



Heat Shrink & Protective Sleevings

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TECHNICAL DATA FOR HEAT SHRINKABLE SLEEVING

J2

Cross Reference By Manufacturer

ETLIN	ALPHA	ICO / RALLY	MARKEL	BIRNBACH	VOLTREX	DABURN	PANDUIT	ESSEX	ECC / 3M	AMP	RAYCHEM	REMTEK	SIGMAFORM	SINCLAIR & RUSH	SUMITOMO
HST/PVC	FIT100	HVX	HT105	SKI105 (SK265)	PVS	SH265	--	VC		--	RT800 (HS105-3)	PVC105	--	RPVC105	V
HST/POL	FIT105*	HCG	--	--	--		--	VCX	CP221	--	--	CPGE105	--	GP105	A4
HST/TWP	FIT295	HRK	HM140	--	SRS	SH290	--	ASR	SR350	--	CRN (RT350)	GPR135	--	RPO135	B8 D
HST/SRPA	FIT300	HIM	--	--	SRM	SM270	--	--	MW	--	SCL (RT1301)	DWP105	--	--	W5DL
HST/TEF	FIT400	--	--	--	SST	SH400	--	--	--	--	FEP	FEP200	--	--	--
HST/PSS	FIT700 (21-25)	--	--	--	--	--	HST	--	ITCS (HDT)	6031	WCSF* (RT1508)	SST	SST / SCTV*	--	--

*Check Specification

ETLIN	ALPHA	ICO / RALLY	MARKEL	BIRNBACH	VOLTREX	DABURN	PANDUIT	ESSEX	KULKA/ SMITH	AMP	BENTLY HARRIS	VARFLEX	BRAND-REX
EVT	PVC105	SLV105	FLEXITE HT105C	B105	PVI	D105 D74	--	ASTRA 703/105	--	35	FLEXTRUDE 105	SYNTHOL VAR SHH	TURBOLEX 105
FSHT/AC	PIF150	--	HYGRADE 463	--	GSA	--	--	ACRYFLEX F	--	--	BEN-HAR	VARGLAS	TURBOCRYL
FSHT	PIF240	SLV1200	HYGRADE 1200FRI	B1200	GSX	D1200	--	VARNISHE D GLASS	--	35	--	VARGLAS	TURBOGLAS
FSHT/VC	PIF130	SLV130	HYGRADE VFB	B105	GSV	D130	--	VINYLGLAS	--	--	VINYL FLEX4000	--	TRUBOTUF 4000
FSHT/SR	PIF200	SLV398	HYGRADE SR398	--	GSR	--	--	SILICONE RR	--	--	BEN-HAR 1151	VARGLAS SILICONE	TURBO 117

TECHNICAL DATA FOR HEAT SHRINKABLE SLEEVING

J3

Recovered Wall Thickness – 2:1 Shrink Ratio Tubing

% RECOVERY	K	% RECOVERY	K	% RECOVERY	K	% RECOVERY	K	% RECOVERY	K
1	0.505	21	0.605	41	0.705	61	0.805	81	0.905
2	0.51	22	0.61	42	0.71	62	0.81	82	0.91
3	0.515	23	0.615	43	0.715	63	0.815	83	0.915
4	0.52	24	0.62	44	0.72	64	0.82	84	0.92
5	0.525	25	0.625	45	0.725	65	0.825	85	0.925
6	0.53	26	0.63	46	0.73	66	0.83	86	0.93
7	0.535	27	0.635	47	0.735	67	0.835	87	0.935
8	0.54	28	0.64	48	0.74	68	0.84	88	0.94
9	0.545	29	0.645	49	0.745	69	0.845	89	0.945
10	0.55	30	0.65	50	0.75	70	0.85	90	0.95
11	0.555	31	0.655	51	0.755	71	0.855	91	0.955
12	0.56	32	0.66	52	0.76	72	0.86	92	0.96
13	0.565	33	0.665	53	0.765	73	0.865	93	0.965
14	0.57	34	0.67	54	0.77	74	0.87	94	0.97
15	0.575	35	0.675	55	0.775	75	0.875	95	0.975
16	0.58	36	0.68	56	0.78	76	0.88	96	0.98
17	0.585	37	0.685	57	0.785	77	0.885	97	0.985
18	0.59	38	0.69	58	0.79	78	0.89	98	0.99
19	0.595	39	0.695	59	0.795	79	0.895	99	0.995
20	0.6	40	0.7	60	0.8	80	0.9		

To determine the wall thickness, in inches or millimeters, of any 2:1 shrink ratio at any percentage of recovery, find the recovery in the table below and multiply the fully recovered wall thickness of the tubing by the constant, K, located opposite the percentage of recovery.

