



WIREMEX



**HEAT SHRINK PRODUCTS
& CABLE TIES**

WWW.WIREMEX.COM.MX



WHO WE ARE

With over 20 years being a benchmark of the highest quality in products and service, we are a proud household name in a wide array of industries.

Our products are certified by:



CONTACT

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Wiremex heat shrinkable products include polyolefin, silicon, halogen-free, high temp, single wall, dual wall and adhesive lines tubing with varying shrink ratios, colors and sizes.

Wiremex's heat shrink tubing products are produced by cross-linking extruded polymer compounds which produce a shape memory effect which, when heated, make the products return to its original shape, making it a versatile product with plenty of applications.

AVIATION

TELECOM

MILITARY

ELECTRONICS

WIRE HARNESS

AUTOMOTIVE

PIPE LINE

MARINE

APPLIANCE





TUBING FEATURES

- Wide range of sizes
- Abrasion, moisture and chemical/solvent resistant
- Different colors upon request
- High shrink ratios: 2:1, 3:1 & 4:1
- Low shrink temperatures: down to 65°C
- High temperature rating: up to 260°C
- Single wall and dual wall tubes
- Flexible types: super flexible, flexible, semi-rigid and rigid
- Packaging: large & small spools, cut-to-length, kits & bags
- Special compound formulations available upon request





HEAT SHRINK TECHNOLOGY

Compound

With a strong background in the research and development of modified polymer materials, we have developed a variety of chemical formulations for different types of heat shrinkable products.

Extrusion

Equipped with 20 advanced extrusion lines, we are able to produce stable and homogeneous dimensions. Our advanced co-extrusion technology makes it possible to manufacture polyolefin/hot melt adhesive dual wall and insulation/conductive multi-layer tubing.

Irradiation

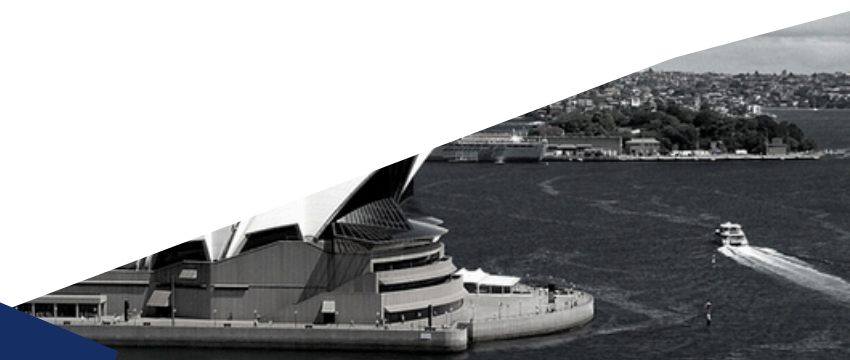
There are three sets of specially designed electronic accelerators in-house to meet requirements of different sizes and shapes of shrinkable products that assures proper crosslinking of the product.

Expansion

This important process is required to obtain final forms and dimensions of heat shrink products. With our modern equipment and technology, we can accurately control the dimensions, longitudinal changes and eccentricity of the final product.

Packaging

After completion of the production cycle and quality control checks, the product is packaged to meet market demands such as standard product or is processed to customer designs from cut-to-length pieces to special packaging requirements.





SINGLE WALL PRODUCTS

Part Number	Material	Product Type	Shrink Ratio	Operating Temperature	Full Recovery Temperature
WM-H(H)	Polyolefin	Ultra-thin wall	2:1	-55 to 125°C	120°C
WM- HCB(H)	Polyolefin	Ultra-thin wall	2:1	-45 to 125°C	110°C
WM-H	Polyolefin	Thin wall	2:1	-55 to 125°C	120°C
WM-H(3X)	Polyolefin	Ultra-thin wall	3:1	-55 to 125°C	120°C
WM-HCB	Polyolefin	Ultra-thin wall	2:1	-45 to 125°C	110°C
WM-(2X,3X) YG	Polyolefin	Thin wall	2:1, 3:1	-55 to 125°C	110°C
WM-135G(2X)	Polyolefin	Thin wall	2:1	-55 to 135°C	120°C
WM-135G(3X)	Polyolefin	Ultra-thin wall	3:1	-55 to 135°C	120°C
WM-105	Polyolefin	Thin wall	2:1	-55 to 105°C	105°C
WM-HT	Polyolefin	Thin wall	2:1	-55 to 150°C	120°C

DUAL WALL PRODUCTS

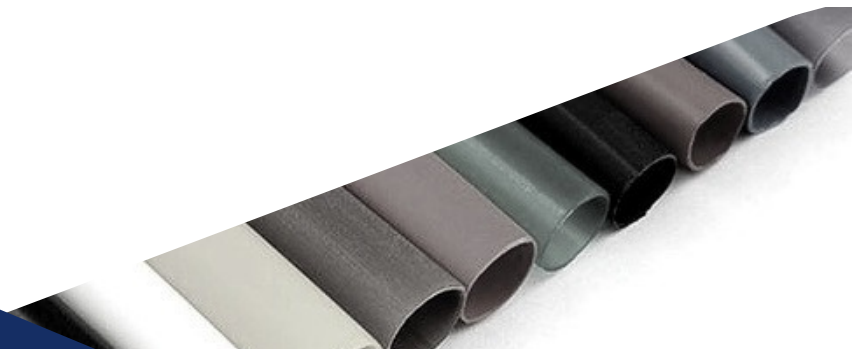
Part Number	Material	Product Type	Shrink Ratio	Operating Temperature	Full Recovery Temperature
WM-(2X) G	Polyolefin	Dual wall	2:1	-45 to 125°C	125°C
WM-(3X) G	Polyolefin	Dual wall	3:1	-45 to 125°C	125°C
WM-(2X) QF	Polyolefin	Dual wall	2:1	-45 to 105°C	125°C
WM-(3X) GLW	Polyolefin	Dual wall	3:1	-45 to 125°C	110°C
WM-(3X) H	Polyolefin	Dual wall	3:1	-45 to 125°C	125°C
WM-(3X,4X) GF	Polyolefin	Dual wall	3:1, 4:1	-55 to 135°C	125°C
WM-(4X) G	Polyolefin	Dual wall	4:1	-45 to 125°C	125°C
WM-(4X) GBK	Polyolefin	Dual wall	4:1	-45 to 125°C	110°C
WM-(4X) GRF	Polyolefin	Dual wall	4:1	-45 to 125°C	125°C
WM- BK	Polyolefin	Dual wall	4:1	-45 to 125°C	125°C



CROSS REFERENCE GUIDE

Wiremex PN	Page	Alpha	Sumitomo	Insul Tab	LG	Raychem	Canusa	3M
WM-H(H)	7-8		SUMITUBE-NH			ZHTM	CZT-200	
WM- HCB(H)	9-10		SUMITUBE-NH			ZHTM	CZT-200	
WM-H	11-12		F2(Z)		GSHS-1625G	VERSAFIT V2	Deray H	CP-221
WM-H(3X)	13-14		F3(Z)		GSHS-1625G	VERSAFIT V4	Deray ITW	
WM-HCB	15-16		F3(Z)		GSHS-1625G	VERSAFIT V4	Deray ITW	
WM-(2X) YG	17-18	FIT 260	B2(Y/G)		GSHS-1635Y/G	DCPT 2:1	Deray IGY, CPX-201	SFTW-202GYS
WM-(3X) YG	17-18			HS-101(3X)		DCPT 3:1	Deray IGY, CPX-201	
WM-135G(2X)	19-20	FIT 221 V	B2(Z), F, F2, F2(Z)	HS-101	GSHS-1635F	RNF-100, VERSAFIT	CPX100, CPX-876	FP-301
WM-135G(3X)	21-22	FIT 321V	B2(3X), F2(3X),A2(3X)	HS101 SR	GSHS-3635	RNF-3000	CPX300, Deray-I 3000	SFTW-203
WM-105	23-24		SUMITUBE-NH			ZHTM	CZT-200	
WM-HT	25-26		F2(Z)		GSHS-1625G	VERSAFIT V2	Deray H	CP-221
WM-(2X) G	28-29	FIT 750	02B2	HS-101-MV 2:1	GSHS-1625W	TAT-125		EPS-200
WM-(3X) G	30-31	FIT 321	W3B2(4X)	HS-101-MW 3:1	GSHS-3635W	ATUM 3:1	Deray IAKT 3:1	EPS-300
WM-(2X) QF	32-33	FIT 750	02B2	HS-101-MV 2:1	GSHS-1625W	TAT-125		EPS-200
WM-(3X) GLW	34-35	FIT 321	W3B2	HS-101-MW 3:1	GSHS-3635W	DWP-125	CPA 300	EPS-300
WM-(3X) H	36-37	FIT 700				SST		ITCSN, MDT
WM-(3X) GF	38-39	FIT 321	W3B2	HS-101-MW 3:1	GSHS-3635W	DWP-125	CPA 300	EPS-300
WM-(4X) GF	38-39		W3B2	HS-101-MW 4:1	GSHS-4635 W	ATUM 4:1		EPS-400
WM-(4X) G	40-41		W3B2	HS-101-MW 4:1	GSHS-4635 W	ATUM 4:1		EPS-400
WM-(4X) GBK	42-43			HS-101-MW 4:1	GSHS-4635 W	ATUM 4:1	Deray IAKT 4:1	EPS-400
WM-(4X) GRF	44-45	FIT 421	SA2		GSHS-4635 WS	ES-2000	Deray Splicemelt	EPS-400, SMS
WM- BK	46-47	FIT 421	SA2		GSHS-4635 WS	ES-2000	Deray Splicemelt	EPS-400, SMS







Note: This cross-reference is only a guide. Wiremex products may not be the same as listed.








