J. M. Engineering Co.

Heat Shrink Sleeves

Dual Wall Heat Shrink Sleeves

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SBRS-(2X)G

Dual Wall Adhesive-Lined Heat-Shrink Polyolefin Tubing

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

RoHS c UL US **2:1**

Features

- 2:1 shrink ratio
- Superior sealing against water, moisture or other contaminants
- Inner adhesive bonds to plastics, steel and polyethylene
- Out jacket flame retardant
- Continuous operating temperature:-45 - 125
- Fully shrink temperature: ≥ 125

Dimensions

Size		As Supplied	After Recovery			Standard Package
Inch	mm	Internal Diameter mm	Internal Diameter mm	Total Wall Thickness mm	Adhesive Thickness mm	Spool Length M/spool
1/16	1.6	1.6	0.8	0.60±0.30	0.30±0.2	200
3/32	2.4	2.4	1.2	0.70±0.30	0.35±0.2	200
1/8	3.2	3.2	1.6	0.70±0.30	0.35±0.2	200
3/16	4.8	4.8	2.4	0.80±0.30	0.40±0.2	100
1/4	6.4	6.4	3.2	0.80±0.30	0.40±0.2	100
5/16	7.9	7.9	3.9	0.90±0.30	0.45±0.2	100
3/8	9.5	9.5	4.8	0.90±0.30	0.45±0.2	50
1/2	12.7	12.7	6.4	0.95±0.40	0.45±0.2	1.22 OR 25M/Roll
5/8	15.9	15.9	7.9	0.95±0.40	0.45±0.2	1.22 OR 25M/Roll
3/4	19.1	19.1	9.5	1.00±0.40	0.45±0.2	1.22 OR 25M/Roll
1	25.4	25.4	12.7	1.10±0.40	0.50±0.2	1.22 OR 25M/Roll
1 1/4	31.8	31.8	15	1.15±0.40	0.50±0.2	1.22 OR 25M/Roll
1 1/2	38.1	38.1	19	1.25±0.40	0.50±0.2	1.22 OR 25M/Roll
1/ 3/4	44.5	44.5	22	1.35±0.40	0.55±0.2	1.22 OR 25M/Roll
2	50.8	50.8	25.4	1.50±0.40	0.60±0.2	1.22 OR 25M/Roll

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥10.4	11.5
Elongation(%)	ASTM D2671	≥300	450
Tensile Strengtn after aging (MPa)	UL224 158 X168hr	≥7.3	8.5
Elongation after aging(%)	UL224 158 X168hr	≥200	350
Dieletric strength(kv/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥$1X10^{14}$	$2.5X10^{14}$
Flammability	ASTM D2671B	Self-extinguish within 30s	

Hot Melt Adhesive Property

Property	Test Method	Stantard
Water Absorption	ASTM D570	≤0.2%
Sofening Point( )	ASTM E28	90±5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm

SBRS-(3X)G

Dual Wall Adhesive-Lined Heat-Shrink Polyolefin Tubing

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

RoHS c UL US **3:1**

Features

- 3:1 shrink ratio
- Low longitudinal shrinkage
- Flame retardant (out jacket only)
- Super sealing against water, moisture or other contaminates
- Continuous operating temperature:-45 - 125
- Fully shrink temperature: ≥ 125

Dimensions

Size		Expanded	After Recovery			Standard Package
Inch	mm	Internal Diameter mm	Internal Diameter mm	Total Wall Thickness mm	Adhesive Thickness mm	Spool Length M/spool
3/32	2.4	2.4	0.8	0.80±0.30	0.40±0.20	200
1/8	3.2	3.2	1.0	0.90±0.30	0.40±0.20	200
3/16	4.8	4.8	1.6	1.05±0.30	0.40±0.20	100
1/4	6.4	6.4	2.2	1.25±0.30	0.45±0.20	100
5/16	7.9	7.9	2.7	1.35±0.30	0.50±0.20	100
3/8	9.5	9.5	3.2	1.45±0.30	0.50±0.20	50
1/ 2	12.7	12.7	4.2	1.65±0.30	0.50±0.20	1.22 OR 25M/Roll
5/8	15	15	5.2	1.80±0.30	0.55±0.30	1.22 OR 25M/Roll
3/4	19.1	19.1	6.3	1.95±0.30	0.60±0.30	1.22 OR 25M/Roll
1	25.4	25.4	8.5	2.00±0.40	0.60±0.30	1.22 OR 25M/Roll
1-1/4	30	30	10.2	2.15±0.40	0.65±0.30	1.22 OR 25M/Roll
1-1/2	39	39	13.5	2.45±0.40	0.60±0.30	1.22 OR 25M/Roll
2	50	50	17	2.75±0.40	0.75±0.30	1.22 OR 25M/Roll
5/2	64	64	21	3.05±0.40	0.80±0.30	1.22 OR 25M/Roll
3	75	75	25	3.05±0.40	1.05±0.40	1.22 OR 25M/Roll
7/2	90	90	30	3.10±0.50	1.05±0.40	1.22 OR 25M/Roll
4	100	100	34	3.10±0.50	1.05±0.40	1.22 OR 25M/Roll
5	125	125	42	3.10±0.50	1.10±0.40	1.22 OR 25M/Roll

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥ 10.4	11.5
Elongation(%)	ASTM D2671	≥ 300	450
Tensile Strengtn after aging (MPa)	UI224 158 X168hr	≥ 7.3	8.5
Elongation after aging(%)	UI224 158 X168hr	≥ 200	350
Flammability	ASTM D2671B	Self-extinguish within 30s	Self-extinguish within 30s
Dieletric strength(kV/mm)	IEC 60243	≥ 15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥ $1X10^{14}$	$2.5X10^{14}$

Hot Melt Adhesive Property

Property	Test Method	Stantard
Water Absorption	ASTM D570	0.2%
Sofening Point( )	ASTM E28	90 ± 5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm

SBRS-(4X)G

Dual Wall Adhesive-Lined Heat-Shrink Polyolefin Tubing

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

RoHS c UL US **4:1**

Features

- 4:1 shrink ratio
- Low longitudinal shrinkage
- Superior sealing against water, moisture or other contaminants
- Ideal for connector sealing covering large diameter differences
- Inner adhesive bonds to plastics, steel and polyethylene
- Flame retardant(out jacket only)
- Continuous operating temperature:-45 - 125
- Fully shrink temperature: ≥ 125

