8	16.0	8.0	0.60	50
3/4	19.1	9.5	0.80	50
1	25.4	12.7	0.90	50
1 1/4	31.8	15.9	0.90	50
1 1/2	38.1	19.1	1.00	50
2	50.8	25.4	1.10	50

- Special size, cutting pieces are available on request.

Thin Wall Tubing

H-1

GENERAL PURPOSE, NON FLAME RETARDANT TUBING
SHRINK RATIO 2:1

Features/Applications

H-1 is commercial grade heat shrinking tubing for general applications where flame-retardant property does not need, but electrical insulation and mechanical performance are important. H-1 conforms to substrates more uniformly with less longitudinal variation rather than most of PVC tubing. The polished surface is an attractive covering for many automotive, appliance, and consumer-goods applications. Precise version offers exceptional clarity (indication) for protection marked surfaces.

- Minimum shrink temperature: 80°C
- Minimum fully recovery temperature: 100°C
- Standard color: Shiny-black, Transparent (other colors are available on request)



Technical Data

Property	Test Method	Typical Data
Operating temperature	UL 224	-55°C to +105°C
Tensile strength	ASTM D 2671	> 10.4MPa
Elongation at break	ASTM D 2671	> 500%
Longitudinal shrinkage	UL 224	0±5%
Eccentricity	ASTM D 2671	<30%
Flammability	—	Flammable
Dielectric strength	IEC 93	>25kV/mm
Volume resistance	ASTM D 2671	> 10 ¹² Ω.cm
Copper stability	ISO 62	Pass

Product Dimensions

Normal size (inch)	As supplied(mm)	After recovered (mm)		Standard length (m/spool)
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
3/64	1.2	0.50	0.33	200
1/16	1.6	0.75	0.36	200
3/32	2.4	1.25	0.44	200
1/8	3.2	1.50	0.44	200
3/16	4.8	2.50	0.56	100
1/4	6.4	3.00	0.56	100
3/8	9.5	5.00	0.56	100
1/2	12.7	6.50	0.65	50
5/8	15.9	8.00	0.69	50
3/4	19.1	10.00	0.80	50
1	25.4	12.00	0.90	50
1 1/4	31.8	15.00	0.90	50
1 1/2	38.1	20.00	1.00	50
2	50.8	25.00	1.00	50

- Special size, cutting pieces are available on request.

Product Dimensions

Normal size (mm)	As supplied(mm)	After recovered (mm)		Standard length (m/spool)
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
1.0	1.0	0.50	0.33	200
1.5	1.5	0.75	0.36	200
2.0	2.0	1.00	0.44	200
2.5	2.5	1.25	0.44	200
3.0	3.0	1.50	0.44	200
3.5	3.5	1.75	0.44	200
4.0	4.0	2.00	0.44	200
5.0	5.0	2.50	0.56	100
6.0	6.0	3.00	0.56	100
7.0	7.0	3.50	0.56	100
8.0	8.0	4.00	0.56	100
9.0	9.0	4.50	0.56	100
10	10.0	5.00	0.56	100
11	11.0	5.50	0.56	100
12	12.0	6.00	0.56	50
13	13.0	6.50	0.65	50
14	14.0	7.00	0.69	50
15	15.0	7.50	0.69	50
16	16.0	8.00	0.69	50
18	18.0	9.00	0.80	50
20	20.0	10.00	0.80	50
22	22.0	11.00	0.80	50
25	25.0	12.00	0.90	50
28	28.0	14.00	0.90	50
30	30.0	15.00	0.90	50
35	35.0	17.50	0.90	50
40	40.0	20.00	1.00	50
50	50.0	25.00	1.00	50

Thin Wall Tubing

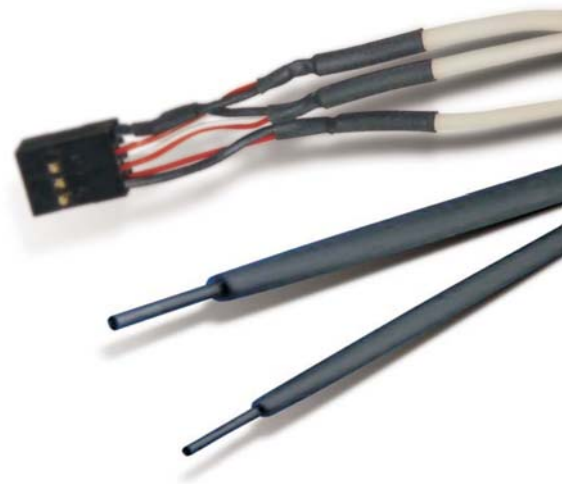
HB-1

NON FLAME RETARDANT TUBING
SHRINK RATIO 2:1

Features/Applications

HB-1 is heat shrinkable tubing for general applications where flame-retardant properties are not needed, but electrical insulation and mechanical performance are important. It fits to substrates more uniformly and with less longitudinal changes than most of PVC tubing. The bright polished surface is an attractive covering for many automotive, appliance, and consumer-goods applications.

- Minimum shrink temperature: 80°C
- Minimum fully recovery temperature: 100°C
- Standard color: Shiny-black, Transparent (other colors are available on request)



Technical Data

Property	Test Method	Typical Data
Operating temperature	UL 224	-55°C to +105°C
Tensile strength	ASTM D 2671	> 10.4MPa
Elongation at break	ASTM D 2671	> 500%
Longitudinal shrinkage	UL 224	0±5%
Eccentricity	ASTM D 2671	< 30%
Flammability	—	Flammable
Dielectric strength	IEC 93	> 25kV/mm
Volume resistance	ASTM D 2671	> 10 ¹⁴ Ω.cm
Copper stability	ISO 62	Pass

Product Dimensions

Normal size (inch)	As supplied(mm)		After recovered (mm)		Standard length (m/spool)
	Inside diameter (Min.)	Wall thickness (Nom.)	Inside diameter (Max.)	Wall thickness (Min.)	
3/64	1.2	0.18	0.50	0.33	200
1/16	1.6	0.18	0.75	0.36	200
3/32	2.4	0.25	1.25	0.44	200
1/8	3.2	0.25	1.50	0.44	200
3/16	4.8	0.25	2.50	0.56	100
1/4	6.4	0.25	3.00	0.56	100
5/16	8.0	0.25	4.00	0.56	100
3/8	9.5	0.30	5.00	0.56	100
1/2	12.7	0.35	6.50	0.65	50
5/8	15.9	0.35	8.00	0.69	50
3/4	19.1	0.40	10.00	0.89	50
1	25.4	0.45	12.00	0.90	50
1 1/4	31.8	0.45	15.00	0.90	50
1 1/2	38.1	0.50	20.00	1.00	50
2	50.8	0.50	25.00	1.00	50
3	76.2	0.55	40.00	1.20	30
4	101.6	0.55	50.00	1.30	30
5	126.0	0.55	60.00	1.30	15
6	150.0	0.55	75.00	1.30	15

• Special size, cutting pieces are available on request.

Thin Wall Tubing

HBG

THIN WALL HEAT SHRINKABLE TUBING FOR FLEXIBLE GAS PIPES

Features/Applications

HBG flexible heat shrinkable tubing is made by specially designed formulations to have outstanding physical properties. Very suitable for application of protecting flexible gas pipes.

- Base materials: Modified cadmium and lead free polyolefin
- Minimum shrink temperature: 90°C
- Minimum fully recovery temperature: 110°C
- Standard color: Yellow

**Technical Data**

Property	Test Method	Typical Data
Specific gravity	ASTM D 729	1.25g/cm ³
Longitudinal changes	ASTM D 2671	0 to -5%
Eccentricity	ASTM D 2671	<30%
Tensile strength	ASTM D 2671	14MPa
Elongation	ASTM D 2671	>650%
After aging Ultimate elongation Tensile strength	158°C/168hrs.	>490% >12MPa
Heat shock	250°C/4hrs.	No flowing or dropping
Cold bend test	ASTM D 2671	No cracking
Dielectric strength	IEC 93	>25kV/mm
Volume resistance	ASTM D 2671	10 ¹⁴ Ω.cm
Copper corrosion	UL 224	No corrosion
Copper Stability (158°C/168hrs.)	UL 224	Pass
Printability	Hot stamp/Ink jet/Offset printing	Very good

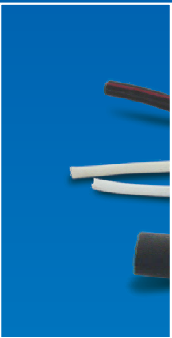
Product Dimensions

Normal size (mm)	As supplied(mm)	After recovered (mm)		Standard length (m/spool)
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
HBG 23/9.5	23.0	9.5	0.65	100
HBG 27.5/12.7	27.5	12.7	0.70	50
HBG 29.0/12.7	29.0	12.7	0.70	50
HBG 33.5/16	33.5	16.0	0.80	50
HBG 40.5/19	40.5	19.0	0.80	50
HBG 51/25.4	51.0	25.4	0.80	50
HBG 65/32.5	65.0	32.5	1.27	30
HBG 76.2/38.1	77.0	38.1	1.27	30

- Special size, cutting pieces are available on request.

Section B

Dual Wall Tubing



FUZHOU CANWELL IMPORT & EXPORT CO., LTD.

Dual Wall Tubing

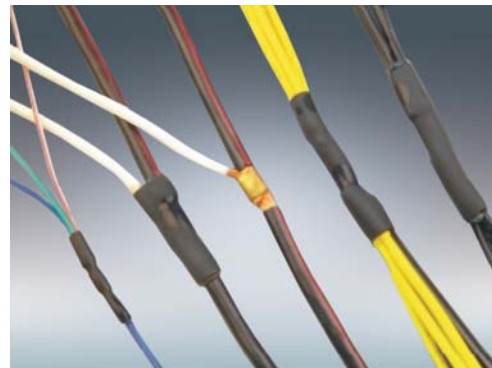
H-5(3X)(4X)

DUAL WALL, ADHESIVE-LINED FLEXIBLE TUBING
SHRINK RATIO 3:1, 4:1

Features/Applications

Manufactured by co-extrusion of polyolefin and hot melt Adhesive. Designed to provide excellent property of both insulation and sealing. Widely used to protect auto wires, shipping cable, bundle wires and metal tubes against water and moisture.

- Approval:  125°C VW-I 600V File No.E204071 (except clear)
- Meet: SAE-AMS-DTL-23053/4
- Operating temperature: -45°C to +125°C
- Minimum shrink temperature: 80°C
- Minimum fully recovery temperature: 120°C
- Standard color: Black
- Special color: Red, Blue, White, Yellow
- Clear (non-flame retardant jacket)



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	> 10.4MPa (min.)
Tensile strength after aging (158°C/168hrs.)	ASTM D 2671	Remains 70%
Elongation at break	ASTM D 2671	> 300% (min.)
Elongation at break after aging (158°C/168hrs.)	ASTM D 2671	100% (min.)
Longitudinal shrinkage	UL 224	0 to -10%
Heat shock	250°C, 4hrs.	No cracking, no dropping
Cold bend (-30°C/1hr.)	ASTM D 2671	No cracking
Voltage withstand (AC 2500V/60 seconds)	ASTM D 2671	No breakdown
Volume resistance	ASTM D 876	> 10 ¹⁴ Ω.cm (min.)
Flammability	SAE-AMS-DTL-23053/4	Self-extinguish in 30sec.
Copper corrosion (158°C/168hrs.)	UL 224	Pass
Water absorption	ASTM D 570	<0.5%

Product Dimensions

Normal size		As supplied (mm)	After recovered (mm)			Standard length (m)	Standard length (m/spool)
(mm)	(inch)	Inside diameter (Min.)	Inside diameter (Max.)	Total wall thickness (Min.)	Adhesive thickness (Nom.)		

H-5(3X) 3:1 Adhesive-lined tubing

3/1	1/8	3.0	1.0	1.00	0.5	1.22	200
4.8/1.5	3/16	4.8	1.5	1.00	0.5	1.22	100
6/2	1/4	6.0	2.0	1.00	0.5	1.22	100
9/3	3/8	9.0	3.0	1.40	0.6	1.22	50
12/4	1/2	12.0	4.0	1.60	0.8	1.22	25
19/6	3/4	19.0	6.0	2.15	0.8	1.22	25
24/8	1	24.0	8.0	2.40	1.0	1.22	25
30/10	1 1/4	30.0	10.0	2.40	1.0	1.22	25
40/13	1 1/2	40.0	13.0	2.40	1.0	1.22	25
50/19	2	50.0	19.0	2.40	1.0	1.22	25

H-5(4X) 4:1 Adhesive-lined tubing

4/1	3/16	4.0	1.0	1.00	0.5	1.22	100
6/1.5	1/4	6.0	1.5	1.00	0.5	1.22	100
8/2	5/16	8.0	2.0	1.00	0.5	1.22	50
12/3	1/2	12.0	3.0	1.40	0.6	1.22	25
16/4	5/8	16.0	4.0	1.60	0.8	1.22	25
24/6	1	24.0	6.0	2.15	0.8	1.22	25
32/8	1 1/4	32.0	8.0	2.40	1.0	1.22	25
52/13	2	52.0	13.0	2.40	1.0	1.22	—

- Special size, cutting pieces are available on request.
- Halogen free heat shrinkable adhesive-lined tubing is available on request.

Dual Wall Tubing

H-5(3X)-M

HEAVY DUAL WALL, ADHESIVE-LINED TUBING
SHRINK RATIO 3:1

Features/Applications

Manufactured by special designed coating technology, it provides both insulation and sealing for protected articles. Suitable for joints and terminations, used to protect auto wire shipping cable, bundle wires and metal tubes against water and moisture.

- Meet:  125°C VW-I
- Operating temperature: -45°C to +125°C
- Minimum shrink temperature: 110°C
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	10.4MPa (min.)
Tensile strength after aging (158°C/168hrs.)	ASTM D 2671	Remains 70%
Elongation at break	ASTM D 2671	300% (min.)
Elongation at break after aging (158°C/168hrs.)	ASTM D 2671	100% (min.)
Longitudinal shrinkage	UL 224	0 to -10%
Heat shock	250°C/4hrs.	No cracking, no dropping
Cold bend (-30°C/1hr.)	ASTM D 2671	No cracking
Voltage withstand (AC 2500V/60s)	ASTM D 2671	No breakdown
Volume resistance	ASTM D 876	10 ¹⁴ Ω.cm (min.)
Flammability	SAE-AMS-DTL-23053/5	Self-extinguish in 30sec.
Copper corrosion (158°C/168hrs.)	UL 224	Pass
Water absorption	ASTM D 570	<0.5%

Product Dimensions

Normal size		As supplied(mm)	After recovered (mm)			Standard length
(mm)	(inch)	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	Adhesive thickness (Nom.)	
19/6	3/4	19	6	3.0	1.35	1.22m
25/8	1	25	8	3.0	1.35	1.22m
33/8	1 1/4	33	8	3.0	1.35	1.22m
40/12	1 1/2	40	12	3.0	1.35	1.22m
55/16	2	55	16	3.0	1.35	1.22m
65/19	2 1/2	65	19	3.0	1.35	1.22m
75/22	3	75	22	3.0	1.35	1.22m
85/25	3 3/8	85	25	3.0	1.35	1.22m
100/30	4	100	30	3.0	1.35	1.22m

- Special size, cutting pieces are available on request.
- Halogen free heat shrinkable adhesive-lined tubing is available on request.

Dual Wall Tubing

HBK

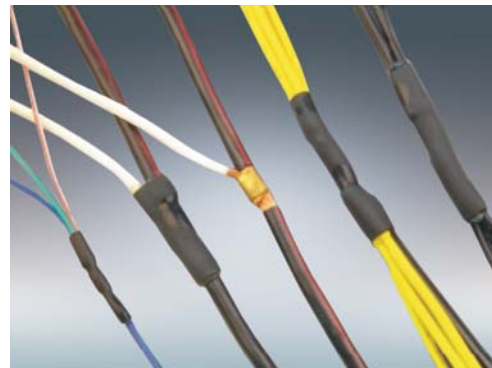
SEMI-RIGID ADHESIVE-LINED TUBING

SHRINK RATIO 4:1

Features/Applications

Specially designed to protect splices and joint of wire harness, and other components against environment damage. Semi-rigid make it more abrasion resistant compared with common tubing, 4:1 shrink ratio make it easily to fit a wide range of component, and thicker adhesive coated layer forms an effective barrier against fluids and moisture.

- Meet: UL 224 125°C 600V SAE-AMS-DTL-23053/4
- Operating temperature: -45°C to +125°C
- Minimum shrink temperature: 120°C
- Standard color: Black, Clear



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	10.4MPa (min.)
Tensile strength after aging (158°C/168hrs.)	ASTM D 2671	Remains 70%
Elongation at break	ASTM D 2671	200% (min.)
Elongation at break after aging (158°C/168hrs.)	ASTM D 2671	100% (min.)
Longitudinal shrinkage	UL 224	0 to -10%
Heat shock	250°C/4hrs.	No cracking, no dropping
Cold bend (-30°C/1hr.)	ASTM D 2671	No cracking
Voltage withstand (AC 2500V/60sec.)	ASTM D 2671	No breakdown
Volume resistance	ASTM D 876	10 ¹⁴ Ω.cm (min.)
Flammability	SAE-AMS-DTL-23053/5	Self-extinguish in 30sec.
Copper corrosion (158°C/168hrs.)	UL 224	Pass
Water absorption	ASTM D 570	<0.5%

Product Dimensions

Normal size (mm)	As supplied(mm)	After recovered (mm)			Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Nom.)	Adhesive thickness (Nom.)	
HBK 6/1.27	6	1.27	1.30	0.56	1.22m
HBK 8/1.65	8	1.65	1.52	0.76	1.22m
HBK 12/2.41	12	2.41	1.91	1.02	1.22m
HBK 18/4.45	18	4.45	2.41	1.37	1.22m

- Special size, cutting pieces are available on request.