Example: What will the wall thickness of Type XYZ, size 1/8, tubing be when the tubing is recovered 30%?

Solution: Constant K, from the table, for 30% recovery is 0.650. The fully recovered nominal wall thickness of the tubing per the product specification is 0.020 inches (0.051 mm). Therefore: 0.020" (0.051mm) X 0.650 = 0.013" (0.03315 mm) wall thickness at 30% recovery.

The above method is mathematically correct, and the values derived from it are useful in practice. The method and values cannot, however, take into account individual variations in tubing manufacture and nominal value or ranges of tolerances in the specification of same, or variations in the application of the tubing.

Insulation Materials Properties Selection Chart

PROPERTIES	POLYOLEFIN	PVC (VINYL)	TEFLON (FEP)	TEFLON (TFE)	TEFLON (ETFE)	KYNAR	NEOPRENE	SILICON
ABRASION RESISTANCE	GOOD	GOOD	GOOD	FAIR	GOOD	GOOD	EXCELLENT	FAIR
HEAT RESISTANCE	GOOD	GOOD	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	GOOD	EXCELLENT
WEATHERABILITY	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	EXCELLENT
FLAME RESISTANCE	VW-1 EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	GOOD	GOOD
WATER RESISTANCE	EXCELLENT	GOOD	GOOD	GOOD	EXCELLENT	GOOD	EXCELLENT	EXCELLENT
ACID RESISTANCE	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	GOOD	GOOD
ALKALI RESISTANCE	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	GOOD	GOOD
ALIPHATIC HYDRO RESISTANCE (GASOLINE, KEROSENE, ETC.)	FAIR	GOOD	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	GOOD	FAIR
AROMATIC HYDRO RESISTANCE (BENZOL, TOLUOL, ETC.)	POOR	POOR	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	FAIR	FAIR

The above material is for reference purposes only. Note that application variables influence performance - favourably or unfavourably. The above data is based only as a recommendation. However, no guarantee is expressed or implied.