Dimensions

Size		Expanded	After Recovery			Standard Package
Inch	mm	Internal Diameter mm	Internal Diameter mm	Total Wall Thickness mm	Adhesive Thickness mm	Spool Length M/spool
5/32	4.0	4.0	1.0	1.05±0.30	0.50±0.30	200
1/4	6.0	6.0	1.5	1.15±0.30	0.50±0.30	100
5/16	8.0	8.0	2.0	1.55±0.30	0.60±0.30	50
1/ 2	12.0	12.0	3.0	1.75±0.30	0.60±0.30	1.22 OR 25M/Roll
5/8	16.0	16.0	4.0	2.00±0.30	0.70±0.30	1.22 OR 25M/Roll
25/32	20.0	20.0	5.0	2.30±0.40	0.70±0.30	1.22 OR 25M/Roll
1	24.0	24.0	6.0	2.60±0.40	0.75±0.30	1.22 OR 25M/Roll
1-1/4	32.0	32.0	8.0	3.00±0.40	0.90±0.30	1.22 OR 25M/Roll
2	52.0	52.0	13.0	3.35±0.50	0.95±0.30	1.22 OR 25M/Roll

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥10.4	11.5
Elongation(%)	ASTM D2671	≥300	450
Tensile Strengtn after aging (MPa)	UI224 158 X168hr	≥7.3	8.5
Elongation after aging(%)	UI224 158 X168hr	≥200	350
Flammability	ASTM D2671B	Self-extinguish within 30s	Self-extinguish within 30s
Dieletric strength(kV/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥1X10^{14}	2.5X10^{14}

Hot Melt Adhesive Property

Property	Test Method	Standard
Water Absorption	ASTM D570	0.2%
Sofening Point( )	ASTM E28	90±5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm

SBRS-(2X)QF

Dual Wall Adhesive-Lined Heat-Shrink Tubing for Automotive Oil-pipe Protection

SBRS-(2X)QF Adhesive-lined Heat-shrinkable Tubing is specially designed for Automotive Oil-pipe Protection, providing preventive protection to break line, fuel line, hydraulic line and other metal pipeline which is subject to bending or clamping during manufacturing, installation or operation.

RoHS c US 2:1

Features

- Semi-rigid outer jacket for mechanical damage prevention
- Adhesive inner layer for sealing against moisture and corrosion
- Easy installation
- High strength bonding, the adhesive layer is hard to be peeled off from pipeline
- Continuous operating temperature:-45 - 105
- Fully shrink temperature: ≥ 125

Dimensions

Size	Expanded	After Recovery			Standard Package
mm	Internal Diameter Min(mm)	Internal Diameter Max(mm)	Total Wall Thickness Nom(mm)	Adhesive Thickness Nom(mm)	Spool Length M/spool
Φ6.0	6	4.5	1.20±0.20	0.20±0.05	300
Φ8.0	8	6.1	1.30±0.20	0.20±0.05	200
Φ11.0	11	7.1	1.30±0.20	0.20±0.05	200
Φ13.0	13	9.8	1.30±0.20	0.20±0.05	100
Φ15.0	15	11.5	1.30±0.20	0.20±0.05	100

Technical Data

Property	Test Method	Standard Performance
Tensile Strengtn(MPa)	ASTM D2671	≥12
Elongation(%)	ASTM D2671	≥ 300
Longitudinal change	ASTM D2671	-10%~+10%
Tensile strength after aging(MPa)	120 X24h	≥12
Non-deformability	140 ,10min,2kg/cm^2 ,loaded 5min	≤60%
Low-temperature impact	ASTM D 746	-35 ,no cracking
Impact resistance to fall	Room temperature&-40 X30min, impacted by a weight of 200g, 0.5m high	no cracking
Stress-crack resistance	ASTM D 1693	no cracking
Chemical reagents resistance: 0.1mol/L H_2SO_4,0.1mol/L NaOH, Brake fluid, Engine oil, Gasoline	No abnormal in appearance	20 ,120hr

Adhesive

Property	Test Method	Standard
Water Absorption	ASTM D570	0.5%
Sofening Point( )	ASTM E28	105±5
Strength of pearing(AL)	ASTM D 1000	120N/25mm
Strength of pearing(PE)	ASTM D 1000	80N/25mm

SBRS-(3X, 4X) GF

Dual Wall Adhesive Lined Cross -linked Polyolefin tubing

Adhesive lined heat shrink tubing ideal for applications where both exceptional flame retardancy and environmental sealing capabilities are required

RoHS c US **3:1&4:1**

Features

- 3:1&4:1 shrink ratio
- Highly flame retardant
- Superior sealing against water, moisture or other contaminants
- High shrink ratio allows for coverage of irregularly shaped connectors and components
- Superior sealing against water, moisture and other contaminants
- Continuous operating temperature:-55 - 135
- Fully shrink temperature: ≥ 125
- Meets MIL-DTL-23053/4

Dimensions

SBRS-(3X)GF

Size		Expanded	After Recovery			Standard Package
Inch	mm	Internal Diameter mm	Internal Diameter mm	Total Wall Thickness mm	Adhesive Thickness mm	Spool Length M/spool
1/8	3.2	3.2	1.0	0.90±0.30	0.40±0.20	200
3/16	4.8	4.8	1.6	1.05±0.30	0.40±0.20	100
1/4	5.4	5.4	2.2	1.25±0.30	0.45±0.20	100
5/16	7.9	7.9	2.7	1.35±0.30	0.45±0.20	100
3/8	9.5	9.5	3.2	1.45±0.30	0.50±0.20	50
1/ 2	12.7	12.7	4.2	1.650±0.30	0.50±0.20	1.22 OR 25M/Roll
5/8	15	15	5.2	1.80±0.30	0.55±0.30	1.22 OR 25M/Roll
3/4	19.1	19.1	6.3	1.95±0.30	0.60±0.30	1.22 OR 25M/Roll
1	25.4	25.4	8.5	2.00±0.40	0.60±0.30	1.22 OR 25M/Roll
1-1/4	30	30	10.2	2.15±0.40	0.65±0.30	1.22 OR 25M/Roll
1-1/2	39	39	13.5	2.45±0.40	0.75±0.30	1.22 OR 25M/Roll
2	50	50	17.0	2.75±0.40	0.80±0.30	1.22 OR 25M/Roll