Dual Wall Tubing

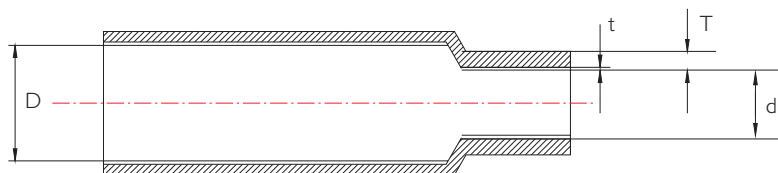
H-5(2000)

DUAL WALL, ADHESIVE-LINED TUBING FOR BRAKE PIPES PROTECTION

Features/Applications

Specially designed for protection of automotive metal pipes and fuel lines against environment damages. This dual wall frame can effectively protect the pipes against any kinds of damages caused by vibration, friction, corrosion and thus improves the reliability of these pipes.

- Minimum fully recovery temperature: 120°C
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +105°C
Longitudinal shrinkage	UL 224	0 to -6%
Eccentricity	ASTM D 2671	≤ 30%
Tensile strength	ASTM D 2671	12MPa (min.)
Elongation at break	ASTM D 2671	300% (min.)
Heat ageing	after 24hrs. at 120°C	12MPa (min.)
Deformation resistance		50% (min.)
Impact resistance	ASTMD 746	No cracking at -35°C
Drop impact resistance		No cracking
Cold resistance	ASTM D 746 (-35°C/1hr.)	No cracking
Stress cracking resistance	ASTM D 1693 (50°C/24hrs.)	No cracking
Fluid resistance	ASTM D 2671 25°C/72hrs. Brake fluid (Honda) Unleaded petrol	Tensile strength 12MPa (min.) Ultimate elongation 300% (min.) Tensile strength 7.8MPa (min.) Ultimate elongation 150% (min.)

Product Dimensions

Normal size (mm)	Standard pipe diameter		As supplied(mm) Inside diameter D(Min.)	After recovered (mm)			Standard length (m)
	(inch)	(mm)		Inside diameter d(Max.)	Wall thickness T(Nom.)	Adhesive thickness t(Nom.)	
H-5(2000)-5	1/8	3.50	5.5	3.3	1.0	0.2	200
H-5(2000)-6	3/16	4.76	6.5	4.6	1.1	0.2	200
H-5(2000)-8	1/4	6.35	8.5	6.0	1.2	0.2	100
H-5(2000)-10	5/16	8.00	11.5	7.0	1.2	0.2	100
H-5(2000)-15	3/8	10.00	15.0	9.5	1.3	0.2	1

Dual Wall Tubing

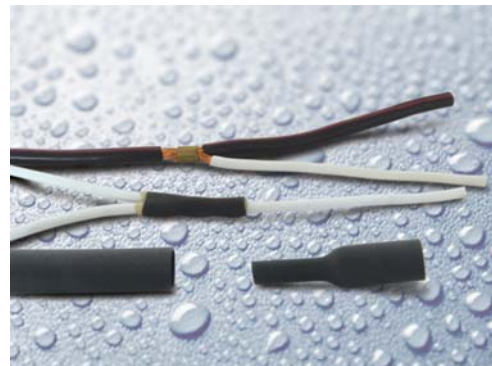
H-5(3000)

DUAL WALL, ADHESIVE-LINED TUBING
SHRINK RATIO 3:1

Features/Applications

H-5(3000) is manufactured by co-extrusion of polyolefin and meltable adhesive. Designed to provide both insulation and sealing for electronic components, wire splices, cables and jackets.

- Meet: SAE-AMS-DTL-23053/4; UL 224; RoHS
- Operating temperature: -45°C to +125°C
- Minimum shrink temperature: 120°C
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	12MPa (min.)
Tensile strength after ageing (136°C/168hrs.)	ASTM D 2671	Remains 70%
Elongation at break	ASTM D 2671	400% (min.)
Elongation at break after ageing (158°C/168hrs.)	ASTM D 2671	>100% (min.)
Longitudinal shrinkage	UL224	0 to -10%
Heat shock	200°C/4hrs.	No cracking, no dropping
Cold bend (-40°C/1hr.)	ASTM D 2671	No cracking
Voltage withstand (AC 2500V/60sec.)	ASTM D 2671	No breakdown
Volume resistance	ASTM D 876	10 ¹⁴ Ω.cm (min.)
Flammability	SAE-AMS-DTL-23053/5	Self-extinguish in 30sec.
Copper corrosion (158°C/168hrs.)	ASTM D 2671 Method B	Pass
Water absorption	ASTM D 570	<0.5%
Fluid resistance	MIL-DTL-23053/4	Pass

Product Dimensions

Normal size (mm)	As supplied(mm)	After recovered (mm)			Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Nom.)	Adhesive thickness (Nom.)	
H-5(3000) 3/1	3.0	1.0	1.00	0.5	1.22m
H-5(3000) 6/2	6.0	2.0	1.00	0.5	1.22m
H-5(3000) 9/3	9.0	3.0	1.35	0.6	1.22m
H-5(3000) 12/4	12.0	4.0	1.50	0.7	1.22m
H-5(3000) 18/6	18.0	6.0	1.70	0.8	1.22m
H-5(3000) 24/8	24.0	8.0	1.95	1.0	1.22m
H-5(3000) 39/13	39.0	13.0	2.10	1.0	1.22m
H-5(3000) 52/13	52.0	13.0	2.50	1.0	1.22m

Dual Wall Tubing

HBCS

DUAL WALL HEAT SHRINKABLE TUBING FOR CRIMP SEALING

Features/Applications

HBCS heat-shrinkable tubing is manufactured by co-extrusion polymeric materials with super high strength and hot-melt adhesive. Designed to provide both insulation and Sealing for wire connector.

- Shrink ratio: 3:1
- Operating temperature: -55°C to +125°C
- Minimum shrink temperature: 110°C
- Standard color: Red, Blue, Yellow



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	28MPa (min.)
Elongation at break	ASTM D 2671	500% (min.)
Longitudinal shrinkage	UL 224	0 to -10%
Heat shock	250°C/4hrs.	No cracking, no flowing of out wall
Heat resistance	165°C/168hrs.	No cracking, no flowing of out wall
Cold bend (-40°C/1hr.)	ASTM D 2671	No cracking
Voltage withstand (AC 2500V/60sec.)	ASTM D 2671	No breakdown
Volume resistance	ASTM D 876	10 ¹⁴ Ω.cm (min.)
Copper corrosion (158°C/168hrs.)	UL 224	Pass
Water absorption	ASTM D 570	<0.5%
Fluid resistance (23°C/24hrs.)	ASTM D 2671	Good to excellent
Specific gravity		0.96
Dielectric strength	ASTM D 2671	32kV/mm

Product Dimensions

Order Ref. Number (mm)	Color	As supplied(mm)	After recovered (mm)			Cut length (mm)	Standard length (m/spool)
		Inside diameter (Min.)	Inside diameter (Max.)	Total wall thickness (Nom.)	Adhesive thickness (Nom.)		
HBCS-1	Red	4.3	1.4	1.30	0.56	38	100
HBCS-2	Blue	5.0	1.8	1.52	0.76	38	100
HBCS-3	Yellow	6.5	2.2	1.91	1.02	42	100

Dual Wall Tubing

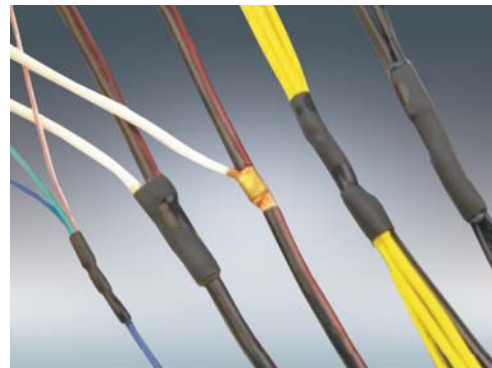
H-5(3X)(4X)-F

DUAL WALL, ADHESIVE-LINED FLEXIBLE TUBING
SHRINK RATIO 3:1, 4:1

Features/Applications

H-5(3X)/(4X)-F heat-shrinkable tubing is manufactured by co-extrusion of polyolefin and hot-melt adhesive. Designed to provide both insulation and sealing for protected articles. Typical applications are environment sealing of electrical components such as wire splices and harness in automobile and communication industry.

- Approvals:  125°C VW-I 600V File No.E204071
- Meet: SAE-AMS-DTL-23053/4
- Meet: RoHS, Sony-SS-00259
- Operating temperature: -55°C to +125°C
- Minimum shrink temperature: 100°C
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	10.4MPa (min.)
Tensile strength after aging (158°C/168hrs.)	ASTM D 2671	Remains 70%
Elongation at break	ASTM D 2671	300% (min.)
Elongation at break after aging (158°C/168hrs.)	ASTM D 2671	150% (min.)
Longitudinal shrinkage	UL 224	0 to -10%
Heat shock	225°C/4hrs.	No cracking, no dropping
Cold bend (-30°C/1hr.)	ASTM D 2671	No cracking
Voltage withstand (AC 2500V/ 60 seconds)	ASTM D 2671	No breakdown
Volume resistance	ASTM D 876	> 10 ¹⁴ Ω.cm (min.)
Flammability	SAE-AMS-DTL-23053/4	Self-extinguish in 30sec.
Copper corrosion (158°C/168hrs.)	UL 224	Pass
Water absorption	ASTM D 570	<0.5%
Adhesive to aluminum	ASTM D 2671	60N/25mm
Fluid resistance	Tensile strength: 7MPa (min.) Elongation: 300% (min.)	24hrs. at 23°C In diesel and lubricating oil

Product Dimensions

Normal size		As supplied (mm)	After recovered (mm)			Standard length (m)	Standard length (m/spool)
(mm)	(inch)	Inside diameter (Min.)	Inside diameter (Max.)	Total wall thickness (Min.)	Adhesive thickness (Nom.)		

H-5(3X)-F 3:1 Adhesive-lined tubing

3/1	1/8	3.0	1.0	1.00	0.5	1.22	200
4.8/1.5	3/16	4.8	1.5	1.00	0.5	1.22	100
6/2	1/4	6.0	2.0	1.00	0.5	1.22	100
9/3	3/8	9.0	3.0	1.40	0.6	1.22	50
12/4	1/2	12.0	4.0	1.60	0.8	1.22	25
19/6	3/4	19.0	6.0	2.15	0.8	1.22	25
24/8	1	24.0	8.0	2.40	1.0	1.22	25
40/13	1 1/2	40.0	13.0	2.40	1.0	1.22	25

H-5(4X)-F 4:1 Adhesive-lined tubing

4/1	3/16	4.0	1.0	1.00	0.5	1.22	100
8/2	5/16	8.0	2.0	1.00	0.5	1.22	50
12/3	1/2	12.0	3.0	1.40	0.6	1.22	25
16/4	5/8	16.0	4.0	1.60	0.8	1.22	25
24/6	1	24.0	6.0	2.15	0.8	1.22	25
32/8	1 1/4	32.0	8.0	2.40	1.0	1.22	25
52/13	2	52.0	13.0	2.40	1.0	1.22	—

- Special size, cutting pieces are available on request.

Section C

Medium & Heavy Wall Tubing



FUZHOU CANWELL IMPORT & EXPORT CO., LTD.

Medium Wall Tubing

HR2

MEDIUM WALL HEAT SHRINKABLE TUBING WITHOUT HOT MELTING ADHESIVE

Features/Applications

HR2 is semi-rigid medium wall heat shrinkable tubing without hot melt adhesive, having properties of excellent insulating and resistant to impact and abrasion, Designed for applications to protect electrical cable splices, terminations and joints where electrical insulation is 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
Operating temperature	IEC 216	-55°C to +110°C
Tensile strength	ASTM D 2671	≥ 14MPa
Tensile strength after aging (150°C/168hrs.)	ASTM D 2671	≥ 12MPa
Elongation at break	ASTM D 2671	≥ 400%
Elongation at break after aging (150°C/168hrs.)	ASTM D 2671	≥ 300%
Density	ASTM D 792	1.05g/cm ³
Longitudinal shrinkage	UL 224	0 to -10%
Dielectric strength	IEC 243	≥ 20kV/mm
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Eccentricity	ASTM D 2671	< 30%
Copper stability	ASTM D 2671	Pass
Resistance to stress cracking (50°C)	ASTM D 1693	No cracking
Water absorption (23°C/14days)	ISO 62	< 0.15%

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
HR2 8/2	8	2	1.7	—	30m/spool
HR2 12/3	12	3	2.0	—	30m/spool
HR2 16/5	16	5	2.2	—	30m/spool
HR2 22/6	22	6	2.2	O	1000-1500mm
HR2 33/8	33	8	2.5	O	1000-1500mm
HR2 40/12	40	12	2.5	O	1000-1500mm
HR2 55/16	55	16	2.7	O	1000-1500mm
HR2 65/19	65	19	2.8	O	1000-1500mm
HR2 75/22	75	22	3.0	O	1000-1500mm
HR2 85/25	85	25	3.0	O	1000-1500mm
HR2 95/25	95	25	3.0	O	1000-1500mm
HR2 115/34	115	34	3.0	O	1000-1500mm
HR2 140/42	140	42	3.0	—	1000-1500mm
HR2 160/50	160	50	3.0	—	1000-1500mm
HR2 180/58	180	58	3.0	—	1000-1500mm
HR2 205/65	205	65	3.0	—	1000-1500mm
HR2 235/65	235	65	3.0	—	1000-1500mm
HR2 265/75	265	75	3.0	—	1000-1500mm
HR2 300/85	300	85	3.0	—	1000-1500mm
HR2 350/100	350	100	3.0	—	1000-1500mm

- Cutting pieces are available on request.
- Tube shape: "O" : Round or Oval, "—" : Flat

Medium Wall Tubing

HRA2

MEDIUM WALL HEAT SHRINKABLE TUBING WITH HOT MELTING ADHESIVE

Features/Applications

HRA2 is medium wall heat shrinkable tubing with hot melt adhesive, having properties of excellent insulating, environmental sealing, and resistant to impact and abrasion. It is designed for applications to seal and 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
Operating temperature	IEC 216	-55°C to +110°C
Tensile strength	ASTM D 2671	≥ 14MPa
Tensile strength after aging (150°C/168hrs.)	ASTM D 2671	≥ 12MPa
Elongation at break	ASTM D 2671	≥ 400%
Elongation at break after aging (150°C/168hrs.)	ASTM D 2671	≥ 300%
Density	ASTM D 792	1.05g/cm ³
Longitudinal shrinkage	UL 224	0 to -10%
Dielectric strength	IEC 243	≥ 20kV/mm
Volume resistance	IEC 93	> 10 ¹⁴ Ω.cm
Eccentricity	ASTM D 2671	< 30%
Copper stability	ASTM D 2671	Pass
Resistance to stress cracking (50°C)	ASTM D 1693	No cracking
Water absorption (23°C/14days)	ISO 62	< 0.15%

Thermoplastic Adhesive

Property	Test Method	Typical Data
Water absorption	ISO 62	< 0.2%
Softening point	ASTM D E28	85°C
Peel strength (PE)	DIN 30672	4N/cm
Copper stability	ASTM D 2671	Non-corrosive
Resistance to fungus and decay	ISO 846	Pass

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
HRA2 8/2	8	2	1.7	O	1000-1500mm
HRA2 12/3	12	3	2.0	O	1000-1500mm
HRA2 16/5	16	5	2.2	O	1000-1500mm
HRA2 19/5	19	5	2.5	O	1000-1500mm
HRA2 22/6	22	6	2.5	O	1000-1500mm
HRA2 28/6	28	6	2.5	O	1000-1500mm
HRA2 33/8	33	8	2.5	O	1000-1500mm
HRA2 40/12	40	12	2.5	O	1000-1500mm
HRA2 55/16	55	16	2.7	O	1000-1500mm
HRA2 65/19	65	19	2.8	O	1000-1500mm
HRA2 75/22	75	22	3.0	O	1000-1500mm
HRA2 85/25	85	25	3.0	O	1000-1500mm
HRA2 95/25	95	25	3.0	O	1000-1500mm
HRA2 115/34	115	34	3.0	O	1000-1500mm
HRA2 140/42	140	42	3.0	O	1000-1500mm
HRA2 160/50	160	50	3.0	O	1000-1500mm
HRA2 180/58	180	58	3.0	O	1000-1500mm
HRA2 205/65	205	65	3.0	O	1000-1500mm
HRA2 235/65	235	65	3.0	O	1000-1500mm
HRA2 265/75	265	75	3.0	O	1000-1500mm
HRA2 300/85	300	85	3.0	O	1000-1500mm
HRA2 350/100	350	100	3.0	O	1000-1220mm

- Cutting pieces are available on request.
- Tube shape: "O" : Round or Oval, "—" : Flat

Medium Wall Tubing

HB2

MEDIUM WALL HEAT SHRINKABLE TUBING

Features/Applications

HB2 is semi-flexible medium wall heat shrinkable tubing with continuous length and without hot melt adhesive. Designed for applications to seal and protect 1kV power cable terminations and joints.