ESTIMATOR CHART FOR CUT TUBING PIECES

J4

Estimator Chart For Cut Tubing Pieces

LENGTH INCHES	FT REQ PER M PIECES	NO PIECES IN 1M FT	LENGTH INCHES	FT REQ PER M PIECES	NO PIECES IN 1M FT	LENGTH INCHES	FT REQ PER M PIECES	NO PIECES IN 1M FT	LENGTH INCHES	FT REQ PER M PIECES	NO PIECES IN 1M FT
1/8	10.4	96,000	3-1/16	255.2	3,950	6-1/16	505.2	1,975	9-1/16	755.2	1,300
3/16	15.7	64,000	3-1/8	260.5	3,850	6-1/8	510.4	1,950	9-1/8	760.4	1,300
1/4	20.9	48,000	3-3/16	265.7	3,800	6-3/16	515.6	1,925	9-3/16	765.7	1,300
5/16	26.1	38,400	3-1/4	270.9	3,700	6-1/4	520.8	1,900	9-1/4	770.8	1,275
3/8	31.3	32,000	3-5/16	276.1	3,650	6-5/16	526.0	1,900	9-5/16	776.1	1,275
7/16	36.5	27,500	3-3/8	281.3	3,600	6-3/8	531.3	1,875	9-3/8	781.3	1,275
1/2	41.7	24,000	3-7/16	286.5	3,500	6-7/16	536.5	1,850	9-7/16	786.5	1,250
9/16	46.9	21,400	3-1/2	291.7	3,450	6-1/2	541.7	1,825	9-1/2	791.7	1,250
5/8	52.1	19,200	3-9/16	296.9	3,400	6-9/16	546.9	1,800	9-9/16	796.9	1,250
11/16	57.3	17,500	3-5/8	302.1	3,350	6-5/8	552.1	1,800	9-5/8	802.1	1,225
3/4	62.5	16,000	3-11/16	307.3	3,300	6-11/16	557.3	1,775	9-11/16	807.3	1,225
13/16	67.7	14,800	3-3/4	312.5	3,200	6-3/4	562.5	1,775	9-3/4	812.5	1,225
7/8	73.0	13,750	3-13/16	317.7	3,150	6-13/16	567.7	1,750	9-13/16	817.7	1,200
15/16	78.2	12,800	3-7/8	323.0	3,100	6-7/8	572.9	1,725	9-7/8	823.0	1,200
1	83.4	12,000	3-15/16	328.2	3,050	6-15/16	578.1	1,725	9-15/16	828.1	1,200
1-1/16	88.6	11,300	4	333.4	3,000	7	583.4	1,714	10	833.3	1,200
1-1/8	93.8	10,700	4-1/16	338.6	2,950	7-1/16	588.5	1,700	10-1/16	838.5	1,175
1-3/16	99.0	10,100	4-1/8	343.8	2,850	7-1/8	593.7	1,650	10-1/8	843.7	1,175
1-1/4	104.2	9,600	4-3/16	349.0	2,800	7-3/16	598.9	1,650	10-3/16	848.9	1,150
1-5/16	109.4	9,150	4-1/4	354.2	2,800	7-1/4	604.2	1,650	10-1/4	854.1	1,150
1-3/8	114.6	8,750	4-5/16	363.3	2,775	7-5/16	609.4	1,625	10-5/16	859.4	1,150
1-7/16	119.8	8,350	4-3/8	364.6	2,725	7-3/8	614.6	1,625	10-3/8	864.5	1,150
1-1/2	125.0	8,000	4-7/16	369.9	2,700	7-7/16	619.8	1,600	10-7/16	869.8	1,125
1-9/16	130.2	7,700	4-1/2	375.0	2,650	7-1/2	625.0	1,600	10-1/2	875.0	1,125
1-5/8	135.5	7,400	4-9/16	380.3	2,625	7-9/16	630.2	1,575	10-9/16	880.2	1,125
1-11/16	140.7	7,150	4-5/8	385.4	2,575	7-5/8	635.4	1,575	10-5/8	885.4	1,125
1-3/4	145.9	6,900	4-11/16	390.7	2,550	7-11/16	640.6	1,550	10-11/16	890.6	1,100
1-13/16	151.1	6,650	4-3/4	395.9	2,525	7-3/4	645.8	1,550	10-3/4	895.9	1,100
1-7/8	156.3	6,400	4-13/16	401.1	2,475	7-13/16	651.0	1,525	10-13/16	901.0	1,100
1-15/16	161.5	6,200	4-7/8	406.2	2,450	7-7/8	656.2	1,500	10-7/8	906.2	1,100
2	166.7	6,000	4-15/16	411.5	2,425	7-15/16	661.4	1,500	10-15/16	911.5	1,075
2-1/16	171.9	5,850	5	416.7	2,400	8	666.7	1,500	11	916.7	1,075
2-1/8	177.1	5,650	5-1/16	421.9	2,350	8-1/16	671.9	1,475	11-1/16	921.8	1,075
2-3/16	182.3	5,500	5-1/8	427.1	2,325	8-1/8	677.1	1,475	11-1/8	927.0	1,075
2-1/4	187.5	5,350	5-3/16	432.3	2,300	8-3/16	682.3	1,450	11-3/16	932.2	1,050
2-5/16	192.7	5,200	5-1/4	437.5	2,275	8-1/4	687.5	1,450	11-1/4	937.4	1,050
2-3/8	198.0	5,100	5-5/16	442.8	2,250	8-5/16	692.7	1,425	11-5/16	942.7	1,050
2-7/16	203.2	4,950	5-3/8	447.9	2,225	8-3/8	698.0	1,425	11-3/8	947.9	1,050
2-1/2	208.4	4,800	5-7/16	453.2	2,200	8-7/16	703.2	1,400	11-7/16	953.1	1,025
2-9/16	213.6	4,700	5-1/2	458.4	2,175	8-1/2	708.4	1,400	11-1/2	958.3	1,025
2-5/8	218.8	4,600	5-9/16	463.6	2,150	8-9/16	713.6	1,400	11-9/16	963.5	1,025
2-11/16	224.0	4,500	5-5/8	468.8	2,125	8-5/8	718.7	1,375	11-5/8	968.7	1,025
2-3/4	229.2	4,400	5-11/16	474.0	2,100	8-11/16	723.9	1,375	11-11/16	973.9	1,000
2-13/16	234.4	4,300	5-3/4	479.2	2,075	8-3/4	729.2	1,350	11-3/4	979.1	1,000
2-7/8	239.6	4,200	5-13/16	484.4	2,050	8-13/16	734.4	1,350	11-13/16	984.3	1,000
2-15/16	244.8	4,100	5-7/8	489.6	2,025	8-7/8	739.6	1,350	11-7/8	989.5	1,000
3	250	4,000	5-15/16	494.8	2,000	8-15/16	744.8	1,325	11-15/16	994.7	1,000
			6	500	2,000	9	750	1,325	12	1,000	1,000

Chart relates the length of tubing required, to the necessary footage to make 1,000 pieces; and to the number of individual pieces that can be cut from 1,000 feet of material.