SBRS-(4X)GF

Size		Expanded	After Recovery			Standard Package
Inch	mm	Internal Diameter mm	Internal Diameter mm	Total Wall Thickness mm	Adhesive Thickness mm	Spool Length M/spool
5/32	4.0	4,0	1.0	1.05±0.30	0.50±0.20	200
1/4	6.0	6,0	1.5	1.15±0.30	0.50±0.20	100
5/16	8.0	8,0	2.0	1.55±0.30	0.60±0.25	50
1/ 2	12.0	12,0	3.0	1.75±0.30	0.60±0.25	1.22 OR 25M/Roll
5/8	16.0	16,0	4.0	2.00±0.35	0.70±0.30	1.22 OR 25M/Roll
25/32	20.0	20,0	5.0	2.30±0.40	0.70±0.30	1.22 OR 25M/Roll
1	24.0	24,0	6.0	2.60±0.40	0.75±0.30	1.22 OR 25M/Roll
1-1/4	32.0	32,0	8.0	3.00±0.50	0.90±0.30	1.22 OR 25M/Roll
2	52.0	52,0	13.0	3.35±0.50	0.95±0.30	1.22 OR 25M/Roll

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥12	12.5
Elongation(%)	ASTM D2671	≥300	450
Tensile Strengtn after aging (MPa)	MIL-DTL-23053/4	≥8.4	8.5
Elongation after aging(%)	MIL-DTL-23053/4	≥100	350
Dieletric strength(kv/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥1X10^{14}	2.5X10^{14}

Adhesive

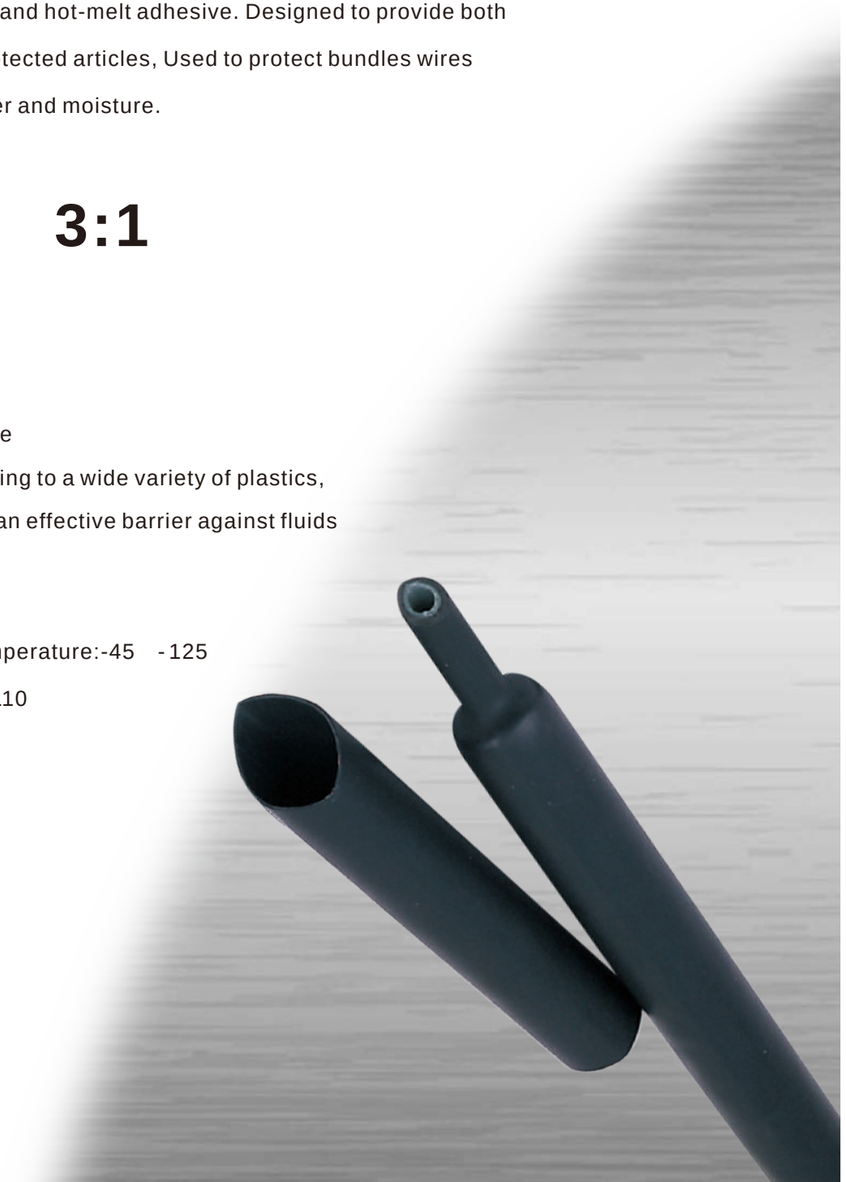
Property	Test Method	Standard
Water Absorption	ASTM D570	0.2%
Sofening Point( )	ASTM E28	90±5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm

SBRS-(3X)GLW

Flexible, Thick Adhesive-Lined Dual Wall Heat-Shrink Tubing

Flexible, Thick Adhesive-Lined Dual Wall Heat-Shrink Tubing is manufactured by co-extrusion of polyolefin and hot-melt adhesive. Designed to provide both insulation and sealing for protected articles, Used to protect bundles wires and metal tubes against water and moisture.

RoHS c UL us **3:1**



Features

- Low longitudinal shrinkage
- Thick adhesive liner bonding to a wide variety of plastics, rubber and metals forms an effective barrier against fluids and moisture,
- Flexible
- Continuous operating temperature:-45 -125
- Min shrink temperature:110
- Shrink ratio: 3:1