- Continuous length
- Minimum fully recovery temperature: 120°C
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +110°C
Tensile strength	ASTM D 2671	≥ 14MPa
Tensile strength after aging (150°C/168hrs.)	ASTM D 2671	≥ 14MPa
Elongation at break	ASTM D 2671	≥ 400%
Elongation at break after aging (150°C/168hrs.)	ASTM D 2671	≥ 300%
Density	ASTM D 792	1.05g/cm ³
Longitudinal shrinkage	UL 224	0 to -10%
Dielectric strength	IEC 243	≥ 20kV/mm
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Eccentricity	ASTM D 2671	<30%
Copper stability	ASTM D 2671	Pass
Resistance to stress cracking (50°C)	ASTM D 1693	No cracking
Water absorption (23°C/14days)	ISO 62	<0.15%

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
HB2 8/2	8	2	1.8	—	30m/spool
HB2 12/3	12	3	1.8	—	30m/spool
HB2 16/5	16	5	2.2	—	30m/spool
HB2 22/7	22	7	2.4	—	30m/spool
HB2 25/8	25	8	2.4	—	30m/spool
HB2 33/10	33	10	2.8	—	30m/spool
HB2 40/13	40	13	2.8	—	30m/spool
HB2 48/16	48	16	2.8	—	30m/spool
HB2 55/19	55	19	2.8	—	30m/spool

● Tube shape: "O" : Round or Oval, "—" : Flat

Heavy Wall Tubing

HR3

HEAVY WALL HEAT SHRINKABLE TUBING WITHOUT HOT MELTING ADHESIVE

Features/Applications

Have properties of excellent insulating, environmental sealing, and resistant to impact and abrasion for applications to seal and protect electrical and communication connections, providing excellent mechanical protection to cable joints and terminations, 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
Operating temperature	IEC 216	-55°C to +110°C
Tensile strength	ASTM D 2671	≥ 14MPa
Tensile strength after aging (150°C/168hrs.)	ASTM D 2671	≥ 12MPa
Elongation at break	ASTM D 2671	≥ 400%
Elongation at break after aging (150°C/168hrs.)	ASTM D 2671	≥ 300%
Density	ASTM D 792	1.05g/cm ³
Longitudinal shrinkage	UL 224	0 to -10%
Dielectric strength	IEC 243	≥ 20kV/mm
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Eccentricity	ASTM D 2671	<30%
Copper stability	ASTM D 2671	Pass
Resistance to stress cracking (50°C)	ASTM D 1693	No cracking
Water absorption (23°C/14days)	ISO 62	<0.15%

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
HR3 9/3	9	3	1.8	○	1000-1500mm
HR3 13/4	13	4	2.4	○	1000-1500mm
HR3 22/6	22	6	2.7	○	1000-1500mm
HR3 33/8	33	8	3.2	○	1000-1500mm
HR3 40/12	40	12	4.1	○	1000-1500mm
HR3 45/12	45	12	4.1	○	1000-1500mm
HR3 55/16	55	16	4.1	○	1000-1500mm
HR3 75/22	75	22	4.1	○	1000-1500mm
HR3 85/25	85	25	4.3	○	1000-1500mm
HR3 95/30	95	30	4.3	○	1000-1500mm
HR3 105/30	105	30	4.3	○	1000-1500mm
HR3 130/36	130	36	4.3	—	1000-1500mm
HR3 160/50	160	50	4.3	—	1000-1500mm
HR3 180/50	180	50	4.3	—	1000-1500mm
HR3 200/60	200	60	4.3	—	1000-1500mm

- Cutting pieces are available on request.
- Tube shape: "○": Round or Oval, "—" : Flat

Heavy Wall Tubing

HRA3

HEAVY WALL HEAT SHRINKABLE TUBING WITH HOT MELTING ADHESIVE

Features/Applications

Have properties of excellent insulating, environmental sealing, and resistant to impact and abrasion for applications to seal and protect electrical and communication connections, providing excellent mechanical protection to cable joints and terminations, 3:1 shrink ratio allows it easily fit over irregular shape and large connectors.

HRA3 is recommended to apply for light cable and wire harnesses, where requiring waterproofing, protection of connector components, and thus encapsulates 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



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +110°C
Tensile strength	ASTM D 2671	≥ 14MPa
Tensile strength after aging (150°C/168hrs.)	ASTM D 2671	≥ 12MPa
Elongation at break	ASTM D 2671	≥ 400%
Elongation at break after aging (150°C/168hrs.)	ASTM D 2671	≥ 300%
Density	ASTM D 792	1.05g/cm ³
Longitudinal shrinkage	UL 224	0 to -10%
Dielectric strength	IEC 243	≥ 20kV/mm
Volume resistance	IEC 93	> 10 ¹⁴ Ω.cm
Eccentricity	ASTM D 2671	<30%
Copper stability	ASTM D 2671	Pass
Resistance to stress cracking (50°C)	ASTM D 1693	No cracking
Water absorption (23°C/14days)	ISO 62	<0.15%

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
HRA3 9/3	9	3	1.8	○	1000-1500mm
HRA3 13/4	13	4	2.4	○	1000-1500mm
HRA3 22/6	22	6	2.7	○	1000-1500mm
HRA3 33/8	33	8	3.2	○	1000-1500mm
HRA3 40/12	40	12	4.1	○	1000-1500mm
HRA3 45/12	45	12	4.1	○	1000-1500mm
HRA3 55/16	55	16	4.1	○	1000-1500mm
HRA3 75/22	75	22	4.1	○	1000-1500mm
HRA3 85/25	85	25	4.3	○	1000-1500mm
HRA3 95/30	95	30	4.3	○	1000-1500mm
HRA3 105/30	105	30	4.3	○	1000-1500mm
HRA3 130/36	130	36	4.3	—	1000-1500mm
HRA3 160/50	160	50	4.3	—	1000-1500mm
HRA3 180/50	180	50	4.3	—	1000-1500mm
HRA3 200/60	200	60	4.3	—	1000-1500mm

- Special size, cutting pieces are available on request.
- Tube shape: "○" : Round or Oval, "—" : Flat

Thermoplastic Adhesive

Property	Test Method	Typical Data
Water absorption	ISO 62	<0.2%
Softening point	ASTM D E28	85°C
Peel strength (PE)	DIN 30672	4 N/cm
Copper stability	ASTM D 2671	Non-corrosive
Resistance to fungus and decay	ISO 846	Pass

Medium Wall Tubing

HFRA2

FLAME RETARDANT MEDIUM WALL TUBING WITH HOT MELTING ADHESIVE

Features/Applications

HFRA2 is made from radiation crosslinked flame retardant polyolefin and lined with hot melt adhesive. Suitable for protecting electrical splices, cable terminations and joints where flame retardant, electrical insulation and water proof are required.

- Flame retardant
- Operating temperature: -55℃ to +110℃
- Shrink temperature: 120℃
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	≥ 14MPa
Tensile strength after aging (158℃/168hrs.)	ASTM D 2671	≥ 12MPa
Longitudinal change after shrinking	ASTM D 2671	0 to -10%
Elongation at break	ASTM D 2671	≥ 300%
Elongation at break after aging (120℃/168hrs.)	ASTM D 2671	≥ 200%
Dielectric strength	IEC 243	≥ 20kV/mm
Heat shock (225℃/4hrs.)	ASTM D 2671	No cracking or flowing
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Flammability	SAE-AMS-DTL-23053/5	Self extinguish in 30sec.

Thermoplastic Adhesive

Property	Test Method	Typical Data
Water absorption	ISO 62	<0.2%
Softening point	ASTM D E28	85℃
Peel strength (PE)	DIN 30672	4N/cm
Copper stability	ASTM D 2671	Non-corrosive
Resistance to fungus and decay	ISO 846	Pass

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
HFRA2 22/6	22	6	2.5	○	1000-1500mm
HFRA2 33/8	33	8	2.5	○	1000-1500mm
HFRA2 40/12	40	12	2.5	○	1000-1500mm
HFRA2 55/16	55	16	2.7	○	1000-1500mm
HFRA2 65/19	65	19	2.8	○	1000-1500mm
HFRA2 75/22	75	22	3.0	○	1000-1500mm
HFRA2 95/25	95	25	3.0	○	1000-1500mm
HFRA2 115/34	115	34	3.0	○	1000-1500mm
HFRA2 140/42	140	42	3.0	○	1000-1500mm
HFRA2 160/50	160	50	3.0	○	1000-1500mm
HFRA2 180/58	180	58	3.0	○	1000-1500mm
HFRA2 200/65	200	65	3.0	○	1000-1500mm
HFRA2 235/65	235	65	3.0	○	1000-1500mm
HFRA2 265/75	265	75	3.0	○	1000-1500mm
HFRA2 300/85	300	85	3.0	○	1000-1500mm

● Tube shape: "○" : Round or Oval, "—" : Flat

Heavy Wall Tubing

HFRA3

FLAME RETARDANT HEAVY WALL TUBING WITH HOT MELTING ADHESIVE

Features/Applications

HFRA3 is made from radiation crosslinked polyolefin with hot melt Adhesive. Suitable for protecting electrical splices, cable terminations and joints where flame retardant and electrical insulation and water proof are required .

- Flame retardant
- Operating temperature: -55℃ to +110℃
- Shrink temperature: 120℃
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	≥ 14MPa
Tensile strength after aging (158℃/168hrs.)	ASTM D 2671	≥ 12MPa
Longitudinal change after shrinking	ASTM D 2671	0 to -10%
Elongation at break	ASTM D 2671	≥ 300%
Elongation at break after aging (120℃/168hrs.)	ASTM D 2671	≥ 200%
Dielectric strength	IEC 243	≥ 20kV/mm
Heat shock (225℃/4hrs.)	ASTM D 2671	No cracking or flowing
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Flammability	SAE-AMS-DTL-23053/5	Self extinguish in 30sec.

Thermoplastic Adhesive

Property	Test Method	Typical Data
Water absorption	ISO 62	<0.2%
Softening point	ASTM D E28	85℃
Peel strength (PE)	DIN 30672	4N/cm
Copper stability	ASTM D 2671	Non-corrosive
Resistance to fungus and decay	ISO 846	Pass

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
HFRA3 9/3	9	3	2.0	○	1000-1500mm
HFRA3 13/4	13	4	2.5	○	1000-1500mm
HFRA3 22/6	22	6	2.7	○	1000-1500mm
HFRA3 33/8	33	8	3.2	○	1000-1500mm
HFRA3 40/12	40	12	4.1	○	1000-1500mm
HFRA3 55/16	55	16	4.1	○	1000-1500mm
HFRA3 75/22	75	22	4.1	○	1000-1500mm
HFRA3 95/29	95	29	4.1	○	1000-1500mm
HFRA3 115/34	115	34	4.3	○	1000-1500mm
HFRA3 130/36	130	36	4.3	○	1000-1500mm

● Tube shape: "○" : Round or Oval, "—" : Flat

Heavy Wall Tubing

HRA5

HEAVY WALL HEAT SHRINKABLE TUBING WITH HOT MELTING ADHESIVE

Features/Applications

HRA5 is semi-rigid heavy wall tubing with hot melt adhesive. Suitable for protecting electrical splices, cable terminations and joints where electrical insulation and water proof are required.

- Wall thickness up to 5.5mm
- Operating temperature: -55°C to +110°C
- Shrink temperature: 120°C
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +110°C
Tensile strength	ASTM D 2671	≥ 14MPa
Tensile strength after aging (158°C/168hrs.)	ASTM D 2671	≥ 12MPa
Longitudinal shrinkage	UL 224	0 to -10%
Elongation at break	ASTM D 2671	≥ 400%
Elongation at break after aging (150°C/168hrs.)	ASTM D 2671	≥ 300%
Density	ASTM D 792	1.05g/cm ³
Dielectric strength	IEC 243	≥ 20kV/mm
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Eccentricity	ASTM D 2671	< 30%
Copper stability	ASTM D 2671	Pass
Resistance to stress cracking (50°C)	ASTM D 1693	No cracking
Water absorptio (23°C/14days)	ISO 62	< 0.15%

Thermoplastic Adhesive

Property	Test Method	Typical Data
Water absorption	ISO 62	< 0.2%
Softening point	ASTM D E28	85°C
Peel strength (PE)	DIN 30672	4N/cm
Copper stability	ASTM D 2671	Non-corrosive
Resistance to fungus and decay	ISO 846	Pass

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
HRA5 35/8	35	8	4.5	O	1220mm
HRA5 45/12	45	12	4.5	O	1220mm
HRA5 55/16	55	16	4.5	O	1220mm
HRA5 75/22	75	22	4.5	O	1220mm
HRA5 95/29	95	29	4.5	O	1220mm
HRA5 105/30	105	30	4.5	O	1220mm
HRA5 115/34	115	34	4.5	O	1220mm
HRA5 130/36	130	36	4.5	O	1220mm
HRA5 140/42	140	42	4.5	O	1220mm
HRA5 160/50	160	50	4.5	O	1220mm

● Tube shape: "O" : Round or Oval, "—" : Flat

Heavy Wall Tubing

HRA-6X

HEAVY WALL HEAT SHRINKABLE TUBING
6:1 VERY HIGH SHRINK RATIO

Features/Applications

Ideal for applications to extremely different diameter cables connectors and components. The very high shrink ratio provides closely fit to a wide variety of irregular profile connector and figurations. Provide excellent mechanical protection to cable joints and terminations with complete environmental sealing and resistance to impact and abrasion.

- Shrink ratio: 6:1
- 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
Operating temperature	IEC 216	-55°C to +110°C
Tensile strength	ASTM D 2671	≥ 14MPa
Tensile strength after aging (158°C/168hrs.)	ASTM D 2671	≥ 12MPa
Longitudinal shrinkage	UL 224	0 to -10%
Elongation at break	ASTM D 2671	≥ 400%
Elongation at break after aging (150°C/168hrs.)	ASTM D 2671	≥ 300%
Dielectric strength	IEC 243	≥ 20kV/mm
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Heat shock (225°C/4hrs.)	ASTM D 2671	No cracking or flowing

Thermoplastic Adhesive

Property	Test Method	Typical Data
Water absorption	ISO 62	<0.2%
Softening point	ASTM D E28	85°C
Peel strength (PE)	DIN 30672	4N/cm
Copper stability	ASTM D 2671	Non-corrosive
Resistance to fungus and decay	ISO 846	Pass

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
HRA-6X 19/3.2	19.0	3.2	3.2	○	1000-1220mm
HRA-6X 33/5.5	33.0	5.5	3.4	○	1000-1220mm
HRA-6X 44.4/7.4	44.4	7.4	3.6	○	1000-1220mm
HRA-6X 50.8/8.3	50.8	8.3	4.8	○	1000-1220mm
HRA-6X 69.8/11.7	69.8	11.7	4.8	○	1000-1220mm
HRA-6X 88.9/17.1	88.9	17.1	4.8	○	1000-1220mm
HRA-6X 119.4/22.9	119.4	22.9	4.8	○	1000-1220mm
HRA-6X 235/40	235.0	40.0	4.8	○	1000-1220mm

● Tube shape: "O" : Round or Oval, "—" : Flat

Medium Wall Tubing

HSTV

MEDIUM WALL TUBING FOR CATV NETWORK

Features/Applications

HSTV is adhesive lined heat shrinkable tubing. Designed specially for protecting of splices and connectors in CATV industry. The heat shrinkable jacket provides effective mechanical protection and hot melt adhesive seals against water and moisture.

- Minimum fully recovery temperature: 120°C
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +110°C
Tensile strength	ASTM D 2671	≥ 15MPa
Elongation at break	ASTM D 2671	≥ 600%
Longitudinal Shrinkage	UL 224	0 to -10%
Eccentricity	ASTM D 2671	<30%
Elongation at break after aging (150°C/168hrs.)	ASTM D 2671	>400%
Dielectric strength	IEC 243	≥ 20kV/mm
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Copper stability	ASTM D 2671	Pass
Resistance to stress cracking (50°C)	ASTM D 1693	No cracking
Cold bend test (-55°C/4hrs.)	ASTM D 2671	No cracking

Thermoplastic Adhesive

Property	Test Method	Typical Data
Water absorption	ISO 62	<0.2%
Softening point	ASTM D E28	85°C
Peel strength (PE)	DIN 30672	100N/25mm
Copper stability	ASTM D 2671	Non-corrosive
Resistance to fungus and decay	ISO 846	Pass

Normal size (mm)	As supplied (mm)	After recovered (mm)		Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
HSTV 0400 (10/3.8)	10	3.8	2.0	1220mm
HSTV 0750 (19/5.6)	19	5.6	2.4	1220mm
HSTV 1100 (28/9)	28	9.0	2.4	1220mm
HSTV 1300 (33/10)	33	10.0	2.4	1220mm
HSTV 1500 (38/12)	38	12.0	2.4	1220mm
HSTV 1700 (45/13)	45	13.0	2.4	1220mm
HSTV 2050 (55/19)	55	19.0	2.4	1220mm
HSTV 2750 (70/25)	70	25.0	2.4	1220mm

Medium Wall Tubing

HRS

MEDIUM WALL HEAT SHRINKABLE TUBING WITH BLACK SEALANT MASTIC

Features/Applications

HRS is mastic lined heat shrinkable tubing, designed specially for protecting metal pipe's joint, soil nails and other connectors requiring environmental sealing. The radiation cross-linked jacket provides effective mechanical protection and the mastic layer provides excellent water and moisture proof.

- Resistant to UV-radiation
- High electrical insulation
- Coated with black mastic
- Minimum fully recovery temperature: 120 °C
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-35°C to +110°C
Tensile strength	ASTM D 2671	≥ 14MPa
Elongation at break	ASTM D 2671	≥ 400%
Longitudinal Shrinkage	UL 224	0 to -10%
Eccentricity	ASTM D 2671	< 30%
Elongation at break after aging (150°C/168hrs.)	ASTM D 2671	≥ 300%
Dielectric strength	IEC 243	≥ 20kV/mm
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Copper stability	ASTM D 2671	Pass
Resistance to stress cracking (50°C)	ASTM D 1693	No Cracking
Cold bend test (-55°C/4hrs.)	ASTM D 2671	No Cracking

Thermoplastic Black Sealant Mastic

Property	Test Method	Typical Data
Water absorption	ISO 62	< 0.1%
Softening point	ASTM D E8	80°C
Peel strength to stainless steel	ASTM D 1000	50N/25mm
Copper stability	ASTM D 2671	Non-corrosive
Resistance to fungus and decay	ISO 846	Pass

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
HRS 30/6	30	6	2.5	O	1000-1500mm
HRS 33/8	33	8	2.5	O	1000-1500mm
HRS 40/12	40	12	2.5	O	1000-1500mm
HRS 55/20	55	20	2.0	O	1000-1500mm
HRS 75/25	75	25	2.0	O	1000-1500mm
HRS 95/30	95	30	2.0	O	1000-1500mm
HRS 120/40	120	40	2.0	O	1000-1500mm
HRS 140/50	140	50	2.3	O	1000-1500mm
HRS 160/50	160	50	2.3	O	1000-1500mm
HRS 180/66	180	66	2.5	O	1000-1500mm
HRS 205/66	205	66	2.5	O	1000-1500mm
HRS 235/70	235	70	2.5	O	1000-1500mm
HRS 265/75	265	75	3.0	O	1000-1500mm
HRS 300/85	300	85	3.0	O	1000-1500mm
HRS 350/100	350	100	3.0	O	1000-1220mm

● Tube shape: "O" : Round or Oval, "—" : Flat

Medium Wall Tubing

HFR5X

5.6:1 FLAME RETARDANT HEAT SHRINKABLE TUBING

Features/Applications

HFR5X tubing manufactured with special technology with shrink ratio as high as 5.6:1. Suitable to fit components with large size differences.