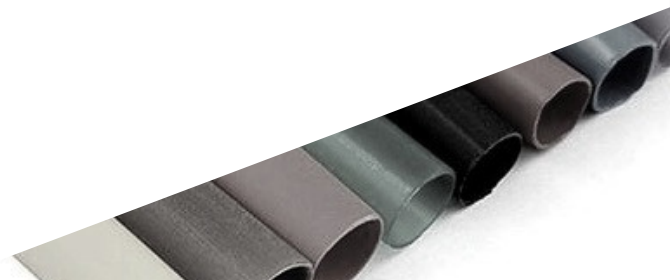


SINGLE WALL PRODUCTS

Single Wall heat shrinkable tubing is used in the electronics, automotive, military & aerospace sectors in a variety of applications, including:

-  Mechanical Protection
-  Abrasion Protection
-  Strain Relief
-  Moisture Protection
-  Cable Insulation
-  Marking Bundling of Electronic Components

Heat Shrink Thin Wall Tubing		
WM-H(H)	Thin wall halogen free, flexible heat shrink tubing.	
WM- HCB(H)	Ultra-thin wall halogen free, flexible heat shrink tubing.	
WM-H	Universal heat shrink tubing with excellent physical and mechanical properties.	
WM-H(3X)	Universal heat shrink tubing with excellent physical and mechanical properties.	
WM-HCB	Ultra-thin wall, very flexible Heat shrink tubing.	
WM-(2X,3X) YG	Yellow/Green Stripped Thin wall cross-linked polyolefin heat shrink tubing.	
WM-135G(2X)	Flame retardant, multi-purpose heat shrink tubing	
WM-135G(3X)	Ultra-thin wall, very flexible heat shrink tubing.	
WM-105	Economical, non-self-extinguishing Halogen free, heat shrink tubing.	
WM-HT	Flame retardant heat shrink tubing.	



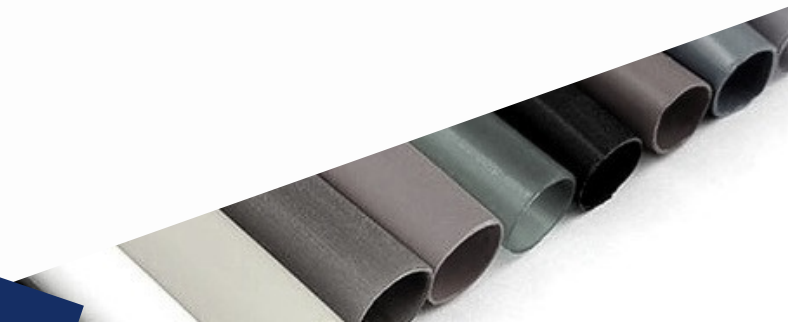


WM-H(H)

Thin wall halogen free, flexible heat shrink tubing.



- Ultra-thin wall
- Flexible
- Halogen free
- Flame retardant
- Low Smoke generation if burning
- Continuous operating temperature: -55°C to 125°C
- Fully shrink temperature: 120°C
- RoHS and REACH compliant





DIMENSIONS

Size		As Supplied	After Recovery		Standard Package
Inch	mm	Internal Diameter mm	Internal Diameter Max mm	Wall Thickness Nom mm	Spool Length M/spool
3/64	0.8	1.1 ± 0.2	0.50	0.22	200
1/16	1	1.5 ± 0.2	0.65	0.28	200
	1.5	2.0 ± 0.2	0.85	0.32	200
3/32	2	2.5 ± 0.2	1.00	0.35	200
	2.5	3.0 ± 0.2	1.30	0.38	200
1/8	3	3.5 ± 0.2	1.50	0.40	200
	3.5	4.0 ± 0.2	1.80	0.42	200
	4	4.5 ± 0.2	2.00	0.45	200
3/16	4.5	5.0 ± 0.2	2.30	0.50	100
	5	5.5 ± 0.2	2.50	0.55	100
1/4	6	6.5 ± 0.2	3.00	0.55	100
5/16	7	7.5 ± 0.3	3.50	0.55	100
	8	8.5 ± 0.3	4.00	0.60	100
3/8	9	9.5 ± 0.3	4.50	0.60	100
	10	10.5 ± 0.3	5.00	0.60	100
	11	11.5 ± 0.3	5.50	0.60	100
1/2	12	12.5 ± 0.3	6.00	0.60	100
	13	13.5 ± 0.3	6.50	0.65	100
	14	14.5 ± 0.3	7.00	0.65	100
5/8	15	15.5 ± 0.4	7.50	0.70	100
	16	16.5 ± 0.4	8.00	0.70	100
	17	17.5 ± 0.4	8.50	0.70	100
3/4	18	19.0 ± 0.5	9.00	0.80	100
	20	21.0 ± 0.5	10.00	0.80	100
	22	23.0 ± 0.5	11.00	0.80	100
1	25	26.0 ± 0.5	12.50	0.90	50
	28	29.0 ± 0.5	14.00	0.90	50
1-1/4	30	31.5 ± 1.0	15.00	0.95	50
	35	36.5 ± 1.0	17.50	1.00	50
1-1/2	40	41.5 ± 1.0	20.00	1.00	50
	45	46.5 ± 1.0	22.50	1.00	25
2	50	≥50	25.00	1.00	25
	60	≥60	31.00	1.30	25
	70	≥70	36.00	1.30	25
3	80	≥80	41.00	1.46	25
	90	≥90	46.00	1.46	25
4	100	≥100	51.00	1.46	25
5	120	≥120	61.00	1.56	25
6	150	≥150	76.00	1.56	25
7	180	≥180	91.00	1.56	25

TECHNICAL DATA

Property	Test Method	Typical Performance
Tensile strength(Mpa)	ASTM D 2671	≥10.4
Ultimate elongation(%)	ASTM D 2671	≥200
Tensile strength after heat aged(Mpa)	158°CX 168h	≥7.3
Ultimate elongation after heat aged(%)	158°CX 168h	≥100
Longitudinal change(%)	ASTM D 2671	-5% ~ +5%
Flammability	ASTM D 2671 C method	VW-1
Dielectric strength (kv/mn)	ASTM D 149	≥15
Volume resistivity(Ω*cm)	ASTM D 876	≥1014

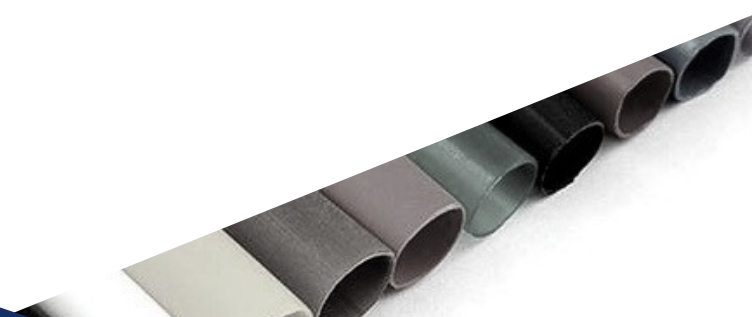


WM-HCB(H)

Ultra thin wall halogen free, flexible heat shrink tubing.



- Ultra-thin wall
- Flexible
- Halogen free
- Flame retardant
- Low Smoke generation if burning
- Continuous operating temperature: -55°C to 125°C
- Fully shrink temperature: 110°C
- Sony compliant





DIMENSIONS

Size		As Supplied	After Recovery		Standard Package
Inch	mm	Internal Diameter mm	Internal Diameter Max mm	Wall Thickness Nom mm	Spool Length M/spool
1/16	1.0	1.5 ± 0.2	≤0.65	0.20±0.10	200
	1.5	2.0 ± 0.2	≤0.85	0.20±0.10	200
3/32	2.0	2.5 ± 0.2	≤1.00	0.22±0.10	200
	2.5	3.0 ± 0.2	≤1.30	0.25±0.10	200
1/8	3.0	3.5 ± 0.2	≤1.50	0.28±0.10	200
	3.5	4.0 ± 0.2	≤1.80	0.28±0.10	200
3/16	4.0	4.5 ± 0.2	≤2.00	0.30±0.10	200
	4.5	5.0 ± 0.2	≤2.30	0.30±0.10	100
1/4	5.0	5.5 ± 0.2	≤2.50	0.32±0.10	100
	6.0	6.5 ± 0.2	≤3.00	0.32±0.10	100
5/16	7.0	7.5 ± 0.3	≤3.50	0.32±0.10	200
	8.0	8.5 ± 0.3	≤4.00	0.32±0.10	200
3/8	9.0	9.5 ± 0.3	≤4.50	0.35±0.10	200
	10.0	10.5 ± 0.3	≤5.00	0.35±0.10	200
1/2	11.0	11.5 ± 0.3	≤5.50	0.40±0.10	200
	12.0	12.5 ± 0.3	≤6.00	0.40±0.10	200
5/8	13.0	13.5 ± 0.3	≤6.50	0.40±0.10	200
	14.0	14.5 ± 0.3	≤7.00	0.40±0.10	200
3/4	15.0	15.5 ± 0.4	≤7.50	0.40±0.10	200
	16.0	16.5 ± 0.4	≤8.00	0.40±0.10	200
1	17.0	17.5 ± 0.4	≤8.50	0.40±0.10	200
	18.0	18.5 ± 0.5	≤9.00	0.42±0.10	200
	20.0	20.5 ± 0.5	≤10.00	0.45±0.10	200
	22.0	22.5 ± 0.5	≤11.00	0.45±0.10	200
	25.0	25.5 ± 0.5	≤12.50	0.45±0.10	100
	28.0	28.5 ± 0.5	≤14.00	0.60±0.10	100