NON-IRRADIATED PVC HEAT SHRINKABLE SLEEVING

Heat Shrinkable Sleeving, Non-Irradiated PVC



Features:

- Economical
- Excellent sunlight and ozone resistance
- Excellent oil, moisture and fungus resistance
- Semi-gloss finish ideal for cosmetic application
- Outstanding flame and chemical resistance
- Easily hot stamped for wire identification
- Spooled lengths reduce waste



Stock Colours:

Black is Standard; add suffix -CL for Clear. Other colours available to order (minimums required).



PART NUMBER	EXPANDED ID D		RECOVERED ID d		RECOVERED NOMINAL WALL THICKNESS W		STANDARD PUT-UP feet	M23053/CL2 MIL STD SIZE CODE
	in	mm	in	mm	in	mm		
HST/PVC-1/16	0.063	1.57	.031	0.79	.020	.50	100, 1000	02
HST/PVC-3/32	0.093	2.30	.046	1.17	.025	.64	100, 1000	03
HST/PVC-1/8	0.125	3.17	.063	1.57	.025	.64	100, 1000	04
HST/PVC-3/16	0.187	4.74	.093	2.396	.025	.64	100, 1000	05
HST/PVC-1/4	0.250	6.35	.125	3.17	.025	.64	100, 1000	06
HST/PVC-3/8	0.375	9.50	.187	4.74	.025	.64	100, 1000	07
HST/PVC-1/2	0.500	12.70	.250	6.35	.025	.64	100, 250	08
HST/PVC-3/4	0.750	18.05	.375	9.50	.033	.84	100, 250	09
HST/PVC-1	1.000	25.40	.500	12.70	.038	.97	100, 250	10
HST/PVC-1-1/2	1.500	38.10	.750	18.05	.045	1.14	100	11
HST/PVC-2	2.000	50.80	1.000	25.40	.045	1.14	100	12

Description:

Low cost economical heat shrink tubing for military, commercial and industrial cable assemblies.

Specifications:

UL 224 VW-1 (Colours)
CSA OFT (Colours)
MIL-I-23053/2 CL 2
ASTM D 3150

Properties:

Shrinkage Ratio: 50% (2:1) @ 105°C
Longitudinal Shrinkage: ±10% (minimum)
Operating Temperature Range: -35°C to +105°C
Dielectric Strength: 1,083 V/mil
UL Rating: 600V @ 105°C
Volume Resistivity: 21.5 X 10¹² ohm-cm
Specific Gravity: 1.33
Tensile Strength: 2,500 psi (176 kg/cm²)
Ultimate Elongation: 300% (minimum)
Non-Irradiated

For ultra thin wall shrinkable PVC used in insulating battery packs and capacitors, consult factory.

Irradiated shrinkable PVC available – contact factory.

Storage Note: Tubing should be stored below 80°C (176°F) away from direct sunlight.

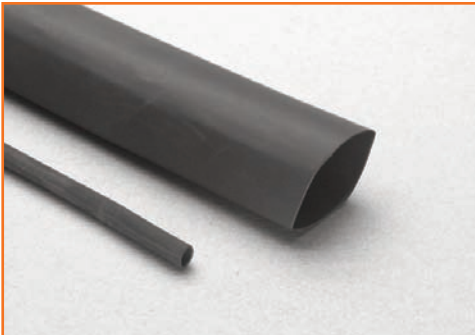
Hot Stamped Tubing and Cable Markers:

For markers made to order, regardless of quantities, the Hot Stamped Wire and Cable Markers can be made from various tubing materials to code, identify, protect, or advertise a cable assembly or circuit installation or terminals. We can also imprint company logos and custom symbols on Polyolefin shrink tubing products. Send drawings or sketches for quotation to our Sales Department.