- Meet: UL 224 VW-I 125°C 600V
SAE-AMS-DTL-23053/15
- Meet: RoHS, Sony-SS-00259
- Shrink ratio: 5.6:1
- Flame retardant
- Resistant to common fluids and solvents
- Operating temperature: -55°C to +135°C
- Minimum fully recovery temperature: 130°C
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	16MPa
Elongation at break	ASTM D 2671	500%
Tensile strength after aging (175°C/168hrs.)	ASTM D 2671	14MPa
Elongation after aging (175°C/168hrs.)	ASTM D 2671	250%
Flammability	Self-extinguish in 30sec.	Pass
Heat shock (250°C/4hrs.)	ASTM D 2671	No cracking
Cold bend test (-55°C/4hrs.)	ASTM D 2671	No cracking
Dielectric strength	ASTM D 150	20kV/mm
Volume resistance	ASTM D 876	10 ¹⁴ Ω.cm
Copper corrosion	UL 224	Pass
Water absorption	ASTM D 570	0.15%
Chemical resistance	SAE-AMS-DTL-23053/5	Pass
Longitudinal shrinkage	UL 224	0±5%
Eccentricity	UL 224	30%

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)	
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness
HFR5X 15/4	15	3.8	1.52
HFR5X 32/6	32	5.6	1.52
HFR5X 45/8	45	8.0	2.40
HFR5X 51/10	51	9.5	2.70

Section D

Medium Voltage Tubing & Tape



FUZHOU CANWELL IMPORT & EXPORT CO., LTD.

Medium Voltage Tubing

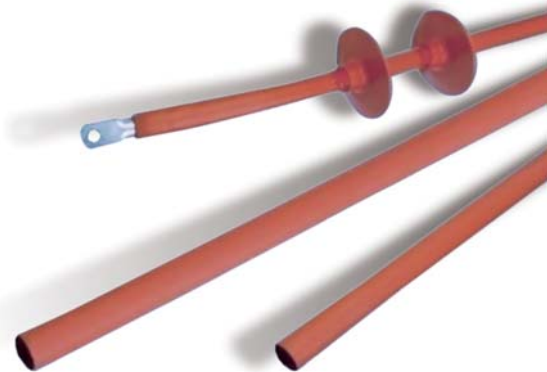
HAT

ANTI TRACKING INSULATION HEAT SHRINKABLE TUBING

Features/Applications

Made from specially formulated radiation cross-linked polyolefin compounds. The high creep resistance and anti-tracking properties of the products provide maximum operational reliability. Used to provide insulation protection for cable terminal, load-break switches, power circuit breakers, etc.

- Halogen free
- Tracking resistant
- Minimum fully shrink temperature: 110°C



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	11 MPa
Elongation at break	ASTM D 2671	≥ 400%
Longitudinal shrinkage	ASTM D 2671	0 to -10%
Tensile strength after aging (120°C/168hrs.)	ASTM D 2671	≥ 10 MPa
Elongation at break after aging (120°C/168hrs.)	ASTM D 2671	≥ 350%
Dielectric strength	IEC 243	≥ 15kV/mm
Tracking resistance	ASTM D 2303	3.75kV, 1hr, Pass
Dielectric constant	IEC 250	3.0 (max.)
Volume resistance	ASTM D 2303	≥ 10 ¹³ Ω.cm
Flammability (Oxygen Index)	IEC 93	≥ 25
Copper corrosion (120°C/168hrs.)	ASTM D 2671	No corrosion
Cold bend (-40°C/4hrs.)	ASTM D 2671	No cracking

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
Continuous length tubing					
HAT 19/6	19	6	2.5	—	15m/spool
HAT 30/10	30	10	2.8	—	15m/spool
HAT 35/12	35	12	2.8	—	15m/spool
HAT 40/16	40	16	2.9	—	15m/spool
HAT 45/18	45	18	3.0	—	15m/spool
HAT 54/24	54	24	3.0	—	15m/spool
HAT 60/29	60	29	3.0	—	15m/spool
HAT 76/38	76	38	3.0	—	15m/spool
HAT 100/49	100	49	3.0	—	15m/spool
Cut length tubing					
HAT 35/10	35	10	3.0	○	1000–1500mm
HAT 40/12	40	12	3.0	○	1000–1500mm
HAT 49/16	49	16	3.0	○	1000–1500mm
HAT 55/18	55	18	3.0	○	1000–1500mm
HAT 65/21	65	21	3.3	○	1000–1500mm
HAT 75/25	75	25	3.5	○	1000–1500mm
HAT 85/29	85	29	3.5	○	1000–1500mm
HAT 100/38	100	38	4.0	○	1000–1500mm
HAT 130/50	130	50	4.0	○	1000–1500mm

● Tube shape: "O": Round or Oval, "—": Flat

Medium Voltage Tubing

HBM

HALOGEN FREE BUSBAR INSULATION HEAT SHRINKABLE TUBING

Features/Applications

Made from specially formulated radiation cross-linked halogen free compounds. It can provide high resistance to tracking and arcing, as well as to enhance the insulation properties of bus-bar in switchgear and substation. Suitable for application in insulating medium voltage bus bars, cable terminations and joints from 11kV to 24kV.

- Halogen free
- Minimum fully shrink temperature: 110°C



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	≥ 11.8MPa
Tensile strength after aging (120°C/168hrs.)	ASTM D 2671	≥ 10MPa
Longitudinal shrinkage	ASTM D 2671	0 to -10%
Elongation at break	ASTM D 2671	≥ 700%
Elongation at break after aging (120°C/168hrs.)	ASTM D 2671	≥ 500%
Dielectric strength	IEC 243	≥ 20kV/mm
Volume resistance	IEC 93	≥ 10 ¹³ Ω.cm
Flammability (Oxygen Index)	ASTM D 2863	≥ 25
Water absorption (23°C/14days)	ISO 62	<0.5%

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
Continuous length tubing					
HBM 25/10	25	10	2.0	—	30m/spool
HBM 30/12	30	12	2.0	—	30m/spool
HBM 35/14	35	14	2.0	—	30m/spool
HBM 40/16	40	16	2.0	—	30m/spool
HBM 50/20	50	20	2.0	—	15m/spool
HBM 65/25	65	25	2.0	—	15m/spool
HBM 75/30	75	30	2.0	—	15m/spool
HBM 100/40	100	40	2.0	—	15m/spool
Cut length tubing					
HBM 150/60	150	60	3.0	—	1000mm
HBM 180/70	180	70	3.0	—	1000mm
HBM 205/75	205	75	3.3	—	1000mm
HBM 235/75	235	75	3.3	—	1000mm

● Tube shape: "O" : Round or Oval, "—" : Flat

Medium Voltage Tubing

HBT

MEDIUM WALL HALOGEN FREE BUSBAR INSULATION HEAT SHRINKABLE TUBING

Features/Applications

HBT is medium wall heat shrinkable tubing. Made from specially formulated radiation cross-linked halogen free compounds. It can provide high resistance to tracking and arcing. Used to enhance the insulation properties of bus-bar in switch and substation to adapt to application in insulating medium voltage bus bars up to 11kV, 24kV, 36kV.

- Medium wall
- Halogen free
- Minimum shrink temperature: 110°C



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	≥ 11.8MPa
Tensile strength after aging (120°C/168hrs.)	ASTM D 2671	≥ 10MPa
Longitudinal shrinkage	ASTM D 2671	0 to -10%
Elongation at break	ASTM D 2671	≥ 700%
Elongation at break after aging (120°C/168hrs.)	ASTM D 2671	≥ 500%
Dielectric strength	IEC 243	≥ 20kV/mm
Dielectric constant	IEC 250	3.0 (max.)
Volume resistance	IEC 93	≥ 10 ¹³ Ω.cm
Flammability (Oxygen Index)	IEC 4589	≥ 25
Copper corrosion (120°C/168hrs.)	ASTM D 2671	No corrosion
Cold bend (-40°C/4hrs.)	ASTM D 2671	No cracking
Water absorption (23°C/14days)	ISO 62	<0.5%

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Rectangular Bus Bar (mm)	Round Bus Bar (mm)	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)			

For service to 24kV on unbolted busbar

HBT 18/6	18	6	2.0	6.4	19.0	6.8	15.0	15m/spool
HBT 30/12	30	12	2.3	15.0	30.0	12.7	25.4	15m/spool
HBT 40/16	40	16	2.5	27.0	45.0	17.0	32.0	15m/spool
HBT 50/20	50	20	2.5	32.0	51.0	21.0	40.0	15m/spool
HBT 65/25	65	25	2.5	45.0	75.0	26.0	52.0	15m/spool
HBT 75/30	75	30	2.6	48.0	85.0	31.0	60.0	15m/spool
HBT 100/40	100	40	2.6	73.0	120.0	45.0	80.0	15m/spool
HBT 120/50	120	50	3.0	69.8	111.0	50.0	90.0	15m/spool

● Note: Rectangular busbars have thickness range from 6mm to 16 mm.

Medium Voltage Tubing

HBTH

HEAVY WALL HALOGEN FREE BUSBAR INSULATION HEAT SHRINKABLE TUBING

Features/Applications

HBTH is heavy wall heat shrinkable tubing, made from specially formulated radiation cross-linked halogen free compounds. It can provide high resistance to tracking and arcing and enhance the insulation properties of bus-bar in switch and substation. Suitable for application in insulating medium voltage bus bars up to 36kV.

- Heavy wall
- Halogen free
- Minimum shrink temperature: 110°C



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	≥ 11.8MPa
Tensile strength after aging (120°C/168hrs.)	ASTM D 2671	≥ 10MPa
Longitudinal shrinkage	ASTM D 2671	0 to -10%
Elongation at break	ASTM D 2671	≥ 700%
Elongation at break after aging (120°C/168hrs.)	ASTM D 2671	≥ 500%
Dielectric strength	IEC 243	≥ 20kV/mm
Dielectric constant	IEC 250	3.0 (max.)
Volume resistance	IEC 93	≥ 10 ¹³ Ω.cm
Flammability (Oxygen Index)	IEC 4589	≥ 25
Copper corrosion (120°C/168hrs.)	ASTM D 2671	No corrosion
Cold bend (-40°C/4hrs.)	ASTM D 2671	No cracking
Water absorption (23°C/14days)	ISO 62	<0.5%

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Rectangular Bus Bar (mm)	Round Bus Bar (mm)		Standard length	
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)					
For service to 36kV on unbolted busbar								
HBTH 25/10	25	10	4.0	9.5	12.7	10.6	17.7	15m/spool
HBTH 40/16	40	16	4.0	16.0	25.4	16.0	30.0	15m/spool
HBTH 65/25	65	25	4.0	25.4	34.9	19.3	33.0	1000mm
HBTH 75/25	75	25	4.0	34.9	50.8	26.1	43.1	1000mm
HBTH 95/30	95	30	4.0	50.8	76.2	35.8	58.4	1000mm
HBTH 120/40	120	40	4.2	69.8	111.0	47.7	81.2	1000mm
HBTH 180/58	180	58	4.2	107.9	177.0	69.5	124.0	1000mm

- Note: Rectangular busbars have thickness range from 6mm to 16 mm.

Medium Voltage Tubing

HSCT

SEMI-CONDUCTIVE HEAT SHRINKABLE TUBING

Features/Applications

HSCT is manufactured with radiation cross-linked conductive polyolefin and suitable for application in power cable accessories. Specially developed chemical formulation provides effective insulation screen on the high voltage cable connectors.

- Excellent / Good conductive performance
- Minimum shrink temperature: 100°C
- Minimum fully recovery temperature: 120°C



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-45°C to +105°C
Tensile strength	ASTM D 638	≥ 14MPa
Elongation at break	ASTM D 638	≥ 300%
Water absorption	ISO 62	<0.15%
Elongation at break after aging	150°C/168hrs.	≥ 200%
Volume resistance	IEC 93	≤ 10 ¹² Ω.cm
Longitudinal shrinkage	—	0±5%
Eccentricity	ASTM D 2671	<30%

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
HSCT 33/8	33	8	2.5	○	1000-1500mm
HSCT 40/12	40	12	2.5	○	1000-1500mm
HSCT 55/16	55	16	2.5	○	1000-1500mm
HSCT 75/22	75	22	2.5	○	1000-1500mm
HSCT 95/25	95	25	2.7	○	1000-1500mm
HSCT 120/34	120	34	3.0	○	1000-1500mm
HSCT 140/42	140	42	3.0	○	1000-1500mm
HSCT 180/58	180	58	3.0	○	1000-1500mm

● Tube shape: "○" : Round or Oval, "—" : Flat

Medium Voltage Tubing

HSC-100

STRESS CONTROL HEAT SHRINKABLE TUBING FOR 11-24 kV JOINTS AND TERMINATIONS

Features/Applications

HSC-100 is made from radiation cross-linked polyolefin material. The specially designed chemical formulation and carefully controlled manufacture technology effectively release the high electrical stress present at insulation screen in termination and joint of power cables from 11kV to 24kV.

- Electric stress relief
- Minimum shrink temperature: 100°C
- Minimum fully recovery temperature: 130°C



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 638	≥ 10MPa
Elongation at break	ASTM D 638	≥ 300%
Heat shock (200°C/30mins.)	ES109-13	No splitting, cracking, dropping or flowing
Dielectric constant	IEC 250	≥ 15
Volume resistance	IEC 93	≥ 10 ¹¹ Ω.cm
Low temp. flexibility	—	No cracking after 4hrs. at -20°C (max.)
Water absorption	ISO 62	< 1.0%
Longitudinal shrinkage	—	0±5%
Eccentricity	ASTM D 2671	<35%

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
Continuous length tubing					
HSC-100 16/8	16	8	1.4	—	30m/spool
HSC-100 20/10	20	10	1.5	—	30m/spool
HSC-100 30/12	30	12	2.0	—	30m/spool
HSC-100 35/15	35	15	2.4	—	30m/spool
HSC-100 47/18	47	18	2.5	—	30m/spool
HSC-100 50/20	50	20	2.5	—	30m/spool
HSC-100 54/24	54	24	2.5	—	15m/spool
HSC-100 65/30	65	30	2.5	—	15m/spool
Cut length tubing					
HSC-100 47/18	47	18	2.5	○	1000mm
HSC-100 55/21	55	21	2.5	○	1000mm
HSC-100 65/25	65	25	2.5	○	1000mm
HSC-100 75/30	75	30	2.5	○	1000mm

● Tube shape: "O" : Round or Oval, "—" : Flat

Medium Voltage Tubing

HSC-360

STRESS CONTROL HEAT SHRINKABLE TUBING FOR 36kV JOINTS AND TERMINATIONS

Features/Applications

HSC-360 is made from radiation cross-linked polyolefin material, The specially designed chemical formulation and carefully controlled manufacture technology effectively release the high electrical stress present at insulation joints and terminations of power cables up to 36kV.

- Electric stress relief
- Minimum shrink temperature: 100°C
- Minimum fully recovery temperature: 130°C



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 638	≥ 10MPa
Elongation at break	ASTM D 638	≥ 300%
Heat Shock (200°C/30mins.)	ES109-13	No splitting, cracking, dropping or flowing
Dielectric constant	IEC 250	≥ 30
Volume resistance	IEC 93	≥ 10 ¹⁰ Ω.cm
Low temp. flexibility	—	No cracking after 4hrs. at -20°C (max.)
Water absorption	ISO 62	< 1.0%
Longitudinal shrinkage	—	0±5%
Eccentricity	ASTM D 2671	< 35%

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
Continuous length tubing					
HSC-360 47/18	47	18	2.5	—	30m/spool
Cut length tubing					
HSC-360 55/21	55	21	2.5	○	1000mm
HSC-360 65/25	65	25	2.5	○	1000mm
HSC-360 75/30	75	30	2.5	○	1000mm
HSC-360 95/45	95	45	3.0	○	1000mm

● Tube shape: "O" : Round or Oval, "—" : Flat

Medium Voltage Tape

HBIT

HEAT SHRINKABLE BUSBAR INSULATION TAPE

Features/Applications

HBIT is made from radiation cross-linked polyolefin. The dual layer structure of insulation/hot melt adhesive effectively provides electric insulation and shock protection to busbar up to 24kV. Widely used to protect irregular shape busbar or connectors where tube products can not be applied.

- Very flexible and easy installation
- Meltable inner layer
- Easily remove the tape upon inspection and maintenances
- Shrink ratio: 30%
- Operating temperature: -55℃ to +105℃
- Minimum fully recovery temperature: 100℃
- Standard color: Red



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	$\geq 11.8\text{MPa}$
Tensile strength after aging (120°C/168hrs.)	ASTM D 2671	$\geq 10\text{MPa}$
Elongation at break	ASTM D 2671	$\geq 550\%$
Elongation at break after aging (120°C/168hrs.)	ASTM D 2671	$\geq 450\%$
Dielectric strength	IEC 243	$\geq 20\text{kV/mm}$
Volume resistance	IEC 93	$\geq 10^{13}\Omega\cdot\text{cm}$
Volume constant	IEC 250	3.5 (max.)
Copper corrosion (120°C/168hrs.)	ASTM D 2671	No corrosion
Water absorption (23°C/14days)	ISO 62	<0.5%
Flammability	ASTM D 2671	Self-extinguish in 60sec.

Product Dimensions

Order Ref. Number	As supplied (mm)	After recovered (mm)	Standard length
	Width (Nom.)	Wall thickness	
HBIT-1	25	1.0 ± 0.1	10m, 30m
HBIT-2	50	1.0 ± 0.1	10m, 30m
HBIT-4	100	1.0 ± 0.1	10m, 30m

Medium Voltage Tubing

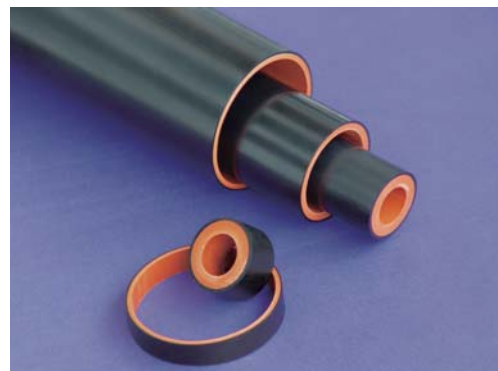
HDWT

SEMI-CONDUCTING/INSULATION DOUBLE LAYER HEAT SHRINKABLE TUBING

Features/Applications

HDWT is dual wall heat shrinkable tubing which inner layer is made from insulation material to provide high insulation and external layer is made from semi-conductive materials to provide electric shielding. The tubing manufactured with special technology, is very suitable for applications in power cable joints up to 36kV.