TECHNICAL DATA

Property	Test Method	Typical Performance
Tensile strength (Mpa)	ASTM D 2671	≥10.4
Ultimate elongation (%)	ASTM D 2671	≥200
Tensile strength after heat aged (Mpa)	158°CX 168h	≥7.3
Ultimate elongation after heat aged (%)	158°CX 168h	≥100
Longitudinal change (%)	ASTM D 2671	-5% ~ +5%
Flammability	ASTM D 2671 C method	VW-1
Dielectric strength (kv/mn)	ASTM D 149	≥15
Volume resistivity(Ω*cm)	ASTM D 876	≥10 ¹⁴



WM-H

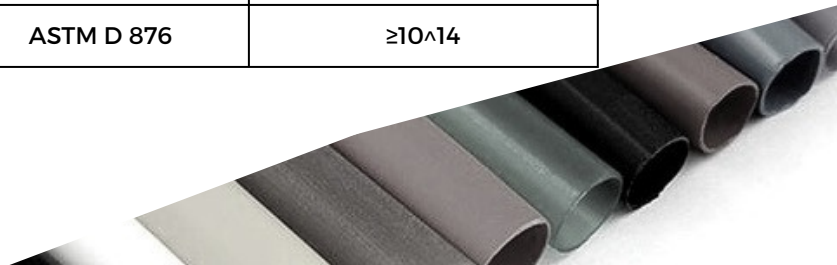
Universal heat shrink tubing.
Excellent physical & mechanical properties.



- Flexible
- Flame retardant
- Continuous operating temperature: -55°C to 125°C
- Fully shrink temperature: ≥125°C

TECHNICAL DATA

Property	Test Method	Typical Performance
Tensile strength(MPa)	ASTM D2671	≥10.4
Ultimate elongation(%)	ASTM D2671	≥ 200
Tensile strength after heat aged (Mpa)	1 58 °CX168h	≥7.3
Ultimate elongation after heat aged (%)	1 58 °CX168h	≥100
Longitudinal change	ASTM D2671	-5%~+5%
Flammability	ASTM D2671 C method	VW-1
Voltage withstand	UL 224, 2500V, 60s	No breakdown
Dielectric strength (kV/mm)	ASTM D 149	≥15
Volume resistivity (Ω·cm)	ASTM D 876	≥10 ¹⁴





DIMENSIONS

Size		As Supplied	After Recovery		Standard Package
Inch	mm	Inner Diametermm	Inner Diameter mm	Wall Thicknessmm	Spool LengthM/spool
3/64	0.8	1.1±0.2	0.50	0.22	200
1/16	1.0	1.5±0.2	0.65	0.28	200
	1.5	2.0±0.2	0.85	0.32	200
3/32	2.0	2.5±0.2	1.00	0.35	200
	2.5	3.0±0.2	1.30	0.38	200
1/8	3.0	3.5±0.2	1.50	0.40	200
	3.5	4.0±0.2	1.80	0.42	200
	4.0	4.5±0.2	2.00	0.45	200
3/16	4.5	5.0±0.2	2.30	0.50	100
	5.0	5.5±0.2	2.50	0.55	100
1/4	6.0	6.5±0.2	3.00	0.55	100
5/16	7.0	7.5±0.3	3.50	0.55	100
	8.0	8.5±0.3	4.00	0.60	100
	9.0	9.5±0.3	4.50	0.60	100
3/8	10.0	10.5±0.3	5.00	0.60	100
	11.0	11.5±0.3	5.50	0.60	100
	12.0	12.5±0.3	6.00	0.60	100
1/2	13.0	13.5±0.3	6.50	0.65	100
	14.0	14.5±0.3	7.00	0.65	100
	15.0	15.5±0.4	7.50	0.70	100
	16.0	16.5±0.4	8.00	0.70	100
5/8	17.0	17.5±0.4	8.50	0.70	100
	18.0	19.0±0.5	9.00	0.80	100
	20.0	21.0±0.5	10.0	0.80	100
3/4	22.0	23.0±0.5	11.0	0.80	100
	25.0	26.0±0.5	12.5	0.90	50
	28.0	29.0±0.5	14.0	0.90	50
1-1/4	30.0	31.5±1.0	15.0	0.95	50
1-1/2	35.0	36.5±1.0	17.5	0.95	50
	40.0	41.5±1.0	20.0	0.95	50
	45.0	46.5±1.0	22.5	1.00	25
2	50.0	≥50.0	25.0	1.00	25
	60.0	≥60.0	31.0	1.00	25
	70.0	≥70.0	36.0	1.10	25
3	80.0	≥80.0	41.0	1.20	25
	90.0	≥90.0	46.0	1.20	25
4	100.0	≥100.0	51.0	1.20	25
5	120.0	≥120.0	61.0	1.30	25
6	150.0	≥150.0	76.0	1.30	25
7	180.0	≥180.0	91.0	1.46	25



WM-H(3X)

Universal heat shrink tubing.
Excellent physical & mechanical properties.



- Flexible
- Flame retardant
- Continuous operating temperature: -55°C to 125°C
- Fully Shrink temperature: $\geq 125^{\circ}\text{C}$
- Ultra-thin wall



**DIMENSIONS**

Size		As Supplied	After Recovery		Standard Package
Inch	mm	Inner Diameter mm	Inner Diameter mm	Wall Thickness mm	Spool Length M/spool
1/16	1.5	≥1.5	≤0.50	0.45±0.10	200
1/8	3.0	≥3.0	≤1.00	0.55±0.10	200
3/16	4.5	≥4.5	≤1.50	0.60±0.10	100
1/4	6.0	≥6.0	≤2.00	0.65±0.10	100
3/8	9.0	≥9.0	≤3.00	0.75±0.15	100
1/2	12.0	≥12.0	≤4.00	0.75±0.15	100
5/8	15.0	≥15.0	≤5.00	0.80±0.15	100
3/4	18.0	≥18.0	≤6.00	0.85±0.15	100
1	24.0	≥24.0	≤8.00	1.00±0.20	50
1-1/4	30.0	≥30.0	≤10.0	1.15±0.20	50
1-1/2	39.0	≥39.0	≤13.0	1.50±0.20	50
2	50.0	≥50.0	≤16.0	2.50±0.20	25
	60.0	≥60.0	≤20.0	2.60±0.20	25
	70.0	≥70.0	≤23.0	2.60±0.20	25
3	80.0	≥80.0	≤26.0	2.60±0.20	25
	90.0	≥90.0	≤30.0	2.60±0.20	25
4	100.0	≥100.0	≤33.0	2.60±0.20	25

TECHNICAL DATA

Property	Test Method	Typical Performance
Tensile strength (Mpa)	ASTM D 2671	≥10.4
Ultimate elongation (%)	ASTM D 2671	≥200
Tensile strength after heat aging (Mpa)	158°CX 168h	≥7.3
Ultimate elongation after heat aging (%)	158°CX 168h	≥100
Longitudinal change (%)	ASTM D 2671	-5% ~ +5%
Flammability	ASTM D 2671 C method	VW-1
Voltage withstand	UL 224, 2500V, 60s	No breakdown
Dielectric strength (kv/mn)	ASTM D 149	≥15
Volume resistivity (Ω*cm)	ASTM D 876	≥10 ¹⁴



WM-HCB

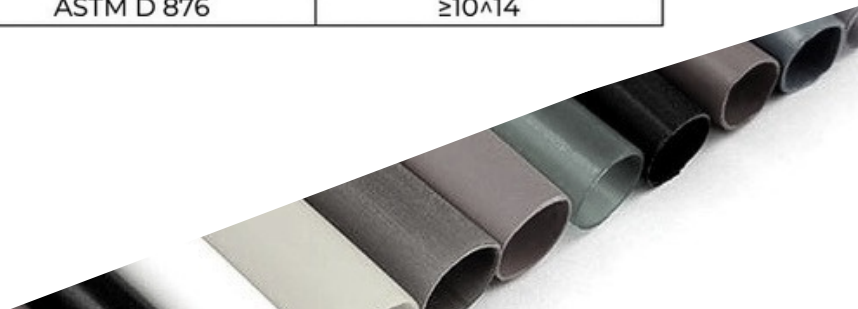
Ultra thin wall.
Very flexible heat shrink tubing.