Dimensions

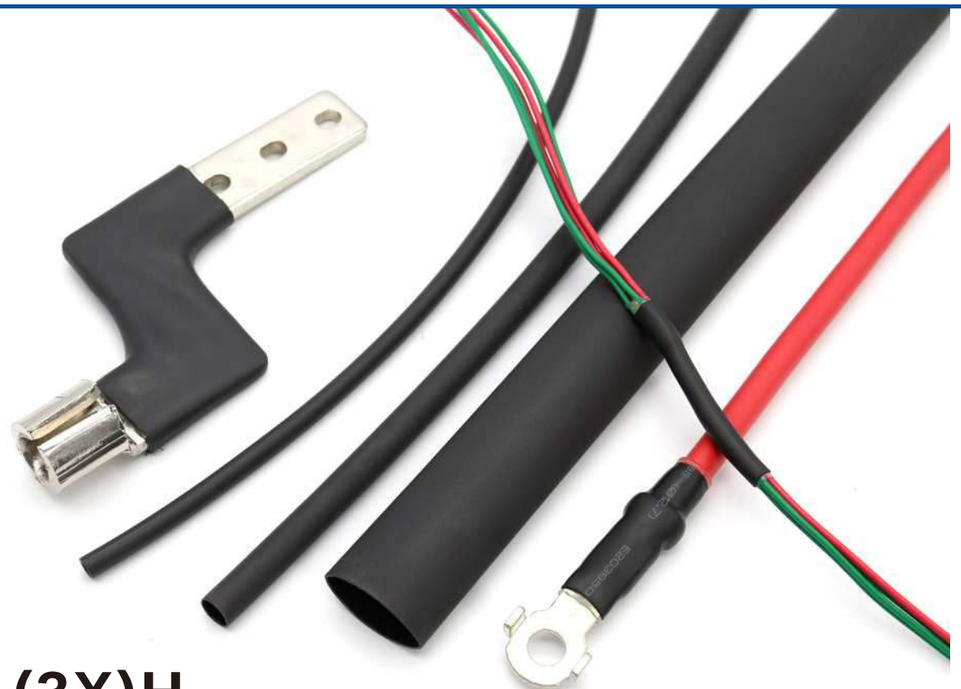
Size		Expanded	After Recovery			Standard Package
Inch	mm	Internal Diameter mm	Internal Diameter mm	Total Wall Thickness mm	Adhesive Thickness mm	Spool Length M/spool
1/8	3.2	3.2	1.0	0.90±0.30	0.45±0.20	200
3/16	4.8	4.8	1.6	1.20±0.30	0.55±0.20	100
1/4	6.4	6.4	2.2	1.25±0.30	0.55±0.20	100
5/16	7.9	7.9	2.7	1.35±0.30	0.65±0.20	100
3/8	9.5	9.5	3.2	1.35±0.30	0.65±0.20	50
1/2	12.7	12.7	4.2	1.55±0.40	0.75±0.20	1.22 OR 25M/Roll
5/8	15.0	15.0	5.2	1.65±0.40	0.75±0.20	1.22 OR 25M/Roll
3/4	19.1	19.1	6.3	1.90±0.40	0.85±0.20	1.22 OR 25M/Roll
1	25.4	25.4	8.5	2.00±0.40	0.90±0.20	1.22 OR 25M/Roll
5/4	30.0	30.0	10.2	2.05±0.40	0.90±0.20	1.22 OR 25M/Roll
1-1/2	38.1	38.1	13.5	2.35±0.40	1.05±0.20	1.22 OR 25M/Roll

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥10.4	11
Elongation(%)	ASTM D2671	≥300	450
Tensile Strengtn after aging (MPa)	UI224 158 X168hr	≥7.3	8.5
Elongation after aging(%)	UI224 158 X168hr	≥200	350
Dieletric strength(kV/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥1X10^{14}	2.5X10^{14}

Adhesive

Property	Test Method	Standard
Water Absorption	ASTM D570	0.2%
Sofening Point( )	ASTM E28	90±5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm



SBRS-(3X)H

Halogen Free Dual Wall Adhesive-Lined Heat-Shrink Polyolefin Tubing

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

RoHS c UL US **3:1**

Features

- 3:1 shrink ratio
- Halogen free
- Super sealing against water, moisture or other contaminates
- Continuous operating temperature:-45 - 125
- Fully shrink Temperature: ≥ 125
- Shrink ratio: 3:1
- Sony compliant

Dimensions

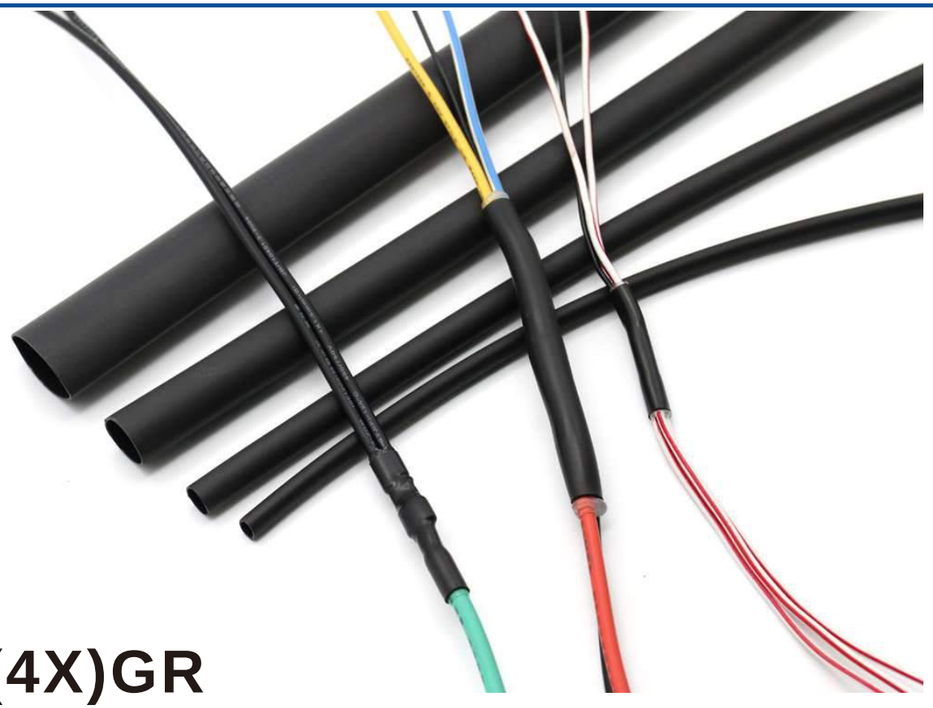
Size		Expanded	After Recovery			Standard Package
Inch	mm	Internal Diameter mm	Internal Diameter mm	Total Wall Thickness mm	Adhesive Thickness mm	Spool Length M/spool
3/32	2.4	2,4	0.8	0.85±0.15	0.40±0.10	200
1/8	3.2	3,2	1.0	0.95±0.15	0.40±0.10	200
3/16	4.8	4,8	1.6	1.10±0.15	0.40±0.10	100
1/4	6.4	6,4	2.2	1.20±0.15	0.45±0.12	100
5/16	7.9	7,9	2.7	1.35±0.15	0.50±0.12	100
3/8	9.5	9,5	3.2	1.45±0.20	0.50±0.12	50
1/ 2	12.7	12,7	4.2	1.70±0.20	0.50±0.12	1.22 OR 25M/Roll
5/8	15	15	5.2	1.80±0.20	0.55±0.15	1.22 OR 25M/Roll
3/4	19.1	19,1	6.3	2.00±0.20	0.55±0.15	1.22 OR 25M/Roll
1	25.4	25,4	8.5	2.10±0.25	0.55±0.15	1.22 OR 25M/Roll
1-1/4	30	30	10.2	2.20±0.25	0.60±0.15	1.22 OR 25M/Roll
1-1/2	39	39	13.5	2.40±0.25	0.60±0.15	1.22 OR 25M/Roll
2	50	50	17	2.70±0.25	0.70±0.15	1.22 OR 25M/Roll
5/2	64	64	21	3.00±0.30	0.70±0.15	1.22 OR 25M/Roll
3	75	75	25	3.00±0.30	1.00±0.20	1.22 OR 25M/Roll
7/2	90	90	30	3.00±0.30	1.00±0.20	1.22 OR 25M/Roll
4	100	100	34	3.00±0.30	1.00±0.20	1.22 OR 25M/Roll
5	125	125	42	3.00±0.30	1.00±0.20	1.22 OR 25M/Roll