- Two layer
- Minimum shrink temperature: 100°C
- Minimum fully recovery temperature: 130°C



Technical Data

Property	Test Method	Typical Data
Inner layer		
Tensile strength	ASTM D 2671	≥ 12MPa
Elongation at break	ASTM D 2671	≥ 300%
Water absorption	ISO 62	<0.5%
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Dielectric strength	IEC 243	≥ 20kV/mm
Density	ASTM D 257-98	1.1g/cm ³
External layer		
Tensile strength	ASTM D 638	≥ 14MPa
Elongation at break	ASTM D 638	≥ 300%
Water absorption	ISO 62	<0.5%
Volume resistance	IEC 93	< 10 ⁹ Ω.cm
Density	ASTM D 257-98	1.2g/cm ³

Product Dimensions

Normal size (mm)	As supplied(mm)	After recovered (mm)		Inner insulation layer wall thickness (mm)	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Total wall thickness (Nom.)		
HDWT 36/12	36	12	6.0	5.0	1000-1220mm
HDWT 45/15	45	15	6.0	5.0	1000-1220mm
HDWT 55/18	55	18	6.0	5.0	1000-1220mm
HDWT 62/18	62	18	6.5	5.5	1000-1220mm
HDWT 65/22	65	22	6.6	5.6	1000-1220mm
HDWT 73/26	73	26	6.6	5.6	1000-1220mm
HDWT 85/30	85	30	6.5	5.6	1000-1220mm
HDWT 100/38	100	38	6.6	5.6	1000-1220mm
HDWT 120/45	120	45	7.0	5.7	1000-1220mm
HDWT 140/50	140	50	7.0	5.7	1000-1220mm

Medium Voltage Tubing

HEDT

SEMI-CONDUCTING/ELASTOMERIC INSULATION DOUBLE LAYER HEAT SHRINKABLE TUBING

Features/Applications

HEDT is dual wall heat shrinkable tubing. Its inner layer is made from elastomeric insulation material to provide high insulation and the external layer is made from semi-conductive materials to provide electric shielding. The tubing manufactured with special technology, is suitable for applications in power cable joints from 11kV to 36kV.

- Two layer
- Inner layer made from elastomer
- Minimum shrink temperature: 110°C
- Minimum fully recovery temperature: 130°C



Technical Data

Property	Test Method	Typical Data
Inner layer		
Tensile strength	ASTM D 2671	≥ 5MPa
Elongation at break	ASTM D 2671	≥ 800%
Water absorption	ISO 62	<0.5%
Volume resistance	IEC 93	≥ 10 ¹⁵ Ω.cm
Dielectric strength	IEC 243	≥ 28kV/mm
Density	ASTM D 257-98	1.0g/cm ³
External layer		
Tensile strength	ASTM D 638	≥ 14MPa
Elongation at break	ASTM D 638	≥ 300%
Water absorption	ISO 62	<0.5%
Volume resistance	IEC 93	< 10 ¹⁵ Ω.cm
Density	ASTM D 257-98	1.2g/cm ³

Product Dimensions

Normal size (mm)	As supplied(mm)	After recovered (mm)			Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Total wall thickness (Nom.)	Inner insulation layer wall thickness (mm)	
HEDT 37/13	37	13	11.0	8	1000-1220mm
HEDT 46/17	46	17	12.0	9	1000-1220mm
HEDT 56/21	54	21	13.5	10	1000-1220mm
HEDT 66/26	66	26	13.5	10	1000-1220mm
HEDT 82/26	82	26	13.5	10	1000-1220mm
HEDT 78/34	78	34	13.5	10	1000-1220mm
HEDT 88/34	88	34	13.5	10	1000-1220mm
HEDT 95/42	95	42	13.5	10	1000-1220mm
HEDT 115/53	115	53	13.5	10	1000-1220mm
HEDT 125/62	125	62	14.0	10	1000-1220mm

Medium Voltage Tubing

HGT

HIGH INSULATION HEAT SHRINKABLE TUBING

Features/Applications

HGT is made from radiation cross-linked polyolefin, Designed for applications to seal and protect power cable joints from 11kV to 36kV.

- Minimum shrink temperature: 90°C
- Minimum fully recovery temperature: 110°C



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-40°C to +110°C
Tensile strength	ASTM D 2671	≥ 12MPa
Elongation at break	ASTM D 2671	≥ 300%
Density	ASTM D 792	1.0g/cm ³
Longitudinal shrinkage	UL 224	0 to -10%
Dielectric strength	IEC 243	≥ 20kV/mm
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Dielectric constant	IEC 250	3.0 (max.)
Water absorption (23°C/14days)	ISO 62	<0.5%

Product Dimensions

Normal size (mm)	As supplied (mm)	After recovered (mm)		Tube shape	Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)		
HGT 35/12	35	12	3.2	O	1000-1220mm
HGT 45/14	45	14	3.5	O	1000-1220mm
HGT 52/15	52	15	4.0	O	1000-1220mm
HGT 55/18	55	18	4.0	O	1000-1220mm
HGT 62/18	62	18	4.0	O	1000-1220mm
HGT 66/18	66	18	4.0	O	1000-1220mm
HGT 66/20	66	20	4.4	O	1000-1220mm
HGT 75/25	75	25	5.0	O	1000-1220mm
HGT 85/25	85	25	5.0	O	1000-1220mm
HGT 95/30	95	30	5.0	O	1000-1220mm

● Tube shape: "O" : Round or Oval, "—" : Flat

Medium Voltage Tubing

HOT

OIL RESISTANT HEAT SHRINKABLE TUBING

Features/Applications

HOT is manufactured with radiation cross-linked oil resistant polyolefin, and suitable for application in power cable terminations and joints up to 36kV.

- Oil resistant
- Minimum shrink temperature: 100°C
- Minimum fully recovery temperature: 130°C



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-40°C to +110°C
Tensile strength	ASTMD 2671	≥ 13MPa
Elongation at break	ASTMD 2671	≥ 400%
Longitudinal shrinkage	UL 224	0 to -10%
Dielectric strength	IEC 243	≥ 20kV/mm
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Water absorption (23°C/14days)	ISO 62	<0.5%
Oil resistance	—	Pass

Product Dimensions

Number size (mm)	As supplied (mm)	After recovered (mm)		Standard length
	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Min.)	
HOT 19/6	19	6	2.0	30m/spool
HOT 25/10	25	10	2.0	30m/spool
HOT 30/12	30	12	2.0	30m/spool
HOT 35/14	35	14	2.5	30m/spool
HOT 40/16	40	16	2.5	30m/spool
HOT 50/20	50	20	2.5	15m/spool
HOT 65/25	65	25	3.0	15m/spool
HOT 85/35	85	35	3.0	15m/spool

Section E

Moulded Parts



FUZHOU CANWELL IMPORT & EXPORT CO., LTD.

Moulded Parts

HSEC

HEAT SHRINKABLE CALBE END CAPS WITH SPIRAL ADHESIVE COATING

Features/Applications

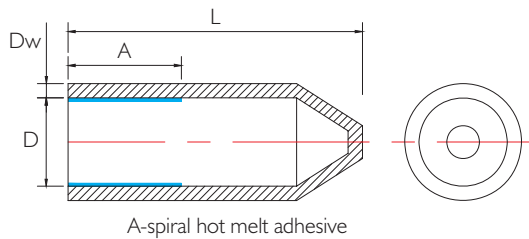
HSEC offers an economical means of sealing the end of power cable with a completely watertight seal. The internal surface of the end cap has a layer of spiral coated hot melt adhesive, which retains its flexible properties after recovery. HSEC is recommended for application both in open air and on underground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

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



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +110°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°C/168hrs.	> 300%
Dielectric strength	IEC 243	> 15kV/mm
Volume resistance	IEC 93	> 10 ¹⁴ Ω.cm



Product Dimensions

Order Ref. Number	As supplied(mm)	After recovered (mm)				Cable diameter (mm)
	D(Min)	D(Max.)	A(±10%)	L(±10%)	Dw(±5%)	

Standard length end caps

HSEC105-12/4	12	4.0	15	40	2.6	4-10
HSEC110-14/5	14	5.0	18	45	2.2	5-12
HSEC115-20/6	20	6.0	25	55	2.8	6-16
HSEC120-25/8.5	25	8.5	30	68	2.8	10-20
HSEC130-35/16	35	16.0	35	83	3.3	17-30
HSEC135-40/15	40	15.0	40	83	3.3	18-32
HSEC140-55/26	55	26.0	50	103	3.5	28-48
HSEC150-75/36	75	36.0	55	120	4.0	45-68
HSEC160-100/52	100	52.0	70	140	4.0	55-90
HSEC170-120/60	120	60.0	70	150	4.0	65-110
HSEC180-145/60	145	60.0	70	150	4.0	70-130
HSEC190-160/82	160	82.0	70	150	4.0	90-150
HSEC200-200/90	200	90.0	70	160	4.2	100-180

Extended length end cap

HSEC110L-14/5	14	5.0	30	55	2.2	5-12
HSEC130L-42/15	42	15.0	40	110	3.3	18-34
HSEC140L-55/23	55	23.0	70	140	3.8	25-48
HSEC145L-62/23	62	23.0	70	140	3.8	25-55
HSEC150L-75/32	75	32.0	70	150	4.0	40-68
HSEC150XL-75/36	75	36.0	70	170	4.2	45-68
HSEC160L-105/45	105	45.0	65	150	4.0	50-90

• End cap with valve is available on request.

Moulded Parts

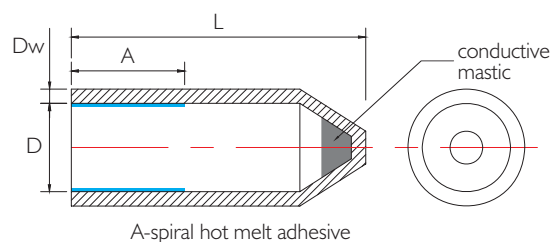
HCEC

CONDUCTIVE CALBE END CAPS WITH CONDUCTIVE MASTIC

Features/Applications

HCEC offers an economical means of sealing the end of power cable with a perfect 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. HSEC is recommended for applications both in open air and underground power distribution cables with PVC ,lead or XLPE sheaths.

- Effectively offering protection against oxidation, ozone, UV radiation etc.
- Coated with conductive mastic to ensure environment seal
- Easily to fit into the cable end
- Minimum fully shrink temperature: 120°C



Technical Data

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

Product Dimensions

Order Ref. Number	As supplied (mm)	After recovered (mm)				Conductive mastic weight	Cable diameter (mm)
	D (Min.)	D (Max.)	A (±10%)	L (±10%)	Dw(±5%)		
HCEC120-25/8.5	25	8.5	30	68	2.8	6±1g	10-20
HCEC130-42/15	42	15.0	40	110	3.3	10±1g	18-34
HCEC140-55/23	55	23.0	70	140	3.8	20±2g	25-48
HCEC145-62/23	62	23.0	70	140	3.8	25±2g	25-55
HCEC150-75/32	75	32.0	65	150	4.0	30±3g	42-68
HCEC150L-75/36	75	36.0	70	170	4.2	30±3g	45-68
HCEC160-105/45	105	45.0	65	150	4.0	35±4g	50-90

Moulded Parts

HAS

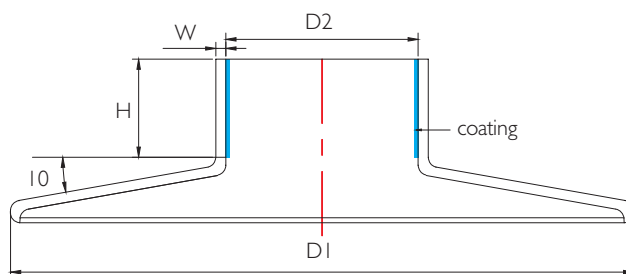
HEAT SHRINKABLE ANTI-TRACKING RAIN SHEDS

SHRINK RATIO 2:1

Features/Applications

Made from high creep resistance, anti-tracking polyolefin compounds and coated with anti-track, weather resistant mastic. The high creep resistance and anti-tracking properties of the products provide maximum operation reliability. Used to provide insulation protection for cable outdoor termination.

- Minimum fully shrink temperature: 110°C



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	≥ 13MPa
Elongation at break	ASTM D 2671	≥ 400%
Tensile strength after aging (120°C/168hrs.)	ASTM D 2671	10.4MPa
Elongation at break after aging (120°C/168hrs.)	ASTM D 2671	350%
Dielectric strength	ASTM D 2671	15kV/mm
Tracking resistance (3.75kV/1hr.)	ASTM D 2303	Pass
Electric constant	IEC 250	3.0
Volume resistance	ASTM D 2303	10 ¹⁴ Ω.cm
Flammability (Oxygen index)	IEC 93	25
Copper corrosion (120°C/168hrs.)	ASTM D 2671	No corrosion
Cold bend (-40°C/4hrs.)	ASTM D 2671	No cracking

Product Dimensions

Order Ref. Number	As supplied (mm)	After recovered (mm)	D1 (Nom.)	H (Min.)	W (± 10%)
	D2 (Min.)	D2 (Max.)			
HAS110-35/12	35	12	95	18	3
HAS120-48/20	48	20	120	21	3
HAS130-60/20	60	20	120	21	3
HAS140-60/30	60	30	140	25	3
HAS150-75/30	75	30	140	25	3
HAS160-100/35	100	35	140	35	3
HAS170-120/45	120	45	200	35	3

Moulded Parts

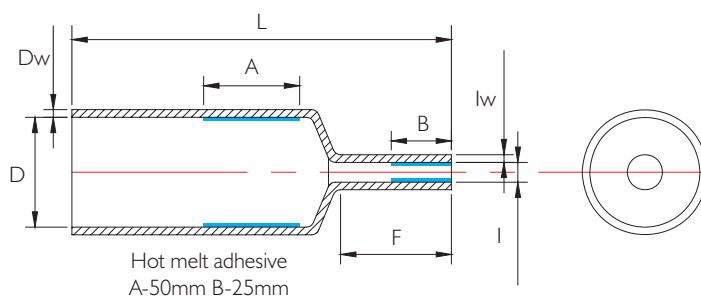
HCFT

HEAT-SHINKABLE CABLE FEED-THROUGHS

Features/Applications

Made from radiation cross-linked polyolefin, suitable for applications in moisture and pressure proof sealing of plastic and metal part. The specially designed structure make it can also be used in sealing vacant cable duct and protecting pipes.

- Applicable for pressure up to 1 bar
- Resistant against chemical and UV
- Easy to install
- Minimum shrink temperature: 110°C



Technical Data

Property	Test Method	Typical Data
Operating 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	$10^{13} \Omega \cdot \text{cm}$
Water absorption	ISO 62	1% (max.)

Product Dimensions

Order Ref. Number	D (mm)		I (mm)		Recovered length $\pm 10\%$		Recovered wall $\pm 10\%$	
	a (Min.)	b (Max.)	a (Min.)	b (Max.)	L (mm)	F (mm)	Dw (mm)	lw (mm)
HCFT 110 (85/42-15/5)	85	42	15	5	130	45	2.5	2.8
HCFT 120 (60/30-45/10)	60	30	45	10	130	45	2.5	4.5
HCFT 130 (100/52-20/8)	100	52	20	8	150	65	3.0	3.0
HCFT 130L (100/50-20/8)	100	50	20	8	210	70	3.0	3.0
HCFT 135 (150/92-14/5)	150	92	14	5	150	55	3.5	3.5
HCFT 140 (160/92-60/20)	160	92	60	20	150	50	3.2	3.0
HCFT 150 (160/92-100/45)	160	92	100	45	150	50	3.5	3.5

- a: as supplied
- b: after recovery

Moulded Parts

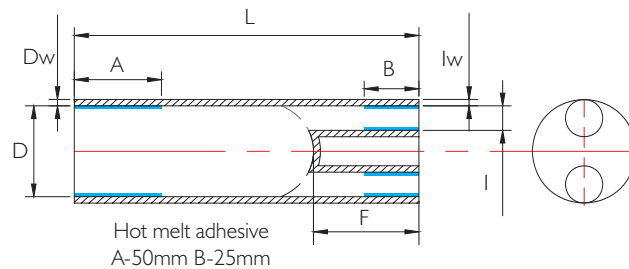
HLB-2Cores

LOW VOLTAGE 2 CORES CABLE BREAKOUT

Features/Applications

Made from radiation cross-linked polyolefin and suitable for applications up to 1kV. The properties of electrically insulating, UV resistant and water proof make HLB2 widely used in electric power industry to provide insulation and sealing 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
Operating 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	$10^{13} \Omega \cdot \text{cm}$ (min.)
Water absorption	ISO 62	1% (max.)