- Ultra-thin wall
- Very Flexible
- Continuous operating temperature: -55°C to 125°C
- Fully shrink temperature: 110°C
- Flame retardant

TECHNICAL DATA

Property	Test Method	Typical Performance
Tensile strength (Mpa)	ASTM D 2671	≥10.4
Ultimate elongation (%)	ASTM D 2671	≥200
Tensile strength after heat aged (Mpa)	158°CX 168h	≥7.3
Ultimate elongation after heat aged (%)	158°CX 168h	≥100
Longitudinal change (%)	ASTM D 2671	-5% ~ +5%
Flammability	ASTM D 2671 C method	VW-1
Dielectric strength (kv/mn)	ASTM D 149	≥15
Volume resistivity(Ω*cm)	ASTM D 876	≥10 ¹⁴



**DIMENSIONS**

Size		As Supplied	After Recovery		Standard Package
Inch	mm	Inner Diameter mm	Inner Diameter mm	Wall Thickness mm	Spool Length M/spool
1/16	1.0	1.40±0.20	0.65	0.20	200
	1.5	1.90±0.20	0.85	0.20	200
3/32	2.0	2.40±0.20	1.00	0.22	200
	2.5	2.90±0.20	1.30	0.25	200
1/8	3.0	3.40±0.20	1.50	0.28	200
	3.5	3.90±0.20	1.80	0.28	200
	4.0	4.40±0.20	2.00	0.30	200
3/16	4.5	4.90±0.20	2.30	0.30	100
	5.0	5.50±0.20	2.50	0.32	100
1/4	6.0	6.50±0.20	3.00	0.32	100
5/16	7.0	7.50±0.30	3.50	0.32	200
	8.0	8.50±0.30	4.00	0.32	200
	9.0	9.50±0.30	4.50	0.35	200
3/8	10.0	10.50±0.30	5.00	0.35	200
	11.0	11.50±0.30	5.50	0.40	200
	12.0	12.50±0.30	6.00	0.40	200
1/2	13.0	13.50±0.30	6.50	0.40	200
	14.0	14.50±0.30	7.00	0.40	200
	15.0	15.50±0.40	7.50	0.40	200
5/8	16.0	16.50±0.40	8.00	0.40	200
	17.0	17.50±0.40	8.50	0.40	200
	18.0	18.50±0.40	9.00	0.42	200
3/4	20.0	20.50±0.50	10.0	0.45	200
	22.0	22.50±0.50	11.0	0.45	200
	25.0	25.50±0.50	12.5	0.45	100



WM-YG (2X, 3X)

Yellow/Green striped thin wall

Cross-linked polyolefin heat shrink tubing.



- Stripped color combination designates international electrical grounding.
- Ultra-thin wall
- Very Flexible
- Continuous operating temperature: -55°C to 125°C
- Minimum shrink temperature: ≥84°C
- Flame retardant

TECHNICAL DATA

Property	Test Method	Standard	Typical Performance
Tensile strength(MPa)	ASTM D2671	≥10.4	11.5
Elongation(%)	ASTM D2671	≥200	450
Tensile strength after aging (MPa)	UL224 158°CX168hr	≥7.3	8.5
Elongation after aging(%)	UL224 158°CX168hr	≥200	350
Dielectric strength(kV/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	ASTM D 876	≥1X10 ¹⁴	2.5 X 10 ¹⁴

DIMENSIONS WM-YG (3X)

Size mm	Expanded Internal Diameter mm	After Recovery		Round/Flat	Standard Package Spool Length M/spool
		Internal Diameter Max mm	Wall Thickness mm		
3.2	3.2	1.0	0.55±0.15	Round	200
4.8	4.8	1.5	0.60±0.15	Round	100
6.4	6.4	2.0	0.65±0.15	Round	100
9.5	9.5	3.0	0.75±0.15	Flat	50
12.7	12.7	4.0	0.75±0.20	Flat	50
19.1	19.1	6.0	0.85±0.20	Flat	50
25.4	25.4	8.0	1.00±0.20	Flat	50
39.0	39.0	13.0	1.50±0.20	Flat	50



DIMENSIONS WM-YG (2X)

Size mm	Expanded	After Recovery		ROUND/FLAT	Standard Package M/Spool
	Inner Diameter Min(mm)	Inner Diameter Max(mm)	Wall Thicknessmm		
1.0	1.5 ± 0.3	0.7	0.28±0.10	Round	200
1.5	2.0 ± 0.3	0.9	0.30±0.10	Round	200
2.0	2.5 ± 0.3	1.0	0.35±0.10	Round	200
2.5	3.0 ± 0.3	1.3	0.36±0.10	Round	200
3.0	3.5 ± 0.4	1.5	0.38±0.10	Round	200
3.5	4.0 ± 0.4	1.8	0.40±0.10	Round	200
4.0	4.5 ± 0.4	2.0	0.45±0.10	Round	200
4.5	5.0 ± 0.4	2.3	0.45±0.10	Round	100
5.0	5.5 ± 0.4	2.5	0.45±0.10	Round	100
6.0	6.5 ± 0.4	3.0	0.50±0.10	Round	100
7.0	7.5 ± 0.4	3.5	0.50±0.10	Flat	100
8.0	8.5 ± 0.5	4.0	0.55±0.10	Flat	100
9.0	9.5 ± 0.5	4.5	0.55±0.10	Flat	100
10.0	10.5 ± 0.5	5.0	0.55±0.10	Flat	100
11.0	11.5 ± 0.5	5.5	0.60±0.10	Flat	100
12.0	12.5 ± 0.5	6.0	0.60±0.10	Flat	100
13.0	13.5 ± 0.5	6.5	0.60±0.10	Flat	100
14.0	14.5 ± 0.5	7.0	0.65±0.10	Flat	100
15.0	15.5 ± 0.6	7.5	0.70±0.10	Flat	100
16.0	17.0 ± 0.6	8.0	0.70±0.10	Flat	100
17.0	17.5 ± 0.6	8.5	0.70±0.10	Flat	100
18.0	19.0 ± 0.7	9.0	0.70±0.15	Flat	100
20.0	22.0 ± 0.7	10.0	0.75±0.15	Flat	100
22.0	24.0 ± 0.7	11.0	0.80±0.15	Flat	100
25.0	26.0 ± 0.7	12.5	0.90±0.15	Flat	50
28.0	29.0 ± 0.7	14.0	0.90±0.15	Flat	50
30.0	31.5 ± 0.7	15.0	0.95±0.15	Flat	50
35.0	36.5 ± 0.7	17.5	0.95±0.15	Flat	50
40.0	41.5 ± 0.7	20.0	1.00±0.20	Flat	50
45.0	46.5 ± 0.7	22.5	1.00±0.20	Flat	25
50.0	51.0 ± 0.7	25.0	1.00±0.20	Flat	25
60.0	≥ 60.0	30.0	1.10±0.20	Flat	25
70.0	≥ 70.0	35.0	1.20±0.20	Flat	25
80.0	≥ 80.0	40.0	1.30±0.20	Flat	25
90.0	≥ 90.0	45.0	1.50±0.20	Flat	25
100.0	≥ 100.0	50.0	1.65±0.20	Flat	25
120.0	≥ 120.0	60.0	1.70±0.20	Flat	25
150.0	≥ 150.0	75.0	1.70±0.20	Flat	25
180.0	≥ 180.0	90.0	1.75±0.20	Flat	25

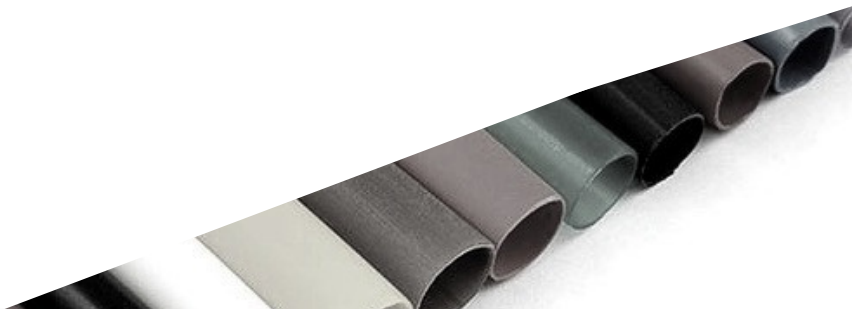


WM-135G(2X)

Flame retardant
Multi-purpose heat shrink tubing



- Flexible
- Suitable for various applications
- Continuous operating temperature: -55°C to 135°C
- Fully Shrink temperature: 120°C
- Meets SAE-AMS-DTL-23053/5 Class 1 and 3



**DIMENSIONS**

Size		As Supplied	After Recovery		Standard Package
Inch	mm	Inner Diameter mm	Inner Diameter mm	Wall Thickness mm	Spool Length M/spool
3/64	1.0	≥1.20	≤0.60	0.41±0.10	200
1/16	1.5	≥1.60	≤0.80	0.43±0.10	200
3/32	2.5	≥2.40	≤1.20	0.51±0.10	200
1/8	3.0	≥3.20	≤1.60	0.51±0.10	200
3/16	4.5	≥4.80	≤2.40	0.51±0.10	100
1/4	6.0	≥6.40	≤3.20	0.64±0.10	100
3/8	9.0	≥9.50	≤4.80	0.64±0.10	100
1/2	12.0	≥12.70	≤6.40	0.64±0.10	100
3/4	18.0	≥19.10	≤9.50	0.76±0.15	100
1	25.0	≥25.40	≤12.70	0.89±0.15	50
5/4	32.0	≥32.00	≤15.90	0.89±0.15	50
3/2	38.0	≥38.00	≤19.10	1.00±0.15	50
2	50.0	≥51.00	≤25.40	1.15±0.15	25
3	75.0	≥76	≤38.10	1.27±0.20	25
4	100.0	≥102	≤50.80	1.40±0.20	25
5	120.0	≥125	≤63.50	1.40±0.25	25