IRRADIATED INDUSTRIAL GRADE POLYOLEFIN HEAT SHRINKABLE SLEEVING

J6

Heat Shrinkable Sleeving, Irradiated Polyolefin – Industrial Grade



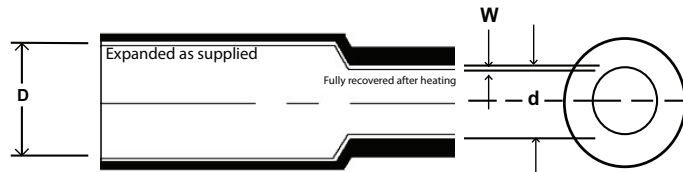
Features:

- Economical
- Commercial and industrial harnesses
- Indefinite shelf life
- Thermally stable
- Mechanically durable
- Easily hot stamped for wire identification
- Long lengths ideal for cable jacketing, minimize waste



Stock Colours:

Black is standard for additional colours contact factory.



PART NUMBER	EXPANDED ID D		RECOVERED ID d		RECOVERED NOMINAL WALL THICKNESS W		STANDARD PUT-UP
	in	mm	in	mm	in	mm	feet
HS-3/64-SWB	.046	1.17	.023	0.58	.016	0.41	100, 1000
HS-1/16-SWB	.063	1.60	.031	0.79	.017	0.43	100, 500
HS-3/32-SWB	.093	2.38	.046	1.17	.020	0.50	100, 500
HS-1/8-SWB	.125	3.18	.063	1.57	.020	0.50	100, 500
HS-3/16-SWB	.187	4.76	.093	2.36	.020	0.50	100, 250
HS-1/4-SWB	.250	6.35	.125	3.17	.025	0.63	100, 200
HS-3/8-SWB	.375	9.53	.187	4.74	.025	0.63	100, 200
HS-1/2-SWB	.500	12.70	.250	6.35	.025	0.63	100, 200
HS-3/4-SWB	.750	19.05	.375	9.50	.030	0.76	100, 200
HS-1-SWB	1.000	25.40	.500	12.70	.035	0.88	100

Description:

Very versatile all purpose heat shrinkable Polyolefin tubing for commercial or industrial applications.

Properties:

Shrinkage Ratio: 50% (2:1) @ 121°C
 Longitudinal Shrinkage: ±5% (maximum)
 Operating Temperature Range: -55°C to +135°C
 Dielectric Strength: 500 V/mil
 Volume Resistivity: 1014 ohm-cm (minimum)
 Specific Gravity: 1.1
 Tensile Strength: 1,800 psi
 Ultimate Elongation: 400%

Hot Stamped Tubing and Cable Markers:

For markers made to order, regardless of quantities, the Hot Stamped Wire and Cable Markers can be made from various tubing materials to code, identify, protect, or advertise a cable assembly or circuit installation or terminals. We can also imprint company logos and custom symbols on Polyolefin shrink tubing products. Send drawings or sketches for quotation to our Sales Department.

IRRADIATED THICK WALL POLYOLEFIN HEAT SHRINKABLE SLEEVING

Heat Shrinkable Sleeving, Irradiated Polyolefin – Thick Wall



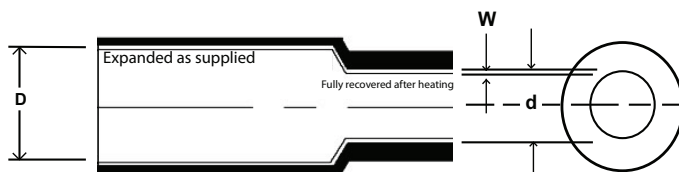
Features:

- Extremely strong
- Self-extinguishing (colours only)
- Provides maximum mechanical strength
- Abrasion resistant
- Thermally stable
- Will not cold flow or melt
- Excellent cut-through resistance
- Component strain relief
- Supplied in easy to use 4 foot lengths



Stock Colours:

Black is Standard; add suffix -CL for Clear. Available in an assortment of size packages. For 6" kit, order as part number-size-colour-6". Other colours subject to minimums.



PART NUMBER	EXPANDED ID D		RECOVERED ID d		RECOVERED NOMINAL WALL THICKNESS W		STANDARD PUT-UP	M23053/6- MIL STD SIZE CODE	
	in	mm	in	mm	in	mm		feet	CL 1
HST/TWP-3/64	0.046	1.17	0.023	0.58	.020	0.50	100	101	201
HST/TWP-1/16	0.063	1.57	0.031	0.79	.020	0.50	100	102	202
HST/TWP-3/32	0.093	2.36	0.045	1.17	.020	0.50	100	103	203
HST/TWP-1/8	0.125	3.17	0.063	1.57	.020	0.50	100	104	204
HST/TWP-3/16	0.187	4.74	0.093	2.36	.025	0.63	100	105	205
HST/TWP-1/4	0.250	6.35	0.125	3.17	.025	0.63	100	106	206
HST/TWP-3/8	0.375	9.50	0.187	4.74	.030	0.76	100	107	207
HST/TWP-1/2	0.500	12.70	0.250	6.35	.030	0.76	100	108	208

Description:

Semi-rigid, heat shrinkable tubing designed specifically to provide superior strain relief and add strength to wires and terminations.