Product Dimensions

Order Ref. Number	D (mm)		I (mm)		Recovered length $\pm 10\%$		Recovered wall $\pm 10\%$	
	a (Min.)	b (Max.)	a (Min.)	b (Max.)	L (mm)	F (mm)	Dw (mm)	lw (mm)
HLB205-22/8	22	8	9	3.5	55	18	2.2	1.8
HLB210-30/12	30	12	14	4.5	93	23	2.6	2.2
HLB215-40/16	40	16	15	5.0	125	35	2.1	2.1
HLB220-60/23	60	23	25	7.5	118	29	2.6	2.6
HLB220L-60/23L	60	23	25	7.5	155	45	2.6	2.6
HLB230-90/60	90	60	30	8.5	190	50	3.0	3.0
HLB240-150/90	150	90	20	6.5	150	70	3.0	3.0

- a: as supplied
- b: after recovery

Moulded Parts

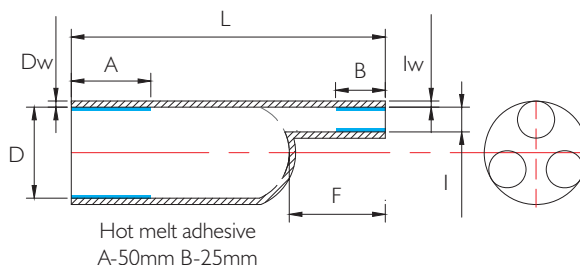
HLB-3Cores

LOW VOLTAGE 3 CORES CABLE BREAKOUT

Features/Applications

Made from radiation cross-linked polyolefin and suitable for applications up to 1kV. The properties of electrically insulating, UV resistant and water proof make HLB2 widely used in electric power industry to provide insulation and sealing 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
Operating 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

Order Ref. Number	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)
HLB310-38/16	38	16	15	4.5	110	35	2.1	2.1
HLB320-60/25	60	25	25	8.0	165	50	3.0	2.5
HLB330-80/38	80	38	35	11.0	185	55	3.5	3.5
HLB340-110/50	110	50	46	17.5	250	65	4.0	4.0
HLB350-125/57	125	57	55	20.0	260	75	4.0	4.0
HLB360-140/70	140	70	62	26.0	280	75	4.0	4.0
HLB370-170/77	170	77	75	28.0	280	80	4.0	4.0

Extender 3core breakouts

HLB310L-40/16L	40	16	15	4.5	125	35	2.1	2.1
HLB320L-60/24L	60	24	25	8.0	180	45	3.2	2.8
HLB330L-80/38L	80	38	35	11.0	215	57	4.0	4.0

- a: as supplied
- b: after recovery

Moulded Parts

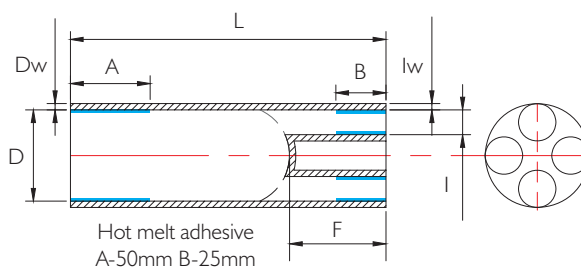
HLB-4Cores

LOW VOLTAGE 4 CORES CABLE BREAKOUT

Features/Applications

Made from radiation cross-linked polyolefin and suitable to applications up to 1kV. The properties of electrical insulation, UV resistant and water proof make HLB4 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
Operating 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

Order Ref. Number	D (mm)		I (mm)		Recovered length ± 10%		Recovered wall ± 10%	
	a (Min.)	b (Max.)	a (Min.)	b (Max.)	L (mm)	F (mm)	Dw (mm)	Iw (mm)
HLB410-40/15	40	15	14	3.5	105	26	2.2	2.0
HLB420-55/21	55	21	20	5.0	150	40	3.1	2.6
HLB425-65/26	65	26	26	7.0	175	45	3.3	2.9
HLB430-75/26	75	26	28	7.0	175	45	3.3	2.9
HLB440-82/37	82	37	30	9.0	190	60	4.0	3.0
HLB445-90/37	90	37	32	9.0	190	60	4.0	3.0
HLB450-100/47	100	47	38	12.0	198	58	4.0	3.0
HLB460-125/52	125	52	52	15.0	240	75	4.0	4.0
HLB470-160/70	160	70	64	19.0	260	75	4.0	4.0

- a: as supplied
- b: after recovery

Moulded Parts

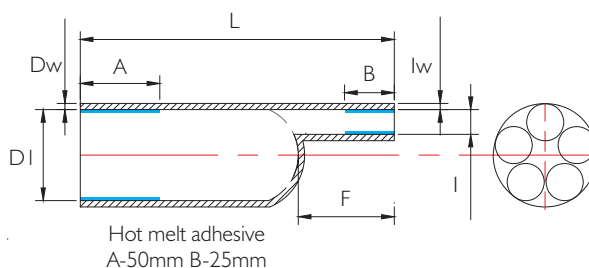
HLB-5Cores

LOW VOLTAGE 5 CORES CABLE BREAKOUT

Features/Applications

Made from radiation cross-linked polyolefin and suitable to applications up to 1kV. The properties of electrical insulation, UV resistant and weather proof make HLB5 widely used in electric power industry to provide insulation with sealing 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
Operating 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	$10^{13} \Omega \cdot \text{cm}$ (min.)
Water absorption	ISO 62	1% (max.)

Product Dimensions

Order Ref. Number	D (mm)		l (mm)		Recovered length $\pm 10\%$		Recovered wall $\pm 10\%$	
	a (Min.)	b (Max.)	a (Min.)	b (Max.)	L (mm)	F (mm)	Dw (mm)	lw (mm)
HLB510-40/19	40	19	13	4	98	25	2.5	2.0
HLB520-55/24	55	24	18	5	155	40	3.2	2.6
HLB530-80/33	80	33	26	8	175	53	3.0	2.8
HLB540-100/42	100	42	34	10	190	60	3.0	3.0

- a: as supplied
- b: after recovery

Moulded Parts

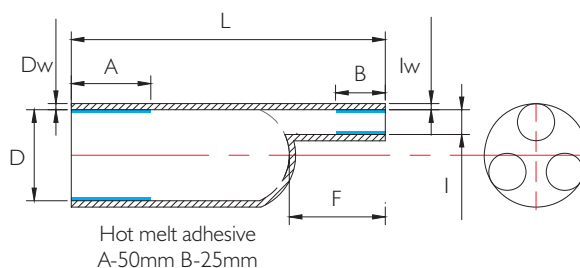
HMB

MEDIUM VOLTAGE 3 CORES CABLE BREAKOUT

Features/Applications

Made from radiation cross-linked polyolefin. The specially designed formulation makes the breakouts with excellent performance of electrical insulating, anti-tracking, UV resistant, weather proof and flame retardant. They can be safely used in protecting cable termination up to 36kV against flashover.

- Coating: anti-track and weather resistant mastic
- Minimum shrink temperature: 110°C
- Minimum fully recovery temperature: 120°C
- Standard color: Red

**Technical Data**

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +105°C
Tensile strength	ASTM D 2671	8MPa (min.)
Tensile strength after thermal aging (120°C/168hrs.)	ASTM D 2671	7MPa (min.)
Elongation at break	ASTM D 2671	300% (min.)
Elongation at break after thermal aging (120°C/168hrs.)	ASTM D 2671	200% (min.)
Dielectric strength	IEC 243	20kV/mm (min.)
Volume resistance	IEC 93	$10^{13} \Omega \cdot \text{cm}$ (min.)
Water absorption	ISO 62	1% (max.)
Resistance to tracking	ASTM D 2303	Non tracking

Product Dimensions

Order Ref. Number	D (mm)		I (mm)		Recovered length $\pm 10\%$		Recovered wall $\pm 10\%$	
	a (Min.)	b (Max.)	a (Min.)	b (Max.)	L (mm)	F (mm)	Dw (mm)	lw (mm)
HMB320-60/24	60	24	25	8.0	180	45	3.0	2.5
HMB330-80/38	80	38	35	11.0	210	57	4.0	4.0
HMB340-110/50	110	50	46	17.5	250	65	4.0	4.0
HMB350-125/57	125	57	55	20.0	260	57	4.0	4.0
HMB360-140/70	140	70	62	26.0	280	70	4.0	4.0
HMB370-170/77	170	77	75	28.0	280	80	4.0	4.0

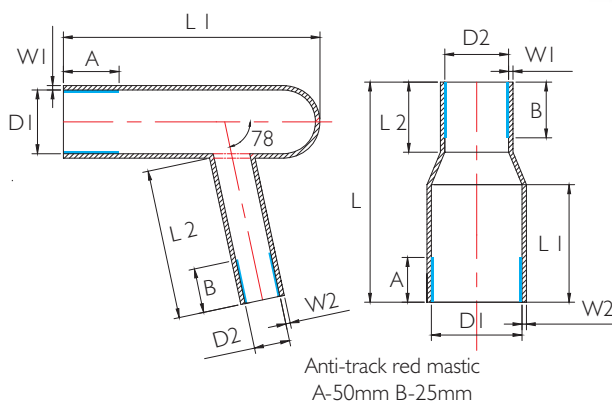
- a: as supplied
- b: after recovery

Moulded Parts

HMR**HEAT SHRINKABLE MEDIUM VOLTAGE RIGHT/STRAIGHT CABLE BOOT****Features/Applications**

Made from radiation cross-linked polyolefin. The specially designed formulation makes the boots with excellent performance of electrically insulating, anti-tracking, UV resistant, weather proof and flame retardant. It can be safely used in protecting cable end up to 36kV against flashover, or surges induce during working life in switch gear and transformer boxes.

- Minimum shrink temperature: 110°C
- Minimum fully recovery temperature: 130°C
- Standard color: Red

**Technical Data**

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	$\geq 12\text{MPa}$
Tensile strength after thermal aging (120°C/168hrs.)	ASTM D 2671	$\geq 8.5\text{MPa}$
Elongation at break	ASTM D 2671	$\geq 300\%$
Elongation at break after thermal aging (120°C/168hrs.)	ASTM D 2671	$\geq 200\%$
Dielectric strength	IEC 243	$\geq 15\text{kV/mm}$
Volume resistance	IEC 93	$10^{13}\Omega\cdot\text{cm}$
Tracking resistance (3.75kV/1hr.)	ASTM D 2303	Pass
Water absorption	ISO 62	1% (max.)
Flammability (oxygen index)	IEC 93	≥ 25
Copper corrosion (120°C/168hrs.)	ASTM D 2671	No corrosion
Cold bend (-40°C/4hrs.)	ASTM D 2671	No cracking

Product Dimensions

Type	Order Ref. Number	As supplied (mm)		After recovered (mm)						
		D1 (Min.)	D2 (Min.)	D1 (Max.)	D2 (Max.)	L1 ($\pm 10\%$)	L2 ($\pm 10\%$)	L ($\pm 10\%$)	W1 ($\pm 10\%$)	W2 ($\pm 10\%$)
Right Angle	HMR110 (80/36-35/18)	80	35	36	18	170	125	/	4.2	3.5
	HMR120 (80/36-50/18)	80	50	36	18	170	125	/	3.8	3.5
	HMR130 (80/36-50/27)	80	50	36	27	160	140	/	3.8	3.5
	HMR140 (95/38-70/28)	95	70	38	28	160	140	/	4.2	4.8
	HMR150 (145/72-68/34)	145	68	72	34	215	140	/	4.0	4.0
Straight	HMR160 (80/35-34/20)	80	34	35	20	145	30	220	3.2	3.2
	HMR170 (80/35-58/20)	80	58	35	20	145	30	220	3.2	3.2
	HMR180 (140/65-90/33)	140	90	65	33	155	40	320	4.0	4.0

Moulded Parts

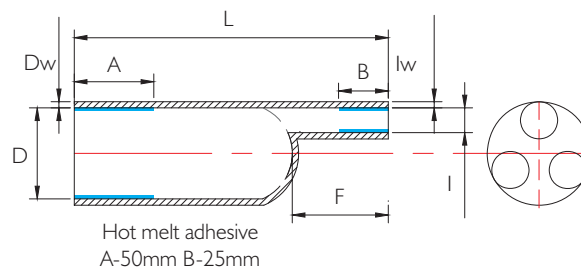
HCB

3 CORES CONDUCTIVE CABLE BREAKOUT

Features/Applications

Made from radiation cross-linked conductive polyolefin. The electrically semi-conductive property of the breakout provides effective conductive screen and sealing protection to the cable terminations. The breakout can be used to cable terminations up to 36kV.

- Minimum shrink temperature: 110°C
- Minimum fully recovery temperature: 130°C
- Standard color: Black



Technical Data

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +105°C
Tensile strength	ASTM D 2671	12MPa (min.)
Tensile strength after thermal aging (120°C/168hrs.)	ASTM D 2671	10MPa (min.)
Elongation at break	ASTM D 2671	250% (min.)
Elongation at break after thermal aging (120°C/168hrs.)	ASTM D 2671	200% (min.)
Water absorption	ISO 62	1% (max.)
Volume resistance	IEC 93	10 ¹² Ω.cm (max.)

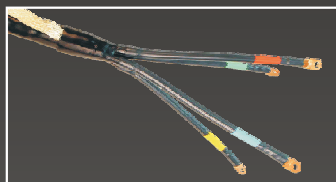
Product Dimensions

Order Ref. Number	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)
HCB320-60/24	60	24	25	8.0	183	45	3.0	2.5
HCB330-80/38	80	38	35	11.0	215	57	4.0	4.0
HCB340-110/50	110	50	46	17.5	250	65	4.0	4.0
HCB350-125/57	125	57	55	20.0	260	57	4.0	4.0
HCB360-140/70	140	70	62	26.0	280	70	4.0	4.0

- a: as supplied
- b: after recovery

Section F

Speciality Products



FUZHOU CANWELL IMPORT & EXPORT CO., LTD.

Speciality Products

H-150K

HEAT SHRINKABLE FLEXIBLE THIN WALL PVDF TUBING

Features/Applications

H-150K is excellent flame retardant heat-shrinkable Polyvinylidene fluoride(PVDF) tube for applications requiring high temperature resistance, outstanding abrasion and cut through resistance or superior chemical and solvent resistant properties. It reliably protects solder joints, terminals and connections against most industrial fuels, solvents and chemicals. The glass like appearance makes it easily to inspect the mark on protected harness.

- Approvals: UL, VW-I, File No E249362
- Meet: RoHS, SAE-AMS-DTL-23053/18
- Minimum fully recovery temperature: 150°C
- Standard color: Clear, Black

**Technical Data**

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +150°C
Tensile strength	ASTM D 2671	≥ 30MPa
Elongation at break	ASTM D 2671	≥ 150%
Elongation at break after aging	180°C/168hrs.	≥ 100%
Heat shock	250°C/4hrs.	No cracking
Cold bend	-55°C/4hrs.	No cracking
Flammability	VW-I	Pass
Volume resistance	IEC 93	≥ 10 ¹⁴ Ω.cm
Copper corrosion	180°C/168hrs.	No corrosion
Copper stability	180°C/168hrs.	No sign of degradation

Product Dimensions

Normal size		As supplied(mm)	After recovered (mm)		Tube shape	Standard length (m/spool)
(inch)	(mm)	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Nom.)		
3/64	1.2	1.2	0.6	0.26	○	200
1/16	1.6	1.6	0.8	0.26	○	200
3/32	2.4	2.4	1.2	0.26	○	200
1/8	3.2	3.2	1.6	0.26	○	100
3/16	4.8	4.8	2.4	0.26	○	100
1/4	6.4	6.4	3.2	0.26	○	100
3/8	9.5	9.5	4.8	0.30	—	50
1/2	12.7	12.7	6.4	0.30	—	50
3/4	19.1	19.1	9.5	0.41	—	50
1	25.4	25.4	12.7	0.41	—	50
1 1/2	38.1	38.1	19	0.51	—	30

● Tube shape: "○" : Round or Oval, "—" : Flat

Speciality Products

H-175K

HEAT SHRINKABLE SEMI-RIGID PVDF TUBING

Features/Applications

H-175K is semi-rigid, excellent flame retardant heat-shrinkable Polyvinylidene fluoride (PVDF) tube for applications requiring high temperature performance, outstanding abrasion and cut through resistance or superior chemical and solvent resistant properties. It reliably protects wires, solder joints, terminals and connections and components from most industrial fuels, solvents and chemicals.

- Approvals: UL, VW-I, File No E249362
- Meet: RoHS, SAE-AMS-DTL-23053/18
- Operating temperature: -55°C to +175°C
- Minimum shrink temperature: 175°C
- Standard color: Clear

**Technical Data**

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +175°C
Tensile strength	ASTM D 2671	≥ 34.5MPa
Elongation at break	ASTM D 2671	≥ 150%
Elongation at break after aging	250°C/168hrs.	≥ 100%
Heat shock	300°C/1 hr.	No cracking
Cold bend	-55°C/1 hr.	No cracking
Flammability	VW-I	Pass
Volume resistance	IEC 93	≥ 10 ¹³ Ω.cm
Dielectric strength	ASTM D 2671	≥ 30kV/mm

Product Dimensions

Normal size		As supplied(mm)	After recovered (mm)		Standard length
(inch)	(mm)	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Nom.)	
3/64	1.2	1.2	0.6	0.20	200m/spool
1/16	1.6	1.6	0.8	0.20	200m/spool
3/32	2.4	2.4	1.2	0.23	200m/spool
1/8	3.2	3.2	1.6	0.23	100m/spool
3/16	4.8	4.8	2.4	0.23	100m/spool
1/4	6.4	6.4	3.2	0.28	100m/spool
3/8	9.5	9.5	4.8	0.28	1.22m
1/2	12.7	12.7	6.4	0.32	1.22m
3/4	19.1	19.1	9.5	0.36	1.22m
1	25.4	25.4	12.7	0.41	1.22m

Speciality Products

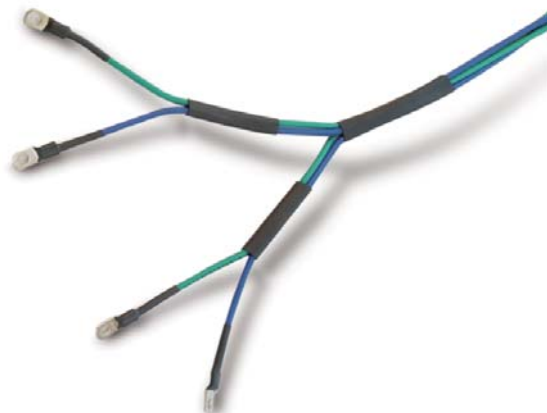
HDR, HDR(TW)

DIESEL-RESISTANT ELASTOMERIC HEAT SHRINKABLE TUBING

Features/Applications

Made from modified radiation crosslinked elastomers. The specially designed formulation provides the tubing with high temperature fluid resistant, long term heat resistant and effective protection to cable termination, splices, joints used in military vehicles.