TECHNICAL DATA

Property	Test Method	Typical Performance
Tensile strength(MPa)	ASTM D2671	≥10.4
Ultimate elongation(%)	ASTM D2671	≥ 200
Tensile strength after heat aged (Mpa)	1 75°CX168h	≥7.3
Ultimate elongation after heat aged (%)	1 75°CX168h	≥100
Longitudinal change	ASTM D2671	-5%~+5%
Flammability	ASTM D2671C method	VW-1
Voltage withstand	UL 224, 2500V, 60s	No breakdown
Heat shock	UL 224 ,250°C×4h	No cracks, flowing or dripping
Dielectric strength (kV/mm)	ASTM D 149	≥19.7
Volume resistivity (Ω·cm)	ASTM D 876	≥ 10 ¹⁴



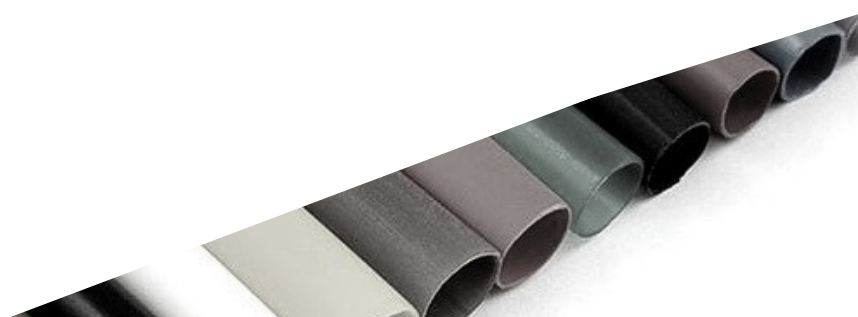
WM-135G(3X)

Ultra-thin wall.

Excellent physical & mechanical properties.



- Very Flexible
- Flame retardant
- Continuous operating temperature: -55°C to 135°C
- Fully Shrink temperature: $\geq 120^{\circ}\text{C}$
- Ultra-thin wall
- Meets SAE-AMS-DTL-23053/5 Class 1 and 3

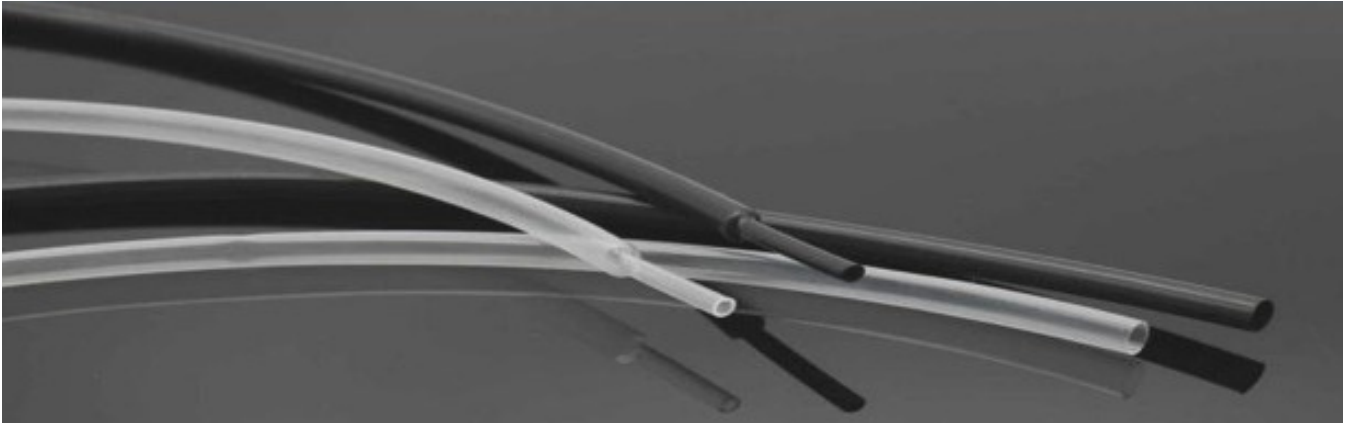


**DIMENSIONS**

Size		As Supplied	After Recovery		Standard Package
Inch	mm	Inner Diameter Min (mm)	Inner Diameter Max (mm)	Wall Thickness Nom (mm)	Spool Length M/spool
1/16	1.5	≥1.5	≤0.5	0.45±0.10	200
1/8	3.0	≥3.0	≤1.0	0.55±0.10	200
3/16	4.5	≥4.5	≤1.5	0.60±0.10	100
1/4	6.0	≥6.0	≤2.0	0.65±0.10	100
3/8	9.0	≥9.0	≤3.0	0.75±0.15	100
1/2	12	≥12.0	≤4.0	0.75±0.15	100
5/8	15	≥15.0	≤5.0	0.80±0.15	100
3/4	18	≥18.0	≤6.0	0.85±0.15	100
1	24	≥24.0	≤8.0	1.00±0.20	50
1-1/4	30	≥30.0	≤10.0	1.15±0.20	50
1-1/2	39	≥39.0	≤13.0	1.50±0.20	50
2	50	≥50	≤16.0	2.50±0.20	25
	60	≥60	≤20.0	2.60±0.20	25
	70	≥70	≤23.0	2.60±0.20	25
3	80	≥80	≤26.0	2.60±0.20	25
	90	≥90	≤30.0	2.60±0.20	25
4	100	≥100	≤33.0	2.60±0.20	25

TECHNICAL DATA

Property	Test Method	Typical Performance
Tensile strength(MPa)	ASTM D2671	≥10.4
Ultimate elongation(%)	ASTM D2671	≥ 200
Tensile strength after heat aged (Mpa)	1 75 °CX168h	≥7.3
Ultimate elongation after heat aged (%)	1 75 °CX168h	≥100
Longitudinal change	ASTM D2671	-5%~+5%
Flammability	ASTM D2671 C method	VW-1
Voltage withstand	UL 224,2500V,60s	No breakdown
Heat shock	UL 224 , 250°CX4h	No cracks, flowing or dripping
Dielectric strength (kV/mm)	ASTM D 149	≥19.7
Volume resistivity (Ω·cm)	ASTM D 876	≥10 ¹⁴

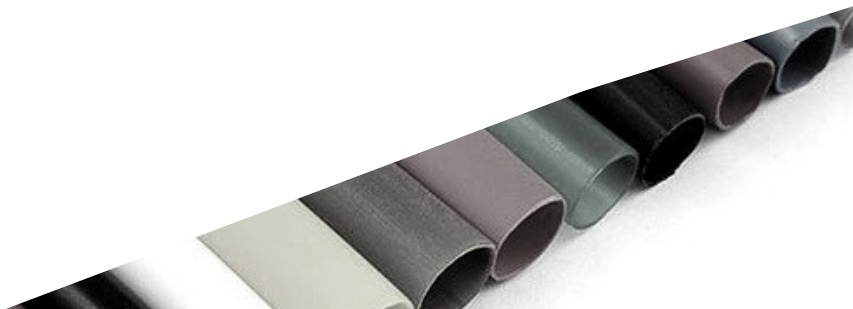


WM-105

Economical, non-self-extinguishing halogen free heat shrink tubing.



- Flexible
- Halogen free
- Continuous operating temperature: -55°C to 105°C
- Shrink temperature: $\geq 105^{\circ}\text{C}$
- Flame retardant
- Sony compliant





DIMENSIONS

Size		As Supplied	AFTER RECOVERY		Standard Package
Inch	mm	Inner Diameter Min(mm)	Inner Diameter Max(mm)	Wall Thickness Nom(mm)	M/spool
3/64	0.6	0.90±0.20	0.40	0.22	200
	0.8	1.10±0.20	0.50	0.22	200
1/16	1.0	1.50±0.20	0.65	0.28	200
	1.5	2.00±0.20	0.85	0.32	200
3/32	2.0	2.50±0.20	1.00	0.35	200
	2.5	3.00±0.20	1.30	0.38	200
1/8	3.0	3.50±0.20	1.50	0.40	200
	3.5	4.00±0.20	1.80	0.42	200
	4.0	4.70±0.20	2.00	0.50	200
3/16	4.5	5.00±0.20	2.30	0.55	100
	5.0	5.50±0.20	2.50	0.55	100
1/4	6.0	6.50±0.20	3.00	0.55	100
5/16	7.0	7.50±0.30	3.50	0.60	100
	8.0	8.50±0.30	4.00	0.60	100
3/8	9.0	9.50±0.30	4.5	0.60	100
	10.0	10.50±0.30	5.0	0.60	100
	11.0	11.50±0.30	5.5	0.60	100
1/2	12.0	13.50±0.30	6.0	0.65	100
	13.0	13.50±0.30	6.5	0.65	100
	14.0	14.50±0.30	7.0	0.70	100
5/8	15.0	15.50±0.40	7.5	0.70	100
	16.0	16.50±0.40	8.0	0.700	100
	17.0	17.50±0.40	8.5	0.80	100
3/4	18.0	19.00±0.50	9.0	0.80	100
	20.0	21.00±0.50	10.0	0.80	100
	22.0	23.00±0.50	11.0	0.90	100
1	25.0	26.00±0.50	12.5	0.90	50
	28.0	29.00±0.50	14.0	0.95	50
1-1/4	30.0	31.50±0.50	15.0	1.00	50
	35.0	36.50±1.00	17.5	1.00	50
1-1/2	40.0	41.50±1.00	20.0	1.00	50
	45.0	46.00±1.00	22.5	1.00	25
	50.0	≥50.0	25.0	1.00	25