Technical Data

Property	Test Method	Standard
Tensile Strengtn(MPa)	ASTM D2671	≥10.4
Elongation(%)	ASTM D2671	≥300
Tensile Strengtn after aging (MPa)	UI224 158 X168hr	≥7.3
Elongation after aging(%)	UI224 158 X168hr	≥200
Flammability	ASTM D2671B	Self-extinguish within 30s
Dieletric strength(kV/mm)	IEC 60243	≥15
Volume resistivity(Ω.cm)	IEC 60093	≥1X10^{14}

Adhesive

Property	Test Method	Standard
Water Absorption	ASTM D570	0.5
Sofening Point( )	ASTM E28	90±5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm



SBRS-(4X)GR

High Shrink Ratio, Semi-rigid Dual Wall Adhesive-Lined Cross-Linked Polyolefin Tubing

Adhesive Semi-rigid, dual wall heat shrink tubing designed to seal& environmentally protect splice in the most,

RoHS c UL US **4:1**

Features

- 4:1 shrink ratio
- Super sealing against water, moisture or other contaminates
- Continuous operating temperature:-45 - 125
- Fully shrink Temperature: ≥ 125
- Shrink ratio: 4:1

Dimensions

Size		Expanded	After Recovery			Standard Package
Inch	mm	Internal Diameter Min(mm)	Internal Diameter Max(mm)	Total Wall Thickness Nom(mm)	Adhesive Thickness Nom(mm)	Spool Length M/spool
2/13	4	4.0	0.95	1.40±0.30	0.60±0.20	200
1/4	6	6.0	1.27	1.70±0.30	0.80±0.20	100
5/16	8	8.0	1.65	2.00±0.30	0.95±0.20	100
	10	10.0	2.00	2.30±0.40	1.10±0.20	1.22 OR 25M/Roll
1/ 2	12	12.0	2.41	2.45±0.40	1.20±0.20	1.22 OR 25M/Roll
3/4	18	18.0	4.45	2.60±0.40	1.34±0.30	1.22 OR 25M/Roll

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥10.4	11.5
Elongation(%)	ASTM D2671	≥300	450
Tensile Strengtn after aging (MPa)	UL224 158 X168hr	≥7.3	8.5
Elongation after aging(%)	UI224 158 X168hr	≥200	350
Dieletric strength(kV/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥1X10^{14}	2.5X10^{14}

Adhesive

Property	Test Method	Standard
Water Absorption	ASTM D570	0.2%
Sofening Point( )	ASTM E28	90±5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm

SBRS-(4X)GRF

Highly Flame Retardant
Dual Wall Heat Shrink Polyolefin Tubing

Highly flame retardant, semi-rigid, cross-linked dual wall heat-shrink tubing designed for splice sealing and fuse link protection

RoHS c UL US **4:1**

Features

- 3:1&4:1 shrink ratio to cover varying splice configurations and substrate profiles
- Jacket and adhesive are exceptionally flame retardant
- Economical way to environmentally seal and protect automotive fuse-links, splice and terminals
- Highly resistance to common automotive fluids and solvents
- Semi-rigid and mechanically tough outer jacket provides added strain relief and excellent abrasion protection
- Thick adhesive liner forms an effective barrier against fluids and moisture penetration
- Continuous operating temperature:-45 -125
- Fully shrink Temperature: ≥125

Dimensions

Size		Expanded	After Recovery			Standard Package
Inch	mm	Internal Diameter Min(mm)	Internal Diameter Max(mm)	Total Wall Thickness Nom(mm)	Adhesive Thickness Nom(mm)	
2/13	4	4.0	0.95	1.40±0.30	0.60±0.20	1.22
1/4	6	6.0	1.27	1.70±0.30	0.80±0.20	1.22
5/16	8	8.0	1.65	2.00±0.30	0.95±0.20	1.22
	10	10.0	2.00	2.30±0.40	1.10±0.20	1.22
1/ 2	12	12.0	2.41	2.45±0.40	1.20±0.20	1.22
3/4	18	18.0	4.45	2.60±0.40	1.34±0.30	1.22

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥10.4	11.5
Elongation(%)	ASTM D2671	≥300	450
Tensile Strengtn after aging (MPa)	UL224 158 X168hr	≥7.3	8.5
Elongation after aging(%)	UL224 158 X168hr	≥200	350
Dieletric strength(kV/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥1X10^{14}	2.5X10^{14}

Adhesive

Property	Test Method	Standard
Water Absorption	ASTM D570	0.2%
Sofening Point( )	ASTM E28	90±5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm

SBRS-(4X)GBK

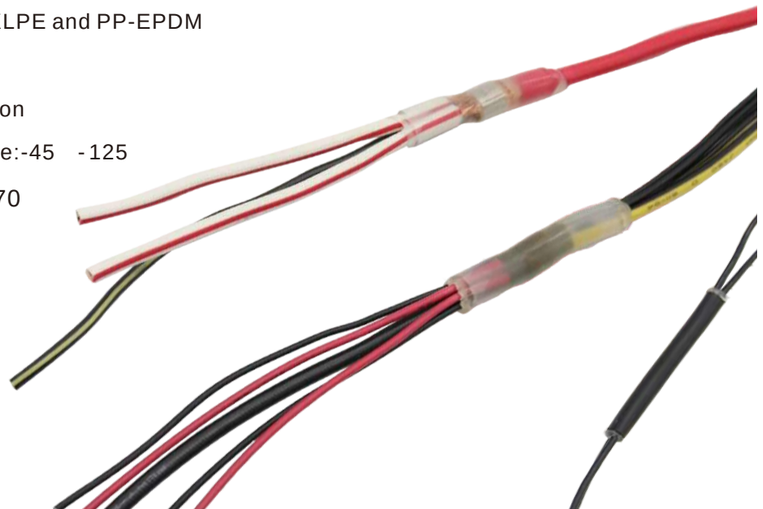
Adhesive-Lined Cross-Linked Polyolefin Tubing

Adhesive lined heat shrink specifically designed to insulate, seal and protect in-line splices in automotive wire harnesses and electronic assemblies

RoHS c UL US **4:1**

Features

- 4:1 shrink ratio allows for fewer sizes to cover numerous splice configurations and diameters.
- Seals and protects against water, moisture and chemicals
- Adhesive bonds readily to PVC, XLPE and PP-EPDM cable jackets
- Shrinks rapidly for quick installation
- Continuous operating temperature:-45 - 125
- Initial shrinkage temperature:70
- Fully shrink Temperature: ≥ 110
- Black and clear



Dimensions

Size		Expanded	After Recovery			Standard Package
Inch	mm	Internal Diameter Min(mm)	Internal Diameter Max(mm)	Total Wall Thickness Nom(mm)	Adhesive Thickness Nom(mm)	
5/32	4	4.0	0.95	1.40±0.30	0.60±0.20	1.22 OR 25M/Roll
1/4	6	6.0	1.27	1.70±0.30	0.80±0.20	1.22 OR 25M/Roll
5/16	8	8.0	1.65	2.00±0.30	0.95±0.20	1.22 OR 25M/Roll
2/5	10	10.0	2.00	2.20±0.40	1.10±0.20	1.22 OR 25M/Roll
1/ 2	12	12.0	2.41	2.45±0.40	1.20±0.20	1.22 OR 25M/Roll
3/4	18	18.0	4.45	2.60±0.40	1.34±0.30	1.22 OR 25M/Roll

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥10.4	11.5
Elongation(%)	ASTM D2671	≥300	450
Tensile Strengtn after aging (MPa)	UL224 158 X168hr	≥7.3	8.5
Elongation after aging(%)	UL224 158 X168hr	≥200	350
Dieletric strength(kV/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥ $1X10^{14}$	$2.5X10^{14}$

Adhesive

Property	Test Method	Standard
Water Absorption	ASTM D570	0.2%
Sofening Point( )	ASTM E28	90±5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm

SBRSM

Flame Retardant Medium Wall Adhesive Lined Heat Shrink Tubing

Medium wall adhesive-lined heat Shrink tubing suitable for a variety of low voltage electrical and mechanical application, where lighter weight and greater flexibility are important.

RoHS **3:1**

Features

- Seals and protects cable splices and terminations
- High resistance to impact and abrasion
- Thermoplastic adhesive liner for complete environmental protection and insulation
- Continuous operating temperature:-45 -125
- Fully shrink temperature: 125

Dimensions

Size	Expanded	After Recovery				Standard Package
mm	Internal Diameter mm	Internal Diameter mm	Jacket Thickness mm	Adhesive Thickness mm	Total Wall Thickness mm	M/pc
10.2/3.0	10.2	3.0	1.40±0.20	0.35±0.15	1.75±0.30	1.22
16.0/5.0	16.0	5.0	1.50±0.20	0.40±0.15	1.90±0.30	1.22
19.1/5.6	19.1	5.6	2.00±0.20	0.45±0.15	2.45±0.40	1.22
25.0/8.0	25.0	8.0	2.00±0.20	0.45±0.15	2.45±0.40	1.22
28.0/9.0	28.0	9.0	2.00±0.20	0.50±0.20	2.60±0.40	1.22
35.0/10.2	35.0	10.2	2.20±0.20	0.78±0.20	2.70±0.40	.1.22
38.1/12.0	38.1	12.0	2.20±0.20	0.50±0.20	2.70±0.40	1.22
43.2/12.7	43.2	12.7	2.20±0.25	0.50±0.20	2.70±0.40	1.22
52.1/16.0	52.1	16.0	2.30±0.25	0.50±0.20	2.80±0.45	1.22
55.0/16.0	55.0	16.0	2.30±0.25	0.50±0.20	2.80±0.45	1.22
63.0/19.0	63.0	19.0	2.50±0.25	0.50±0.20	3.00±0.45	1.22
75.0/22.0	75.0	22.0	2.60±0.25	0.50±0.20	3.00±0.45	1.22
85.0/25.0	85.0	25.0	2.80±0.35	0.50±0.20	3.30±0.45	1.22
95.0/29.0	95.0	29.0	3.10±0.45	0.60±0.20	3.70±0.50	1.22
115.0/34.0	115.0	34.0	3.10±0.45	0.60±0.20	3.70±0.50	1.22
140.0/42.0	140.0	42.0	3.10±0.45	0.60±0.20	3.70±0.50	1.22
160.0/48.0	160.0	48.0	3.10±0.45	0.60±0.20	3.70±0.50	1.22
180.0/58.0	180.0	58.0	3.10±0.45	0.60±0.20	3.70±0.50	1.22
200.0/60.0	≥200.0	≤60.0	3.10±0.45	0.60±0.20	3.70±0.50	1.22
230.0/69.0	≥230.0	≤69.0	3.10±0.45	0.60±0.20	3.70±0.50	1.22

Note: Tubing without adhesive is available upon request

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥10.4	11.5
Elongation(%)	ASTM D2671	≥300	450
Tensile Strengtn after aging (MPa)	UL224 158 X168hr	≥7.3	8.5
Elongation after aging(%)	UL224 158 X168hr	≥200	350
Dieletric strength(kV/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥1X10^{14}	2.5X10^{14}

Adhesive

Property	Test Method	Standard
Water Absorption	ASTM D570	0.2%
Sofening Point( )	ASTM E28	95±5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm

SBRSW

Flame Retardant Adhesive-Lined Heavy Wall Cross-linked Polyolefin Heat Shrink Tubing

Adhesive-lined heavy wall heat shrink tubing insulates and protects electrical splice and terminations where maximum flame retardancy and exceptional insulating and sealing characteristics are required.