- Meet: SAE-AMS-DTL-23053/16
- Minimum fully recovery temperature: 175°C
- Standard color: White, Black

**Technical Data**

Property	Test Method	Typical Data
Operating temperature	IEC 216	-75°C to +150°C
Tensile strength	ASTM D 2671	≥ 13MPa
Elongation at break	ASTM D 2671	≥ 500%
Elongation at break after aging	160°C/168hrs.	≥ 220%
Heat shock	215°C/4hrs.	No cracking or dropping
Flexibility (2% secant)	ASTM D 882	≤ 50MPa
Flammability	ASTM D 2671	Self-extinguish in 15sec.
Volume resistance	ASTM D 876	≥ 10 ⁹ Ω.cm
Fluid resistance tensile strength	ISO37 24hrs. (diesel 70°C, hydraulic 70°C, lubricant 100°C)	≥ 10MPa
Fluid resistance elongation		≥ 300%

Product Dimensions

Normal size		As supplied(mm)	After recovered (mm)		Tube shape	Standard length (m/spool)
(inch)	(mm)	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Nom.)		
HDR diesel resistant elastomeric tubing						
1/8	3.2	3.2	1.6	0.76	○	50
3/16	4.8	4.8	2.4	0.85	○	50
1/4	6.4	6.4	3.2	0.90	○	50
3/8	9.5	9.5	4.8	1.02	○	50
1/2	12.7	12.7	6.4	1.22	○	30
3/4	19.1	19.1	9.5	1.45	—	30
1	25.4	25.4	12.7	1.80	—	30
1 1/2	38.1	38.1	19.1	2.40	—	15
2	50.8	50.8	25.4	2.80	—	15
3	76.2	76.2	38.1	3.20	—	15
HDR(TW) thin wall diesel resistant elastomeric tubing						
3/32	2.4	2.4	1.2	0.51	○	150
1/8	3.2	3.2	1.6	0.51	○	150
3/16	4.8	4.8	2.4	0.51	○	75
1/4	6.4	6.4	3.2	0.64	○	75
3/8	9.5	9.5	4.8	0.64	○	50
1/2	12.7	12.7	6.4	0.64	○	30
3/4	19.1	19.1	9.5	0.76	—	30
1	25.4	25.4	12.7	0.90	—	30
1 1/4	31.8	31.8	15.9	1.10	—	30
1 1/2	38.1	38.1	19.1	1.02	—	30

● Tube shape: "○" : Round or Oval, "—" : Flat

Speciality Products

H-200E, H-200E(TW)

HEAT SHRINKABLE FLUOROELASTOMER TUBING

Features/Applications

Made from modified fluoroelastomer (Viton), with superior impact, abrasion and cut through resistant, it is suitable to many applications requiring high resistance to corrosive fluids, fuels, lubricants, acids and solvents at elevated temperature.

- Approval: UL, VW-I, File No E249362
- Meet: SAE-AMS-DTL-23053/13
- Very flexible
- Excellent resistance of chemicals
- Operating temperature -55°C to +200°C
- Minimum fully recovery temperature: 175°C
- Standard color: Black

**Technical Data**

Property	Test Method	Typical Data
Operating temperature	IEC 216	-55°C to +200°C
Tensile strength	ASTM D 2671	≥ 8.5MPa
Elongation at break	ASTM D 2671	≥ 250%
Elongation at break after aging	250°C/168hrs.	≥ 200%
Heat shock	300°C/4hrs.	No cracking or dropping
Flexibility	ASTM D 412	≤ 13.8MPa
Flammability	ASTM D 2671	Self-extinguish in 15sec.
Volume resistance	ASTM D 876	≥ 10 ¹² Ω.cm
Dielectric strength	ASTM D 2671	≥ 7.9kV/mm
Copper corrosion	SAE-AMS-DTL-23053/13 (175°C/16hrs.)	No corrosion

Product Dimensions

Normal size		As supplied(mm)	After recovered (mm)		Tube shape	Standard length (m/spool)
(inch)	(mm)	Inside diameter (Min.)	Inside diameter (Max.)	Wall thickness (Nom.)		
H-200E fluoroelastomer tubing						
1/8	3.2	3.2	1.6	0.76	○	50
3/16	4.8	4.8	2.4	0.90	○	50
1/4	6.4	6.4	3.2	0.90	○	50
3/8	9.5	9.5	4.8	0.90	○	50
1/2	12.7	12.7	6.4	1.10	○	30
3/4	19.1	19.1	9.5	1.30	○	30
1	25.4	25.4	12.7	1.65	—	30
1 1/2	38.1	38.1	19.1	1.90	—	15
2	50.8	50.8	25.4	1.90	—	1.22m
H-200E (TW) thin wall fluoroelastomer tubing						
3/8	9.5	9.5	4.8	0.90	○	50
1/2	12.7	12.7	6.4	0.90	○	30
5/8	15.9	15.9	7.9	1.07	○	30
3/4	19.1	19.1	9.5	1.07	○	30
7/8	22.0	22.0	11.0	1.25	—	30
1	25.4	25.4	12.7	1.25	—	30
1 1/4	31.8	31.8	15.7	1.40	—	30
1 1/2	38.1	38.1	19.0	1.40	—	15
2	50.8	50.8	25.4	1.65	—	15

- (Viton®) is a registered trademark of E.I. Du Pont de Nemours and Co. Inc
- Tube shape: "○" : Round or Oval, "—" : Flat

Speciality Products

HTFE

TEFLON PTFE HEAT SHRINKABLE TUBING

Features/Applications

HTFE is manufactured with polytetrafluoroethylene (PTFE). Specially designed for applications such as in the field of automotive, military and aerospace, HTFE provides excellent high temperature stability, chemicals resistant, extreme electrical insulation and highly flame retardant.

- Meet: SAE-AMS-DTL-23053/12
- Operating temperature: -65°C to +260°C
- Minimum fully recovery temperature: 350°C
- Standard color: Clear(natural)

**Technical Data**

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	≥ 17.3MPa
Elongation at break	ASTM D 2671	≥ 200%
Specific gravity	ASTM D 792	2.30
Heat shock (400°C/4hrs.)	ASTM D 2671	No cracking or dropping
Cold bend (-65°C/4hrs.)	ASTM D 2671	No cracking
Flammability	ASTM D 2671	Self extinguish
Volume resistance	ASTM D 2671	≥ 10 ¹⁶ Ω.cm
Dielectric strength	ASTM D 2671	≥ 34kV/mm
Copper corrosion	UL 224	Pass
Fluid resistance	SAE-AMS-DTL-23053/12	Excellent
Water absorption	ASTM D 570	0.1 max.

Product Dimensions

Size	As supplied (mm)	After recovered (mm)		Standard length
	Inside diameter (Nom.)	Inside diameter (Nom.)	Wall thickness (Nom.)	
AWG 20	1.52	0.97	0.30	1.22m
AWG 18	1.93	1.17	0.30	1.22m
AWG 16	2.36	1.45	0.30	1.22m
AWG 14	3.05	1.82	0.30	1.22m
AWG 12	3.81	2.26	0.30	1.22m
AWG 10	4.85	2.80	0.30	1.22m
AWG 8	6.10	3.55	0.38	1.22m
AWG 6	7.67	4.40	0.38	1.22m
AWG 4	9.40	5.45	0.38	1.22m
AWG 2	10.92	6.90	0.38	1.22m
AWG 0	11.94	8.56	0.38	1.22m

Speciality Products

H-2(XT)/H-2(XT)HF

NON-SHRINKABLE, RADIATION CROSS-LINKED,
FLAME RETARDANT TUBING

Features/Applications

Made from radiation cross-linked flame retardant polyolefin. Designed to provide mechanical protection and insulation for harness used in automobile and electronic facilities. The Environment friendly formulation makes the tubing free from harmful heavy metal and PBB's, PBBO's, PBBE's that were suspected to be harmful to the human beings and environment.

- Meet: UL 224, VW-I 600V, RoHS
- H-2(XT): flame retardant
- H-2(XT)HF: halogen free flame retardant
- Operating temperature: -55°C to +125°C
- Standard color: Black

Other colors are available on request

**Technical Data**

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	≥ 10.4MPa
Tensile strength after aging	ASTM D 2671	Remains 70%
Elongation at break	ASTM D 2671	200%
Elongation at break after aging	ASTM D 2671	100%
Heat shock (250°C/4hrs.)	ASTM D 2671	No cracking or dropping
Cold bend (-30°C/1 hr.)	ASTM D 2671	No cracking
Flammability	UL 224 VW-I	Pass
Volume resistance	ASTM D 876	≥ 10 ¹⁴ Ω.cm
Voltage withstand (AC 2500V/60s)	ASTM D 876	≥ 34kV/mm
Copper stability (158°C/168hrs.)	UL 224	No corrosion
Water absorption	ASTM D 570	0.5%

Product Dimensions

Size	Inside diameter (mm)	Wall thickness (mm)	Standard length (m/spool)
AWG 18	1.00±0.10	0.40±0.06	400
AWG 16	1.30±0.10	0.40±0.06	400
AWG 14	1.65±0.10	0.40±0.06	400
AWG 12	2.10±0.15	0.40±0.06	400
AWG 10	2.60±0.15	0.50±0.06	400
AWG 8	3.30±0.15	0.50±0.06	400
AWG 6	4.10±0.20	0.50±0.06	200
AWG 4	5.20±0.20	0.50±0.06	200
AWG 2	6.50±0.20	0.50±0.06	100
AWG 0	8.30±0.30	0.50±0.06	100
3/8"	9.50±0.40	0.50±0.06	100
7/16"	11.10±0.40	0.50±0.06	100
1/2"	12.70±0.40	0.50±0.06	100

Speciality Products

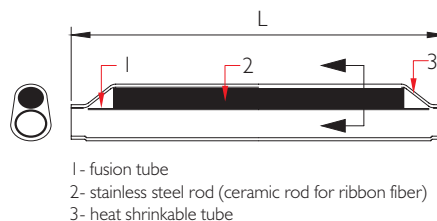
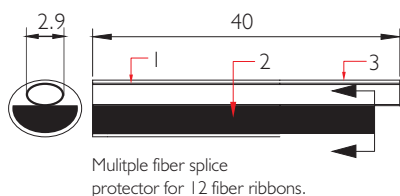
HFSP

HEAT SHRINKABLE FIBER OPTIC SPLICE PROTECTOR

Features/Applications

Consist of cross linked polyolefin, hot fusion tubing and stainless reinforcing steel rod which keep optic transmission properties of optical fiber and enhance the protection to optical fiber splices. Easily operating to the optical fiber during installation without damaging and clear sleeve make it easy to detect splice before shrinkage. Sealing structure make the splice free from influence of temperature and humidity in special environment.

- Operating temperature: -45°C to +100°C
- Minimum fully recovery temperature: 120°C



Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 2671	≥18MPa
Ultimate elongation	ASTM D 2671	700%
Density	ISO R 1183 D	0.94g/cm ²
Dielectric strength	IEC 243	20kV/mm
Dielectric constant	IEC 243	2.5max.
Longitudinal change	ASTM D 2671	0±5%

Product Dimensions

Order Ref. Number	Splice protector(mm)		Fusion tube(mm)		Steel Rod(mm)		Packing (pcs/bag)
	O.D	Length	I.D	Length	O.D	Length	
Larger sleeves							
HFSP-61	3.0	61	1.40	61	1.5	55	100
HFSP-45	3.0	45	1.40	45	1.5	40	100
HFSP-23	3.0	23	1.40	23	1.5	18	100
Standard sleeves							
HFSP-61T	2.5	61	1.40	61	1.0	57	100
HFSP-45T	2.5	45	1.40	45	1.0	41	100
HFSP-40T	2.5	40	1.40	40	1.0	36	100
HFSP-30T	2.5	30	1.40	30	1.0	26	100
HFSP-25T	2.5	25	1.40	25	1.0	21	100
Mini/micro sleeves							
HFSP-40M	1.3	40	0.35	40	0.5	40	100
HFSP-25M	1.3	25	0.35	25	0.5	25	100
HFSP-18M	1.3	18	0.35	18	0.5	18	100
HFSP-15M	1.3	15	0.35	15	0.5	15	100
HFSP-10M	1.3	10	0.35	10	0.5	10	100
Ribbon fiber sleeves							
Order Ref. Number	Length (mm)	Fusion tube (mm)	Ceramic rod width (mm)	Ceramic rod height (mm)	Packing		
HFSP-40(12)	40±1.0	3.0±0.05	3.8	1.8	50pcs/bag		

• Other lengths and sizes are available on request.

Mastic Tapes

MASTICS FOR POWER CABLE ACCESSORIES

TAPE 55 STRESS RELIEF MASTICS

Features/Applications

The self amalgamating tape make it easy to apply for power cable accessory applications. The specially designed insulation give excellent compatibility with polymeric cables. Used to release electrical stresses at the end of the outer screen in MV polymeric cable joints and terminations to ensure the safe operation of the power system and can also be used to fill void space and gaps during installation of cable joints and terminations.

- Suitable for applications in power cable termination and joint 15kV, 24kV, 36kV
- Maximum service temperature: 90°C
- Standard color: light yellow

TAPE 65 ANTI-TRACKING SEALING MASTIC

Features/Applications

The anti-tracking sealing mastic is made from a non-toxic, butyl composite. The self amalgamating and solvent free make the mastic effectively used in sealing cable joints and terminations to provide waterproof and void-filling.

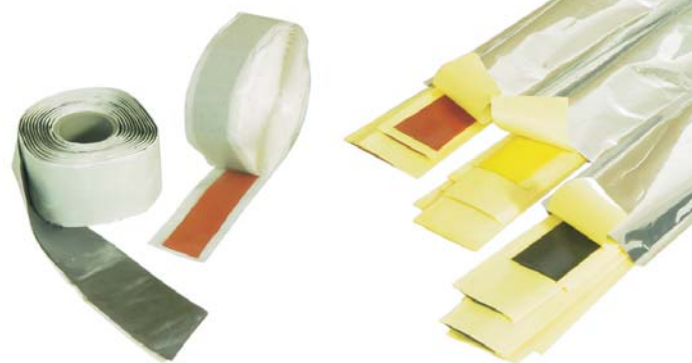
- Suitable for applications in power cable termination and joint 15kV, 24kV, 36kV
- Maximum service temperature: 90°C
- Standard color: Red

TAPE 75 BLACK SEALING MASTIC

Features/Applications

The anti-tracking sealing mastic is made from a non-toxic, butyl composite. The self amalgamating and solvent free make the mastic effectively used in sealing cable joints and terminations to provide waterproof and void-filling.

- Suitable for applications in power cable termination and joint 15kV, 24kV, 36kV
- Maximum service temperature: 90°C
- Standard color: Black



Product dimension

Order Ref. Number	Thickness(mm)	Width(mm)	Length
Tape 55	1.6±0.2	25±1.0	0.5m, 1.5m, 30m
Tape 65	0.8±0.1	25±1.0	1.5m, 50m
Tape 75	3.0±0.1	38±1.0	1.5m, 20m

Technical Data

Property	Test Method	Typical Data
Tape 55 stress relief mastic		
Density	ASTM D 792	1.3g/m ³
Tensile strength	ASTM D 638	0.1MPa
Elongation at break	ASTM D 638	>1000%
Dielectric strength	IEC 250	≥15kV/mm
Dielectric constant	IEC 250	10-15
Volume resistance	ASTM D 527	10 ⁹ -10 ¹² Ω.cm
Loss factor (50Hz)		0.035
Service temperature (max.)		-20°C to +90°C
Adhesive and self-amalgamation		Good

Tape 65 anti-tracking mastic		
Density	ASTM D 792	1.2g/m ³
Tensile strength	ASTM D 638	0.1MPa
Elongation at break	ASTM D 638	>1000%
Dielectric strength	IEC 250	≥10kV/mm
Dielectric constant	IEC 250	3.0
Volume resistance	ASTM D 527	10 ¹³ Ω.cm
Loss factor (50Hz)		0.035
Service temperature (max.)		-20°C to +90°C
Adhesive and self-amalgamation		Good

Tape 75 black sealing mastic		
Density	ASTM D 792	1.2g/m ³
Tensile strength	ASTM D 638	0.1MPa
Elongation at break	ASTM D 638	>1000%
Dielectric strength	IEC 250	≥15kV/mm
Dielectric constant	IEC 250	2-3
Volume resistance	ASTM D 527	10 ¹³ Ω.cm
Loss factor (50Hz)		0.035
Service temperature (max.)		-20°C to +90°C
Adhesive and self-amalgamation		Good