TECHNICAL DATA

Property	Test Method	Typical Performance
Tensile strength (MPa)	ASTM D2671	≥10.4
Ultimate elongation (%)	ASTM D2671	≥200
Voltage withstand	2500V, 60s	No breakdown
Volume resistivity (Ω.cm)	ASTM D 876	≥10 ¹⁴



WM-HT

150°C Flame retardant
heat shrink tubing



- 2:1 shrink ratio
- Good resistance to common fluids and solvents
- Continuous operating temperature: -55°C to 150°C
- Fully shrink temperature: ≥135°C
- Flame retardant

TECHNICAL DATA

Property	Test Method	Typical Performance
Tensile strength(MPa)	ASTM D2671	≥10.4
Ultimate elongation(%)	ASTM D2671	≥200
Tensile strength after heat aged (Mpa)	180°CX168h	≥7.3
Ultimate elongation after heat aged(%)	180°CX168h	≥100
Corrosion	UL 224	Pass
Flammability	ASTM D 2671C method	VW-1
Voltage withstand	2500V, 60s	No breakdown
Heat shock	250°CX4h	No cracks, flowing or dripping
Cold blend	-30°CX1h	No cracks
Dielectric strength(kv/mm)	ASTM D149	≥15
Volume resistivity (Ω.cm)	ASTM D876	≥10 ¹⁴
Water absorption(%)	ASTM D570	≤0.5







**DIMENSIONS**











Size		As Supplied	After Recovery		Standard Package
Inch	mm	Internal Diameter mm	Internal Diameter mm	Wall Thickness mm	Spool Length M/spool
3/64	1.0	≥1.20	≤0.6	0.41±0.10	200
1/16	1.5	≥1.60	≤0.8	0.43±0.10	200
3/32	2.5	≥2.40	≤1.2	0.51±0.10	200
1/8	3.0	≥3.20	≤1.6	0.51±0.10	200
3/16	4.5	≥4.80	≤2.4	0.51±0.10	100
1/4	6.0	≥6.40	≤3.2	0.64±0.10	100
3/8	9.0	≥9.50	≤4.8	0.64±0.10	100
1/2	12.0	≥12.70	≤6.4	0.64±0.10	100
3/4	18.0	≥19.10	≤9.5	0.76±0.15	100
1	25.0	≥25.40	≤12.7	0.89±0.15	50
5/4	32.0	≥32.00	≤15.9	0.89±0.15	50
3/2	38.0	≥38.00	≤19.1	1.00±0.15	50
2	50.0	≥51.00	≤25.4	1.15±0.15	25
3	75.0	≥76.00	≤38.1	1.27±0.20	25
4	100.0	≥102.00	≤50.8	1.40±0.20	25
5	120.0	≥125.00	≤63.5	1.40±0.25	25
3/64	1.0	≥1.20	≤0.6	0.41±0.10	200
1/16	1.5	≥1.60	≤0.8	0.43±0.10	200

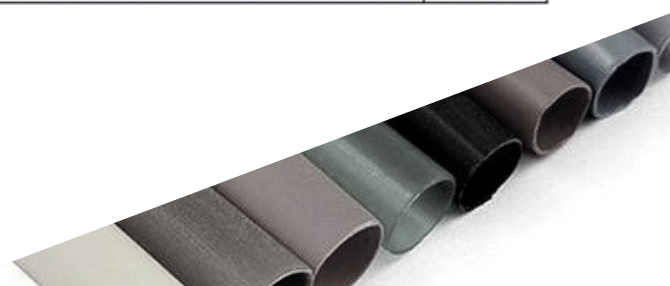


DOUBLE WALL PRODUCTS

Dual Wall polyolefin's are lined with a meltable adhesive or encapsulant to protect from moisture. Available in flexible, semi-flexible and semi-rigid products and meet UL, CSA and military specifications.

-  Mechanical Protection
-  Abrasion Protection
-  Strain Relief
-  Moisture Protection
-  Cable Insulation
-  Marking Bundling of Electronic Components

Heat Shrink Dual Wall Tubing		
WM-(2X) G	Dual wall adhesive-lined heat-shrink polyolefin tubing. 2:1	
WM-(3X) G	Dual wall adhesive-lined heat-shrink polyolefin tubing. 3:1	
WM-(2X) QF	Dual wall adhesive-lined polyolefin tubing for automotive oil-pipe protection. 2:1	
WM-(3X) GLW	Flexible, thick adhesive lined dual wall heat shrink tubing. 3:1	
WM-(3X) H	Halogen free dual wall adhesive-lined heat shrink polyolefin tubing. 3:1	
WM-(3X,4X) GF	Dual wall adhesive-lined cross-linked polyolefin tubing. 3:1, 4:1	
WM-(4X) G	Dual wall adhesive-lined heat-shrink polyolefin tubing. 4:1	
WM-(4X) GBK	Adhesive-lined cross-linked polyolefin tubing. 4:1	
WM-(4X) GRF	Highly flame-retardant dual wall heat-shrink polyolefin tubing. 4:1	
WM- BK	High shrink ratio. Semi-rigid dual wall adhesive-lined cross-linked polyolefin tubing. 4:1	





WM-(2X) G

Dual Wall Adhesive-lined Heat-shrink Polyolefin Tubing

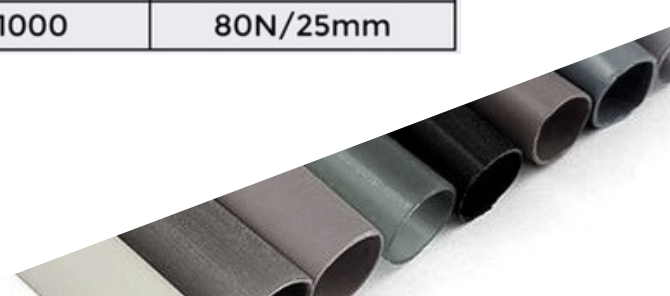
Adhesive lined heat shrink tubing with environmental sealing capability for a wide variety of electrical applications, including automotive and marine wire harness, wire splices, breakouts, and connector-to-cable transitions.



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

ADHESIVE PROPERTIES

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



**DIMENSIONS**

Size		AS Supplied	After Recovery			Standard Package
Inch	mm	Inner Diameter Min (mm)	Inner Diameter Max (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	15.0	1.15±0.40	0.50±0.2	1.22 OR 25M/Roll
1 1/2	38.1	38.1	19.0	1.25±0.40	0.50±0.2	1.22 OR 25M/Roll
1 3/4	44.5	44.5	22.0	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

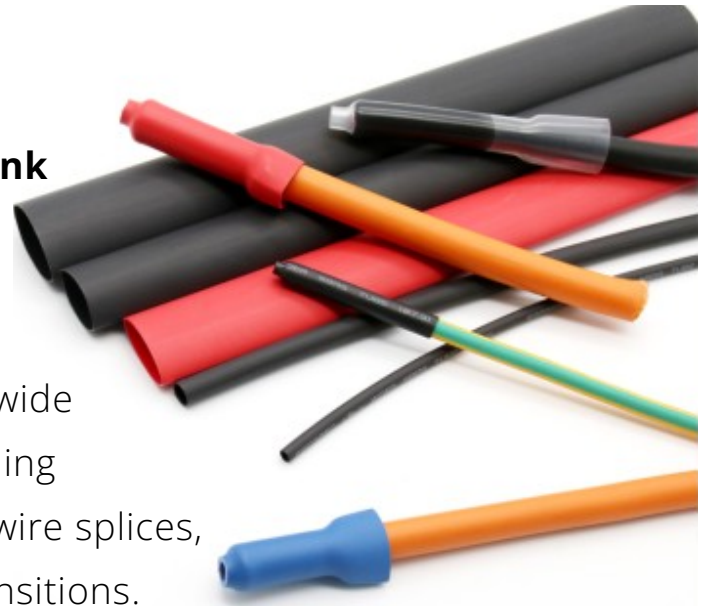
TECHNICAL DATA

Property	Test method	Standard Performance	Typical Performance
Tensile strength(MPa)	ASTM D 2671	≥ 10.4	13.25
Elongation(%)	ASTM D 2671	≥ 200	450.62
Tensile strength after aging(MPa)	UL224 158 °C*168h	≥ 7.3	11.28
Elongation after aging (%)	UL224 158 °C*168h	≥100	390.69
Dielectric strength(kV/mm)	IEC 60243	≥ 15	18.25
Volume resistivity(Ω.cm)	IEC 60093	≥ 1X10 ¹⁴	2.14X10 ¹⁴
Flammability	ASTM D2671B	Pass	Pass



WM-(3X) G

Dual Wall Adhesive-lined Heat-shrink Polyolefin Tubing



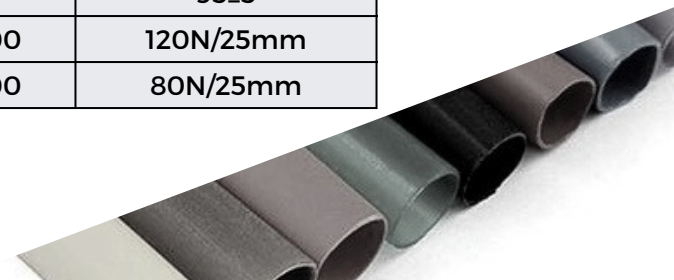
Adhesive lined heat shrink tubing with environmental sealing capability for a wide variety of electrical applications, including automotive and marine wire harness, wire splices, breakouts, and connector-to-cable transitions.