RoHS **3:1**

Features

- 3:1 shrink ratio
- Flame retardant
- SBRSW tubing will not split or rupture during installation, when overheated
- Thermoplastic adhesive liner for complete environmental protection and insulation
- Continuous operating temperature:-45 -125
- Fully shrink temperature: 125

Dimensions

Size	Expanded	After Recovery				Standard Package M/pc
mm	Internal Diameter mm	Internal Diameter mm	Jacket Thickness mm	Adhesive Thickness mm	Total Wall Thickness mm	
9.0/3.0	9.0	3.0	2.00±0.35	0.45±0.20	2.45±0.35	1.22
13.0/4.0	13.0	4.0	2.30±0.35	0.45±0.20	2.80±0.35	1.22
20.0/6.0	20.0	6.0	2.30±0.35	0.60±0.20	2.90±0.35	1.22
28.0/9.0	28.0	9.0	2.30±0.35	0.70±0.20	3.00±0.40	1.22
33.0/10.2	33.0	10.2	2.80±0.35	0.70±0.20	3.60±0.40	1.22
38.1/12.0	38.1	12.0	3.10±0.35	0.70±0.20	3.85±0.50	1.22
43.2/12.7	43.2	12.0	3.50±0.35	0.70±0.20	4.20±0.50	1.22
51.0/16.0	55.0	16.0	3.85±0.40	0.70±0.20	4.50±0.50	1.22
70.0/21.0	75.0	22.0	3.65±0.40	0.70±0.20	4.40±0.50	1.22
85.0/25.0	85.0	25.0	3.65±0.40	0.70±0.20	4.40±0.50	1.22
105.0/30.0	105.0	30.0	3.85±0.40	0.70±0.20	4.50±0.50	1.22
120.0/36.0	120.0	36.0	3.85±0.40	0.70±0.20	4.50±0.50	1.22
130.0/36.0	130.0	36.0	3.85±0.40	0.70±0.20	4.50±0.50	1.22
140.0/42.0	140.0	42.0	3.85±0.40	0.70±0.20	4.50±0.50	1.22

Note: Tubing without adhesive is available upon request

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥10.4	11.5
Elongation(%)	ASTM D2671	≥300	450
Tensile Strengtn after aging (MPa)	UL224 158 X168hr	≥7.3	8.5
Elongation after aging(%)	Ul224 158 X168hr	≥200	350
Dieletric strength(kV/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥1X10^{14}	2.5X10^{14}

Adhesive

Property	Test Method	Standard
Water Absorption	ASTM D570	0.2%
Sofening Point( )	ASTM E28	95±5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm

SBRSM-NF

Medium Wall Adhesive-lined Cross-linked Polyolefin Heat Shrink Tubing

Medium wall heat shrinkable tubing suitable for a variety of low voltage electrical and mechanical application, where lighter weight and greater flexibility are important

RoHS **3:1**

Features

- 3:1 shrink ratio, not Flame-retardant
- Seal and protect cable splice and terminations
- Rugged mechanical protection
- Complete moisture sealing
- Strain relief for delicate wire connections
- High resistance to impact and abrasion
- Thermoplastic adhesive liner for complete environmental protection and insulation
- Continuous operating temperature:-45 -125
- Fully shrink temperature: 125
- RoHS conpliant

Dimensions

Size	Expanded	After Recovery				Standard Package
mm	Internal Diameter mm	Internal Diameter mm	Jacket Thickness mm	Adhesive Thickness mm	Total Wall Thickness mm	M/pc
6.0/2.0	6.0	2.0	1.40±0.20	0.45±0.15	1.85±0.30	1.22
8.0/2.0	8.0	2.0	1.40±0.20	0.45±0.15	1.85±0.30	1.22
10.2/3.0	10.2	3.0	1.40±0.20	0.50±0.15	1.90±0.30	1.22
12.0/3.0	12.0	3.0	1.40±0.20	0.50±0.15	1.90±0.30	1.22
16.0/5.0	16.0	5.0	1.50±0.20	0.55±0.20	2.15±0.35	1.22
19.1/5.6	19.1	5.6	1.80±0.20	0.60±0.20	2.40±0.40	1.22
22.0/6.0	22.0	6.0	2.00±0.30	0.60±0.20	2.60±0.40	1.22
25.0/8.0	25.0	8.0	2.00±0.30	0.65±0.20	2.70±0.40	1.22
28.0/6.0	28.0	6.0	2.40±0.30	0.95±0.25	3.30±0.45	1.22
33.0/8.0	33.0	8.0	2.50±0.30	0.80±0.25	3.30±0.45	1.22
38.1/12.0	38.1	12.0	2.40±0.30	0.80±0.25	3.30±0.45	1.22
43.2/12.7	43.2	12.7	2.40±0.30	0.80±0.25	3.30±0.45	1.22
55.0/16.0	55.0	16.0	2.40±0.30	0.80±0.25	3.30±0.45	1.22
65.0/19.0	65.0	19.0	2.50±0.30	0.80±0.25	3.30±0.45	1.22
75.0/22.0	75.0	22.0	2.90±0.30	0.80±0.25	3.70±0.50	1.22
85.0/25.0	85.0	25.0	2.90±0.30	0.80±0.25	3.70±0.50	1.22
95.0/30.0	95.0	30.0	3.00±0.30	0.80±0.25	3.70±0.50	1.22
115.0/34.0	115.0	34.0	3.00±0.30	0.80±0.25	3.70±0.50	1.22
140.0/42.0	140.0	42.0	3.00±0.30	0.80±0.25	3.70±0.50	1.22
160.0/50.0	160.0	50.0	3.10±0.30	0.80±0.25	3.70±0.50	1.00
180.0/65.0	180.0	65.0	3.10±0.30	0.80±0.25	3.70±0.50	1.00
200.0/69.0	200.0	69.0	3.10±0.30	0.80±0.25	3.70±0.50	1.00
230.0/78.0	230.0	78.0	3.10±0.30	0.80±0.25	3.70±0.50	1.00

Note: Tubing without adhesive is available upon request

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥14	15
Elongation(%)	ASTM D2671	≥400	450
Tensile Strengtn after aging (MPa)	UL224 158 X168hr	≥12	12.5
Elongation after aging(%)	Ul224 158 X168hr	≥300	350
Dieletric strength(kV/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥1X10^{14}	2.5X10^{14}

Adhesive

Property	Test Method	Standard
Water Absorption	ASTM D570	0.2%
Sofening Point( )	ASTM E28	95±5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm

SBRSW-NF

Heavy Wall Adhesive-Lined Cross-linked Polyolefin Heat Shrink Tubing

Heavy wall adhesive-lined heat shrink tubing provides maximum reliability for insulating and protecting cable joints and terminations.