SELECTION GUIDE

A) Heat Shrinkable Thin Wall Tubing

Product Name	Material	Product Type	Shrink Ratio	Operating Temp & Potential Rating	Shrink Temp.*	Flame Retardant	MIL Spec.	General Description
H-2(Z)	Polyolefin	Thin Wall	2:1	-55°C to +125°C, 600V	70°C-100°C	VW-I	—	125°C, Flexible, highly flame-retardant tubing. Size: 1.0-150mm (3/64" to 6")
H-2(3X)	Polyolefin	Thin Wall	3:1	-55°C to +125°C, 600V	70°C-100°C	VW-I	—	125°C, Flexible, 3:1 high shrink ratio, highly flame-retardant tubing. Size: 1.5-39mm (1/16" to 1 1/2")
H-2(CB)	Polyolefin	Ultra Thin Wall	2:1	-55°C to +125°C, 300V	70°C-100°C	VW-I	—	Ultra thin wall, flame-retardant tubing. Size: 1.0-10mm / 3/64" to 1/2"
H-2(HF)	Polyolefin	Thin Wall	2:1	-55°C to +105°C, 600V	70°C-100°C	—	—	Halogen free, low smoke, flame-retardant tubing. Size: 1.0-150mm
H-2R	Polyolefin	Semi-rigid Thin Wall	2:1	-55°C to +135°C, 600V	90°C-130°C	Self-extinguish in 30 seconds	SAE-AMS-DTL-23053/5 Class I and 3	Semi-rigid, flame-retardant tubing, resistant to common chemicals and solvents. Size: 1.2-25.4mm (3/64" to 1")
H-2F	Polyolefin	Thin Wall	2:1	-55°C to +135°C, 600V	70°C-100°C	VW-I	SAE-AMS-DTL-23053/5 Class I and 3	135°C, MIL-spec, very flexible, highly flame-retardant multi-purpose tubing. Size: 1.2-151mm (3/64" to 6")
H-2F(3X)	Polyolefin	Thin Wall	3:1	-55°C to +135°C, 600V	70°C-100°C	VW-I	SAE-AMS-DTL-23053/5 Class I and 3	135°C, 3:1 High shrink ratio, highly flexible & flame-retardant tubing. Size: 1.5-39mm (1/16" to 1 1/2")
H-2F(4X)	Polyolefin	Thin Wall	4:1	-55°C to +135°C, 600V	70°C-100°C	VW-I	SAE-AMS-DTL-23053/5 Class I and 3	135°C, 4:1 High shrink ratio, highly flexible & flame-retardant tubing. Size: 19.1-115mm (3/4" to 4 1/2")
H-2F(YG)	Polyolefin	Thin Wall	3:1 & 2:1	-55°C to +135°C, 600V	70°C-100°C	VW-I	SAE-AMS-DTL-23053/5 Class I and 3	135°C, Yellow & green striped, flexible & flame-retardant tubing. Size: 1.6-39mm (1/16" to 1 1/2")/ 1.2-101.6mm (3/64" to 4")
H-2(LS)	Polyolefin	Thin Wall	2:1	-45°C to +125°C, 600V	65°C-95°C	MVSS 302	—	Very low shrink temp., flexible, halogen free polyolefin tubing. Size: 1.6-50.8mm (1/16" to 2")
H-I	Polyolefin	Thin Wall	2:1	-55°C to +105°C, 600V	80°C-100°C	—	—	Non flame-retardant, general purpose, flexible, shine black or clear. Size: 1.0-50mm (3/64" to 2")
HB-I	Polyolefin	Thin Wall	2:1	-55°C to +105°C, 600V	80°C-100°C	—	—	Non flame-retardant, flexible, shine black or clear. Size: 1.2-150mm (3/64" to 6")
HBG	Polyolefin	Thin Wall	2:1	-55°C to +105°C, 600V	90°C-110°C	—	—	Suitable for flexible gas pipe protection. Size: 23-76.2mm

B) Heat Shrinkable Dual Wall, Adhesive-line Tubing

Product Name	Material	Product Type	Shrink Ratio	Operating Temp & Potential Rating	Shrink Temp.*	Flame Retardant	MIL Spec.	General Description
H-5(3X)(4X)	Polyolefin	Dual Wall	3:1 & 4:1	-45°C to +125°C, 600V	80°C-120°C	Self-extinguish in 30 seconds	—	3:1 & 4:1 High shrink ratio, adhesive-lined flexible, flame-retardant tubing. Size: 3.0-50mm/4.0-52mm
H-5(3X)-M	Polyolefin	Heavy Dual Wall	3:1	-45°C to +125°C, 600V	110°C	Self-extinguish in 30 seconds	—	3:1 High shrink ratio, adhesive-lined flexible, flame-retardant tubing. Size: 19.0-100.0mm (3/4" to 4")
HBK	Polyolefin	Semi-rigid Dual Wall	4:1	-45°C to +125°C, 600V	120°C	Self-extinguish in 30 seconds	—	4:1 High shrink ratio, semi-rigid adhesive-lined flexible, flame-retardant tubing. Size: 6.0-18.0mm (0.236" to 0.708")
H-5(2000)	Polyolefin	Dual Wall	1.5:1	-55°C to +105°C, 600V	120°C	Self-extinguish in 30 seconds	—	Adhesive-lined tubing for protect automotive metal pipes & fuel lines. Size: 5.0-15mm
H-5(3000)	Polyolefin	Dual Wall	3:1	-45°C to +105°C, 600V	80°C-100°C	Self-extinguish in 30 seconds	—	Commercial-grade, adhesive-lined flexible, flame-retardant tubing. Size: 3.0-52mm
HBCS	Polyolefin	Dual Wall	3:1	-55°C to +125°C, 600V	110°C	Self-extinguish in 30 seconds	—	Dual wall tubing for crimp connector sealing. Size: 4.3/5.0/6.5mm
H-5(3X)(4X)-F	Polyolefin	Dual Wall	3:1 & 4:1	-55°C to +125°C, 600V	80°C-120°C	Self-extinguish in 30 seconds	SAE-AMS-DTL-23053/4	3:1 & 4:1 High shrink ratio, adhesive-lined flexible, flame-retardant tubing. Size: 3.0-40mm/4.0-52mm

C) Heat Shrinkable Medium & Heavy Wall Tubing

Product Name	Material	Product Type	Shrink Ratio	Operating Temp & Potential Rating	Shrink Temp.*	Flame Retardant	MIL Spec.	General Description
HR2	Polyolefin	Medium Wall	3:1	-55°C to +110°C, 600V	120°C	—	—	Resistance to UV, high electrical insulation, excellent mechanical protection to cable joints and terminations. Size: 8.0-350mm
HRA2	Polyolefin	Medium Wall	3:1	-55°C to +110°C, 600V	120°C	—	—	Resistance to UV, high electrical insulation, excellent mechanical protection to cable joints and terminations. Size: 8.0-350mm
HB2	Polyolefin	Medium Wall	3:1	-55°C to +110°C, 600V	120°C	—	—	High electrical insulation, excellent mechanical protection to cable joints and terminations. Size: 8.0-55mm
HR3	Polyolefin	Heavy Wall	3:1	-55°C to +110°C, 600V	120°C	—	—	High electrical insulation, excellent mechanical protection to cable joints and terminations. Size: 9.0-200mm
HRA3	Polyolefin	Heavy Wall	3:1	-55°C to +110°C, 600V	120°C	—	—	High electrical insulation, excellent mechanical protection to cable joints and terminations. Size: 9.0-200mm
HFRA2	Polyolefin	Medium Wall	3:1	-55°C to +110°C, 600V	120°C	Self-extinguish in 30 seconds	—	Medium wall adhesived-lined flame-retardant polyolefin tubing. Size: 22-300mm
HFRA3	Polyolefin	Heavy Wall	3:1	-55°C to +110°C, 600V	120°C	Self-extinguish in 30 seconds	—	Heavy wall adhesived-lined flame-retardant polyolefin tubing. Size: 9.0-130mm
HRA5	Polyolefin	Heavy Wall	5.6:1	-55°C to +110°C, 600V	120°C	Self-extinguish in 30 seconds	—	Heavy wall adhesived-lined flame-retardant polyolefin tubing. Size: 35-160mm
HRA-6X	Polyolefin	Heavy Wall	6:1	-55°C to +110°C, 600V	120°C	—	—	6:1 very high shrink ratio, excellent mechanical protection to cable joints and terminations. Size: 19-235mm
HSTV	Polyolefin	Medium Wall	3:1	-55°C to +110°C, 600V	120°C	—	—	Adhesive-lined tubing for CATV industry splices and connectors protection. Size: 10-70mm
HRS	Polyolefin	Medium Wall	3:1	-35°C to +100°C, 600V	120°C	—	—	Adhesive-lined tubing with black sealant mastic for metal pipes joint protection. Size: 30-350mm
HFR5X	Polyolefin	Medium Wall	5.6:1	-55°C to +135°C, 600V	130°C	—	—	5.6:1 flame retardant heat shrinkable tubing. Size: 15-51mm

D) Medium Voltage Insulation Tubing & Tape

Product Name	Material	Product Type	Shrink Ratio	Operating Temp & Potential Rating	Shrink Temp.*	Flame Retardant	MIL Spec.	General Description
HAT	Polyolefin	Medium Wall	2.5:1	-55°C to +105°C, up to 36kV	110°C	IEC 93	—	Non-tracking tubing, high creep resistance & anti-tracking properties. Size: 19-100mm (continue length), 35-130mm (cut length)
HBM	Polyolefin	Medium Wall	2.5:1	-55°C to +105°C, 5-24kV	110°C	IEC 93	—	Halogen free, medium-voltage bus-bar insulation tubing. Size: 25-100mm (continue length), 150-235mm (cut length)
HBT	Polyolefin	Medium Wall	2.5:1	-55°C to +105°C, 5-24kV	110°C	IEC 93	—	Medium wall, halogen free, medium voltage bus-bar insulation tubing. Size: 18-120mm
HBTH	Polyolefin	Heavy Wall	2.5:1	-55°C to +105°C, 5-24kV	110°C	IEC 93	—	Heavy wall, halogen-free, medium voltage bus-bar insulation tubing. Size: 25-180mm
HSCT	Polyolefin	Medium Wall	2:1	-45°C to +105°C, up to 36kV	100°C-120°C	—	—	Semi-conductive tubing, provide effective insulation screen on high voltage cable connectors. Size: 33-180mm
HSC-100	Polyolefin	Medium Wall	2:1	-45°C to +100°C, up to 24kV	100°C-130°C	—	—	Stress control tubing, effective control the high electrical stress present at the end of the cable termination and joint up to 24kV. Size: 16-65mm (continue length), 47-75mm (cut length)
HSC-360	Polyolefin	Medium Wall	2.5:1	-45°C to +100°C, up to 36kV	100°C-130°C	—	—	Stress control tubing, effective control the high electrical stress present at the end of the cable joint. Size: 47-95mm
HBIT	Polyolefin	Medium Wall	1.4:1	-55°C to +105°C, 5-24kV	110°C	IEC 93	—	Medium voltage bus-bar insulation tape, wall thickness: 1.0mm, width: 25mm/50mm/100mm
HDWT	Polyolefin	Heavy Wall	3:1	-45°C to +100°C, up to 36kV	100°C-130°C	—	—	Semi-conducting / Insulation dual wall tubing, suitable for applications in power cable joints up to 36kV. Size: 36-140mm

Product Name	Material	Product Type	Shrink Ratio	Operating Temp & Potential Rating	Shrink Temp.*	Flame Retardant	MIL Spec.	General Description
HEDT	Polyolefin	Heavy Wall	2.5:1	-45°C to +100°C, up to 24kV	100°C-130°C	—	—	Semi-conducting/elastomeric insulation dual wall tubing for power cable joint. Size: 37-125mm
HGT	Polyolefin	Heavy Wall	3:1	-40°C to +110°C, up to 36kV	90°C-110°C	—	—	High insulation tubing for power cable joint. Size: 35-95mm
HOT	Polyolefin	Medium Wall	2.5:1	-40°C to +140°C, up to 36kV	100°C-130°C	—	—	Oil resistance tubing for cable termination and joint. Size: 19-85mm

E) Moulded Parts

Product Name	Material	Product Type	Shrink Ratio	Operating Temp & Potential Rating	Shrink Temp.*	Flame Retardant	MIL Spec.	General Description
HSEC	Polyolefin	—	—	-55°C to +110°C, 1000V	120°C	—	—	Spiral hot melt adhesive coated cable end cap, for protecting end from the environmental effects.
HCEC	Polyolefin	—	—	-55°C to +110°C	120°C	—	—	With spiral melt adhesive and conductive mastic cable end cap.
HAS	Polyolefin	—	—	-55°C to +105°C, up to 36kV	110°C	—	—	High creep resistance & anti-tracking rain sheds, protect cable outdoor termination.
HCFT	Polyolefin	—	—	-55°C to +110°C	110°C-130°C	—	—	Cable feed-throughs
HLB-2	Polyolefin	—	—	-55°C to +110°C	110°C-130°C	—	—	Insulation & sealing of cable breakouts for 1kV cables, 2 cores
HLB-3	Polyolefin	—	—	-55°C to +110°C	110°C-130°C	—	—	Insulation & sealing of cable breakouts for 1kV cables, 3 cores
HLB-4	Polyolefin	—	—	-55°C to +110°C	110°C-130°C	—	—	Insulation & sealing of cable breakouts for 1kV cables, 4 cores
HLB-5	Polyolefin	—	—	-55°C to +110°C	110°C-130°C	—	—	Insulation & sealing of cable breakouts for 1kV cables, 5 cores
HMB	Polyolefin	—	—	-55°C to +100°C, up to 36kV	110°C-130°C	IEC93	—	Anti-tracking medium voltage cable breakout
HMR	Polyolefin	—	—	-55°C to +100°C, up to 36kV	110°C-130°C	—	—	Anti-tracking medium voltage right angle/straight boot
HCB	Polyolefin	—	—	-55°C to +100°C, up to 36kV	110°C-130°C	—	—	Conductive cable breakout

F) Speciality Products

Product Name	Material	Product Type	Shrink Ratio	Operating Temp & Potential Rating	Shrink Temp.*	Flame Retardant	MIL Spec.	General Description
H-150K	Modified PVDF	Flexible Thin Wall	2:1	-55°C to +150°C, 600V	150°C	VW-I	SAE-AMS-DTL-23053/18	UL VW-I, 150°C, Clear & Black, flexible, high-temperature and chemical-resistant PVDF tubing. Size: 1.2-38.1mm (3/64" to 1 1/2")
H-175K	PVDF	Semi-rigid Thin Wall	2:1	-55°C to +175°C, 600V	175°C	VW-I	SAE-AMS-DTL-23053/18	175°C, Clear, high-temperature and chemical-resistant PVDF tubing. Size: 1.2-25.4mm (3/64" to 1")
HDR	Modified Elastomer	Very Flexible	2:1	-55°C to +150°C, 600V	175°C	VW-I	SAE-AMS-DTL-23053/16	Diesel resistant, elastomer. Size: 3.2-76.2mm (1/8" to 3")
HDR(TW)	Modified Elastomer	Thin Wall Very Flexible	2:1	-55°C to +150°C, 600V	175°C	VW-I	SAE-AMS-DTL-23053/16	Elastomer, diesel resistant, thin wall. Size: 2.4-38.1mm (3/32" to 1 1/2")
H-200E	Modified Fluoroelastomer	Very Flexible	2:1	-55°C to +200°C, 600V	175°C	VW-I	SAE-AMS-DTL-23053/13	UL VW-I, 200°C, very flexible, high-temperature and solvent resistance, made from fluoroelastomer. Size: 3.2-50.8mm (1/8" to 2")
H-200E (TW)	Modified Fluoroelastomer	Very Flexible	2:1	-55°C to +200°C, 600V	175°C	VW-I	SAE-AMS-DTL-23053/13	UL VW-I, 200°C, very flexible, high-temperature and solvent resistance, made from fluoroelastomer. Size: 9.5-50.8mm (3/8" to 2")
HTFE	Modified Teflon	Semi-rigid Thin Wall	2:1	-65°C to +260°C, 600V	350°C	Self-extinguish	SAE-AMS-DTL-23053/12	Chemically inert modified Teflon tubing. Size: AWG 20-0 (1.52-11.94mm)
H-2(XT), H-2(XT)HF	Polyolefin	Thin Wall	Non-Shrink	-55°C to +125°C, 600V	—	VW-I	—	Non-shrink, Irradiated flexible flame-retardant tubing. Size: AWG 18-0 & 3/8" to 1/2"
HFSP	Polyolefin	Thin Wall	2:1	-45°C to +100°C	120°C	—	—	Provide strength and protection to optical fiber splices
Mastic Tape 55								Stress relief mastic for power cable accessory
Mastic Tape 65								Anti-tracking sealing mastic for power cable termination and joints to provide water proof and void-filling
Mastic Tape 75								Black sealing mastic for power cable termination and joints to provide waterproof and void-filling

* Shrink temp.: Min. shrink temp & Min. fully recovery temp. listed

CROSS REFERENCES

Our type	Raychem	Sumitomo	DSG-Canusa	Alpha	3M	LG
H-2(Z)	VERSAFIT V2	F2(Z)	DERAY-H			GSHS-I625G
H-2(3X)	VERSAFIT 3X	F2(3X)				
H-2(CB)	VERSAFIT V4	F3(Z)	DERAY ITW			GSHS-I625GT
H-2(HF)	ZHTM	SUMITUBE-NH	CZT 200			
H-2R	CRN	B8	CHM I40	FIT 295	SR350	
H-2F	RNF-100/VERSAFIT	B2(Z)	CPX 100/CPX 876/DERA-I	FIT 221	FP 301(I&2)	GSHS-I635F
H-2F(3X)	RNF-3000	B2(3X)	CPX 300/DERAY-I 3000	FIT321V		GSHS-3635
H-2F(4X)	RP-4800					
H-2F(Y/G) 2:I	DCPT 2:I	B2(Y/G)	CPX 201	FIT206	GYS	GSHS-I635Y/G
H-2F(Y/G) 3:I	DCPT 3:I		DERAY IGY			
H-I	CGPE-I05	C	DERAY HB			
H-2(LS)	LSTT		DERAY LSB			
H-5(3X)(4X)	ATUM	W3B2	DERAY IAKT	FIT321	EPS300	
H-5(3X)-M	SST					
HBK	ES-2000/RBK	SA2	CBK	FIT421	EPS4000,SMS	GSHS-4635WS
H-5(2000)	AP-2000	O2				GSHS-2690NW
H-5(3000)	CGAT				EPS300	
H-5(3X)(4X)-F	ATUM	W3B2	DERAY IAKT	FIT321	EPS300	
HRA2	MWTM		CFM			LG-PMWT
HRA3	WCSM/XCSM		CFW	FIT700		LG-PHWT
HFRA3	BSTSFR/SSTFR		FCFW		HDT	
HRA-6X			CFHR	FIT621		
HSTV	TCS2		CFTV			LG-CATV
HRS			PLA			
HAT	HVTM		DATS/CNTT			
HBT/HBM	BBIT/BPTM		CBTM/CBTH		BBI	LG-BBHV
HSCT			HSCT			
HSEC	SSC/ESC		CEC			
HSC-100		SCR-100	CSCR			
H-150K	RT375/RNF-I50	K2				GSHS-I650F
H-175K	KYNAR, RW-I75	K	CKN-I75/DERAY KYI75	FIT350		GSHS-I675
HDR	DR-25		DERAY V25			
HDR(TW)	DR-25-TW		DERAY V25 TW			
H-200E	Viton	FE3	DERAY VT220	FIT650	Viton	
HTFE	TFE		DERAY PTFE			
H-2(XT)		IRRAX TUBE F2				
HFSP	SMOUV	FSP-I	CFSP			

Notes: This is a guide only, our products may not be a direct equivalent as listed. Please check with us before ordering.