- 3:1 Shrink Ratio
- Out jacket flame retardant
- Low longitudinal shrinkage
- Continuous operating temperature: -45°C to 125°C
- Fully shrink temperature: ≥125°C
- Superior sealing against water, moisture or other contaminants

ADHESIVE PROPERTIES

Property	Test method	Standard
Water Absorption	ASTM D570	< 0.2%
Softening Point(°C)	ASTM E28	95±5
Strength of pearing (PE)	ASTM D 1000	120N/25mm
Strength of pearing (Al)	ASTM D 1000	80N/25mm





DIMENSIONS

Size		AS Supplied	After Recovery			Standard Package
Inch	mm	Inner Diameter Min(mm)	Inner Diameter Max(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
2-1/2	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
3-1/2	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 strength(MPa)	ASTM D 2671	≥ 10.4	13.78
Elongation(%)	ASTM D 2671	≥ 200	460.62
Tensile strength after aging(Mpa)	UL224 158 °CX168hr	≥ 7.3	11.34
Elongation after aging (%)	UL224 158 °CX168hr	≥ 100	398.28
Flammability	ASTM D 2671B	Pass	Pass
Dielectric strength(kV/mm)	IEC 60243	≥ 15	17.36
Volume resistivity(Ω .cm)	IEC 60093	≥1 X10 ¹⁴	2.24X10 ¹⁴



WM-(2X) QF

Dual Wall Adhesive-lined HST for Automotive Oil-Pipe Protection

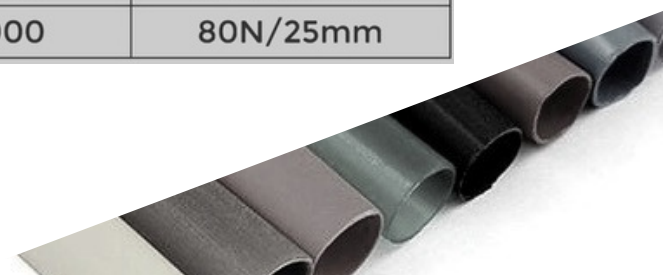
Specially designed for Automotive Oil-pipe Protection, providing preventive protection to break lines, fuel lines, hydraulic lines and other metal pipelines prone to bending.



- 2:1 Shrink Ratio and easy installation
- Adhesive inner layer for sealing vs moisture and corrosion
- Continuous operating temperature: -45°C to 105°C
- Fully shrink temperature: ≥125°C
- Semi-rigid outer jacket for mechanical damage protection
- High strength bonding. The adhesive layer is hard to peel off from pipeline

ADHESIVE PROPERTIES

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



**DIMENSIONS**

Size	As Supplied	After Recovery			Standard Package
mm	Internal Diameter mm	Internal Diameter Max mm	Wall Thickness Nom mm	Adhesive Thickness mm	Spool Length M/spool
6.0	6.0	4.50	1.20±0.20	0.20±0.05	300
8.0	8.0	6.1	1.30±0.20	0.20±0.05	200
11	11.0	7.1	1.30±0.20	0.20±0.05	200
13	13.0	9.8	1.30±0.20	0.20±0.05	100
15	15.0	11.5	1.30±0.20	0.20±0.05	100

TECHNICAL DATA

Property	Test Method	Standard Performance
Tensile Strength(MPa)	ASTM D2671	≥12
Elongation(%)	ASTM D2671	≥300
Longitudinal change	ASTM D2671	-10%~+10%
Tensile strength after aging(MPa)	120°CX24h	≥12
Non-deformability	140°C,10min,2kg/cm ² ,loaded 5min	≤60%
Low-temperature impact	ASTM D 746	-35°C,no cracking
Impact resistance to fall	Room temperature&-40°CX30min,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 ₂ SO ₄ ,0.1mol/L NaOH,Brake fluid, Engine oil, Gasoline	No abnormal in appearance	20°C,120hr



WM-(3X) GLW

Flexible, Thick Adhesive-lined Dual Wall HST

Manufactured by co-extrusion of polyolefin and hot-melt adhesive. Designed to provide both insulation and sealing for protected parts. Used to protect wire bundles and metal tubes against water and moisture.



- 3:1 Shrink Ratio
- Flexibility
- Low longitudinal shrinkage
- Continuous operating temperature: -45°C to 125°C
- Min shrink temperature: 110°C
- Thick adhesive liner forms an effective barrier vs. fluids and moisture

ADHESIVE PROPERTIES

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



**DIMENSIONS**

Size		AS Supplied	After Recovery			Standard Package
Inch	mm	Inner Diameter Min(mm)	Inner Diameter Max(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

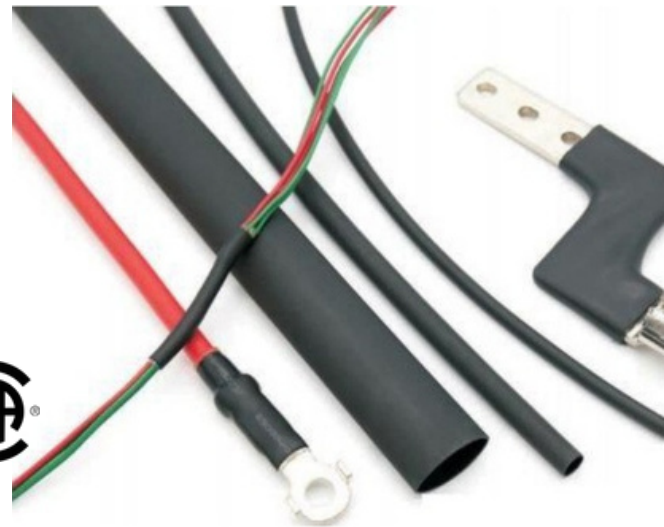
Property	Test method	Standard	Typical Performance
Tensile strength(Mpa)	ASTM D2671	≥ 10.4	13.85
Elongation(%)	ASTM D2671	≥ 200	454.62
Tensile strength after aging(Mpa)	UL224 158 °CX168hr	≥ 7.3	12.36
Elongation after aging (%)	UL224 158 °CX168hr	≥ 100	392.54
Dielectric strength(kV/mm)	IEC 60243	≥ 15	19.17
Volume resistivity(Ω.cm)	IEC 60093	≥ 1X10 ¹⁴	1.98 X10 ¹⁴



WM-(3X) H

Halogen-Free Dual Wall Adhesive-lined HST

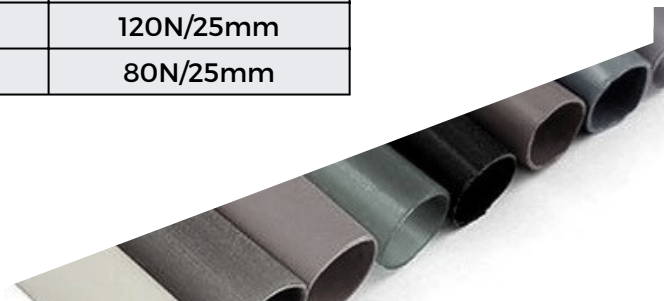
With environmental sealing capability for a wide variety of electrical applications, including automotive and marine wire harness, wire splices, breakouts, and connector-to-cable transitions.



- 3:1 Shrink Ratio
- Halogen Free
- Continuous operating temperature: -45°C to 125°C
- Fully shrink temperature: ≥ 125°C
- Super Sealing against water, moisture and other contaminants

ADHESIVE PROPERTIES

Property	Test method	Standard
Water Absorption	ASTM D570	<0.5
Softening Point(°C)	ASTM E28	95±5
Strength of pearing (PE)	ASTM D 1000	120N/25mm
Strength of pearing (AI)	ASTM D 1000	80N/25mm



**DIMENSIONS**

Size		AS Supplied	After Recovery			Standard Package
Inch	mm	Inner Diameter Min(mm)	Inner Diameter Max(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	Typical Performance
Tensile strength(MPa)	ASTM D2671	≥10.4	11.56
Elongation(%)	ASTM D2671	≥200	480.62
Tensile strength after aging(Mpa)	UL224 158°CX168hr	≥7.3	10.58
Elongation after aging (%)	UL224 158°CX168hr	≥100	420.75
Flammability	ASTM D2671B	Pass	Pass
Dielectric strength(kV/mm)	IEC 60243	≥15	18.36
Volume resistivity(Ω.cm)	IEC 60093	≥1X10 ¹⁴	2.18X10 ¹⁴



WM-(3X, 4X) GF

Flexible, Thick Adhesive-lined Dual Wall HST

Ideal for applications where both exceptional flame retardancy and environmental sealing capabilities are required.