RoHS **3:1**

Features

- 3 1 shrink ratio, not flame-retardant
- Withstands severe mechanical requirements of U.R.D., submersible and direct burial installations
- High impact, abrasion, corrosion and chemical resistance
- Rated for 1kv, 90 continuous use application
- Thermoplastic adhesive liner provides complete environmental protection and installation
- Continuous operating temperature:-45 -110
- Fully shrink temperature: 125

Dimensions

Size	Expanded	After Recovery				Standard Package
mm	Internal Diameter mm	Internal Diameter mm	Jacket Thickness mm	Adhesive Thickness mm	Total Wall Thickness mm	M/pc
8.0/2.0	8.0	2.0	1.80±0.30	0.55±0.20	2.35±0.35	1.22
9.0/3.0	9.0	3.0	2.00±0.30	0.55±0.20	2.55±0.40	1.22
13.0/4.0	13.0	4.0	2.30±0.30	0.55±0.20	2.85±0.40	1.22
16.0/5.0	16.0	5.0	2.30±0.30	0.60±0.20	2.90±0.50	1.22
22.0/6.0	22.0	6.0	2.50±0.40	0.60±0.25	3.10±0.50	1.22
28.0/6.0	28.0	6.0	2.70±0.40	0.70±0.25	3.40±0.50	1.22
33.0/8.0	33.0	8.0	2.80±0.40	0.80±0.25	3.60±0.60	1.22
38.1/12.0	38.1	12.0	3.10±0.50	0.80±0.25	3.90±0.60	1.22
43.2/12.0	43.2	12.0	3.50±0.50	0.80±0.25	4.30±0.70	1.22
55.0/16.0	55.0	16.0	3.60±0.50	0.80±0.25	4.40±0.70	1.22
65.0/19.0	65.0	19.0	3.60±0.50	0.80±0.25	4.40±0.70	1.22
75.0/22.0	75.0	22.0	3.60±0.50	0.80±0.25	4.40±0.70	1.22
85.0/25.0	85.0	25.0	3.60±0.50	0.80±0.25	4.40±0.70	1.22
95.0/30.0	95.0	30.0	3.60±0.50	0.80±0.25	4.40±0.70	1.22
105.0/30.0	105.0	30.0	3.80±0.60	0.80±0.25	4.60±0.70	1.22
120.0/39.0	120.0	39.0	3.80±0.60	0.80±0.25	4.60±0.70	1.22
130.0/40.0	130.0	40.0	3.80±0.60	0.80±0.25	4.60±0.70	1.22
140.0/42.0	140.0	42.0	3.80±0.60	0.80±0.25	4.60±0.70	1.22
160.0/50.0	160.0	50.0	3.80±0.60	0.80±0.25	4.60±0.70	1.00
180.0/60.0	180.0	60.0	3.80±0.60	0.80±0.25	4.60±0.70	1.00
200.0/69.0	200.0	69.0	3.80±0.60	0.80±0.25	4.60±0.70	1.00

Note: Tubing without adhesive is available upon request

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥14	15
Elongation(%)	ASTM D2671	≥400	450
Tensile Strengtn after aging (MPa)	UL224 158 X168hr	≥12	12.5
Elongation after aging(%)	UI224 158 X168hr	≥300	350
Dieletric strength(kV/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥1X10^{14}	2.5X10^{14}

Adhesive

Property	Test Method	Standard
Water Absorption	ASTM D570	0.2%
Sofening Point( )	ASTM E28	95±5
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm

SBRSTV

Medium Wall Adhesive-lined Heat Variable Heat Shrink Tubing

Heat shrinkable tubing and adhesive liner combination that established the CATV industry standard for splice and connector protection

RoHS **3:1**

Features

- 3 1 shrink ratio
- Flame retardant
- Excellent resistance to weathering , moisture contamination and adverse environmental conditions
- Heat indicating lines
- Adhesive liner provides complete environmental protection and insulation
- Resists common fluids and solvents
- Continuous operating temperature:-45 - 110
- Fully shrink temperature: 125

Dimensions

Size mm	Expanded	After Recovery				Standard Package M/pc
	Internal Diameter mm	Internal Diameter mm	Jacket Thickness mm	Adhesive Thickness mm	Total Wall Thickness mm	
10.2/3.8	10.2	3.8	1.40±0.20	0.50±0.10	1.90±0.25	1.22
19.0/5.6	19.0	5.6	1.80±0.20	0.60±0.15	2.40±0.30	1.22
28.0/6.0	28.0	6.0	2.40±0.30	0.95±0.20	3.30±0.35	1.22
33.0/8.0	33.0	8.0	2.50±0.30	0.80±0.15	3.30±0.35	1.22
38.1/12.0	38.1	12.0	2.40±0.30	0.80±0.15	3.30±0.35	1.22
43.2/12.7	43.2	12.7	2.40±0.30	0.80±0.15	3.30±0.35	1.22
55.0/16.0	55.0	16.0	2.40±0.30	0.80±0.15	3.30±0.35	1.22
70.0/25.4	70.0	25.4	2.80±0.30	0.60±0.15	3.40±0.40	1.22

Technical Data

Property	Test Method	Standard	Typical Performance
Tensile Strengtn(MPa)	ASTM D2671	≥10.4	11.5
Elongation(%)	ASTM D2671	≥300	450
Tensile Strengtn after aging (MPa)	UL224 158 X168hr	≥7.3	8.5
Elongation after aging(%)	UL224 158 X168hr	≥200	350
Dieletric strength(kV/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥1X10^{14}	2.5X10^{14}

Adhesive

Property	Test Method	Standard
Water Absorption	ASTM D570	0.2%
Sofening Point( )	ASTM E28	85
Strength of pearing(PE)	ASTM D 1000	120N/25mm
Strength of pearing(AL)	ASTM D 1000	80N/25mm