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

ADHESIVE PROPERTIES

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





DIMENSIONS WM-(3X) GF

Size		AS Supplied	After Recovery			Standard Package
Inch	mm	Inner Diameter Min(mm)	Inner Diameter Max(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	1.65±0.30	0.50±0.20	1.22 OR 25M/Roll
5/8	15.0	15.0	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

DIMENSIONS WM-(4X) GF

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±0.30	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±0.50	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 Strength(MPa)	ASTM D2671	≥10.4	14.28
Elongation(%)	ASTM D2671	≥200	450.29
Tensile Strength after aging (MPa)	MIL-DTL-23053/4	≥8.4	10.82
Elongation after aging(%)	MIL-DTL-23053/4	≥100	390.27
Dielectric strength(kv/mm)	IEC 60243	≥15	17.5
Volume resistivity(Ω.cm)	IEC 60093	≥1X10 ¹⁴	2.5X10 ¹⁴



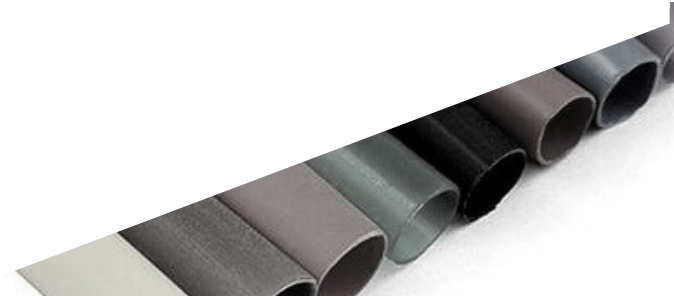
WM-(4X) G

Adhesive-lined Dual Wall HST

Ideal for applications where both exceptional flame retardancy and environmental sealing capabilities are required.



- 4:1 Shrink Ratio
- Low longitudinal shrinkage
- Flame retardant (out jacket only)
- Continuous operating temperature: -45°C to 125°C
- Fully shrink temperature: $\geq 125^{\circ}\text{C}$
- Ideal for connector sealing covering large diam. differences
- Inner adhesive bonds to plastics, steel and polyethylene
- Superior sealing vs. water, moisture and other contaminants



**ADHESIVE PROPERTIES**

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

DIMENSIONS

Size		AS Supplied	After Recovery			Standard Package
Inch	mm	Inner Diameter Min(mm)	Inner Diameter Dax(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 strength(MPa)	ASTM D2671	≥10.4	12.68
Elongation(%)	ASTM D2671	≥200	448.72
Tensile strength after aging(MPa)	UL224 158°CX168hr	≥7.3	11.45
Elongation after aging (%)	UL224 158°CX168hr	≥100	390.41
Flammability	ASTM D2671B	Pass	Pass
Dielectric strength(kV/mm)	IEC 60243	≥15	18.25
Volume resistivity(Ω.cm)	IEC 60093	≥1X10 ¹⁴	1.86X10 ¹⁴



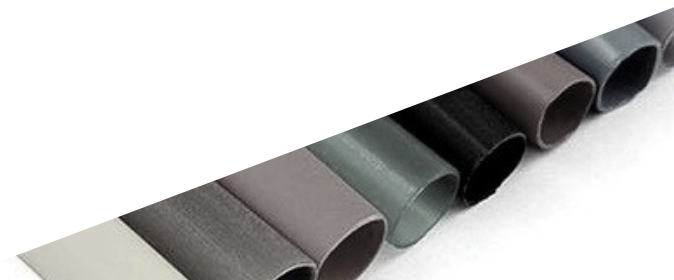
WM-(4X) GBK

Adhesive-lined Cross-linked HST

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



- 4:1 Shrink Ratio
- Shrinks rapidly for quick installation
- Adhesive bonds to PVC, XLPE and PP-EDM cable jackets
- Continuous operating temperature: -45°C to 125°C
- Fully shrink temperature 110°C
- Initial shrinkage temperature 70°C
- Superior sealing vs. water, moisture and chemicals



**ADHESIVE PROPERTIES**

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

DIMENSIONS

Size		As supplied	After Recovery			Standard Package
Inch	mm	Internal Diameter mm	Total Wall Thickness mm	Adhesive Thickness mm	Spool Length M/spool	
5/32	4.0	1.0	1.40±0.30	0.50±0.20	200	
1/4	6.0	1.3	1.70±0.30	0.60±0.20	100	
5/16	8.0	1.7	2.00±0.30	0.75±0.20	100	
2/5	10.0	2.0	2.20±0.40	0.90±0.20	1.22m OR 25M/Roll	
1/2	12.0	2.4	2.45±0.40	1.20±0.20	1.22m OR 25M/Roll	
3/4	18.0	4.5	2.60±0.40	1.40±0.20	1.22m OR 25M/Roll	

TECHNICAL DATA

Property	Test Method	Standard	Typical Performance
Tensile strength (Mpa)	ASTM D 2671	≥10.4	11.5
Ultimate elongation (%)	ASTM D 2671	≥300	450
Tensile strength after heat aged (Mpa)	158°CX 168h	≥7.3	8.5
Ultimate elongation after heat aged (%)	158°CX 168h	≥200	350
Dielectric strength (kv/mn)	ASTM D 149	≥15	17.5
Volume resistivity(Ω*cm)	ASTM D 876	≥1x10 ¹⁴	2.5x10 ¹⁴



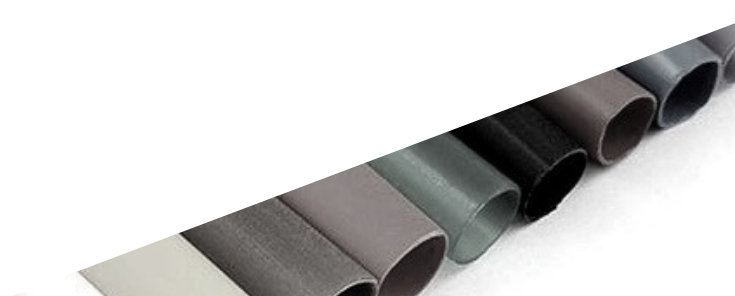
WM-(4X) GRF

Highly Flame Retardant Dual Wall HST

Semi-rigid, cross-linked dual-wall HST designed for splice sealing and fuse link protection.



- 4:1 Shrink Ratio
- Exceptionally Flame retardant
- Highly resistant to common automotive fluids & solvents
- Continuous operating temperature: -45°C to 125°C
- Fully shrink temperature: $\geq 125^{\circ}\text{C}$
- Seals and protects automotive fuse-links, splice & terminals
- Thick adhesive liner vs. fluids and moisture penetration
- Semi-rigid and mechanically tough outer jacket provides added strain relief and excellent abrasion protection



**ADHESIVE PROPERTIES**

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

DIMENSIONS

Size		AS Supplied	After Recovery			Standard Package
Inch	mm	Inner DiameterM in(mm)	Internal Diameter(mm)	Total Wall Thickness (mm)	Adhesive Thickness(m m)	Spool Length M/spool
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

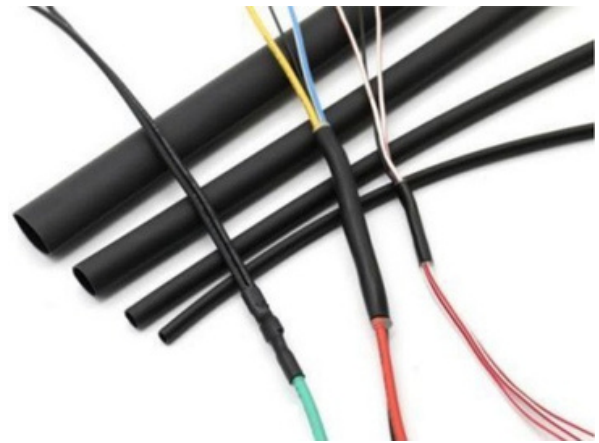
Property	Test Method	Standard
Tensile Strength(MPa)	ASTM D2671	≥10.4
Elongation(%)	ASTM D2671	≥300
Tensile Strength after aging (MPa)	UL224 158°CX168hr	≥7.3
Elongation after aging(%)	UL224 158°CX168hr	≥200
Dielectric strength(kV/mm)	IEC 60243	≥15
Volume resistivity(Ω.cm)	IEC 60093	≥1X10 ¹⁴



WM-BK

High Shrink Ratio, Cross-Linked Semi-Rigid Dual Wall HST

Adhesive, semi-rigid dual-wall HST designed to seal & environmentally maximise splice protection.



- 4:1 Shrink Ratio
- Halogen Free
- Super sealing vs. water, moisture or other contaminants
- Continuous operating temperature: -45°C to 125°C
- Fully shrink temperature 125°C
- Sony Compliant

Adhesive Properties

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



**DIMENSIONS**

Size	As Supplied	After Recovery			Standard Package
Inch	mm	Internal Diameter mm	Wall Thickness Nom mm	Adhesive Thickness mm	Spool Length M/spool
5/32	4.0	0.95	1.40±0.30	060±0.20	200
1/4	6.0	1.27	1.70±0.30	0.80±0.20	100
5/16	8.0	1.65	2.00±0.30	0.95±0.20	100
1/2	12.0	2.41	2.45±0.40	1.20±0.20	1.22 OR 25M/Roll
3/4	18.0	4.45	2.60±0.40	1.34±0.30	1.22 OR 25M/Roll

TECHNICAL DATA

Property	Test Method	Standard
Tensile strength (Mpa)	ASTM D 2671	≥10.4
Ultimate elongation (%)	ASTM D 2671	≥300
Tensile strength after aging (Mpa)	UL 224 158°CX 168h	≥7.3
Ultimate elongation after aging (%)	UL 224 158°CX 168h	≥200
Dielectric strength (kv/mn)	IEC243	≥15
Flammability	ASTM D2671B	Self- extinguish within 30s
Volume resistivity(Ω*cm)	ASTM D 876	≥1x10 ¹⁴