Specifications:

UL Recognized
MIL-DTL-23053/6:
CL 1 – Colours
CL 2 – Clear only
AMS-3638B Colours
AMS-3639B Clear

Properties:

Shrinkage Ratio: 50% (2:1) @ 135°C
Longitudinal Shrinkage: ±5% (maximum)
Operating Temperature Range: -55°C to +135°C
Dielectric Strength: 500 V/mil
UL Rating: 600V @ 125°C
Volume Resistivity: 10¹⁴ ohm-cm (minimum)
Specific Gravity: 1.35 CL 1 (maximum)/1.00 CL 2 (maximum)
Tensile Strength: 2,000 psi
Ultimate Elongation: 200%

IRRADIATED POLYOLEFIN, SEMI-RIGID ADHESIVE LINED SLEEVING

J8

Heat Shrinkable Sleeving, Irradiated Polyolefin – Semi-Rigid Adhesive Lined



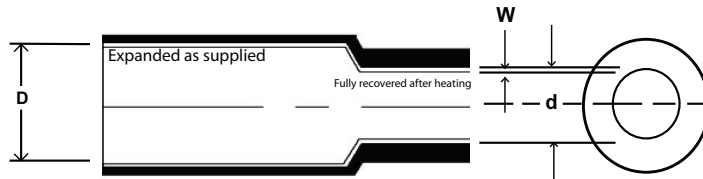
Features:

- Moisture protection
- Provides maximum mechanical strength
- Component strain relief
- Creates corrosion resistant seal
- Reinforces weak solder joints and terminations
- Thermally stable
- Ideal for field installations
- Supplied in easy to use 4 foot lengths



Stock Colours:

Black is Standard. Available in an assortment of size packages.



PART NUMBER	EXPANDED ID D		RECOVERED ID d		RECOVERED NOMINAL WALL THICKNESS W		STANDARD PUT-UP	M23053/CL2 MIL STD SIZE CODE
	in	mm	in	mm	in	mm		
HST/SRPA-1/8	0.125	2.2	.023	0.6	.038	0.96	100	01
HST/SRPA-3/16	0.187	4.7	.060	1.5	.043	1.09	100	02
HST/SRPA-1/4	0.250	6.4	.080	2.0	.047	1.19	100	03
HST/SRPA-3/8	0.375	9.5	.135	3.4	.020	1.27	100	04
HST/SRPA-1/2	0.500	12.7	.195	5.0	.055	1.39	20	05
HST/SRPA-3/4	0.750	19.1	.313	8.0	.065	1.65	20	06
HST/SRPA-1	1.000	25.4	.400	10.2	.075	1.90	20	07

Description:

Semi-rigid, flame retardant Polyolefin heat shrink tubing lined with a moisture proof sealant. For use in repairing and protecting cable jackets, outdoor connections and splices. Upon shrinking, the inner adhesive melts and flows while outer tubing shrinks to conform to substrate. Ideal for strain relief, sealing, encapsulating, moisture and corrosion protection of wires, terminals and connections.

Specifications:

UL Recognized
MIL-DTL-23053/4 CL 1
AMS-3634

Properties:

Shrinkage Ratio: Approximately (3:1) @ 135°C
 Longitudinal Shrinkage: ±10% (maximum)
 Operating Temperature Range: -55°C to +110°C
 Dielectric Strength: 700 V/mil
 UL Rating: 600V @ 125°C
 Volume Resistivity: 1015 ohm-cm (minimum)
 Specific Gravity: 1.01 (minimum)
 Tensile Strength: 2,100 psi
 Ultimate Elongation: 200% (minimum)
 Water Absorption: 0.1% (maximum)

CROSS LINKED POLYOLEFIN, 3:1 SHRINK RATIO SLEEVING

J9

Heat Shrinkable Sleeving, Cross Linked Polyolefin – 3:1 Shrink Ratio



Features:

- Slips over large and irregular shapes easily
- 3:1 shrink ratio offers application size versatility
- Forms permanent tight mechanical bond
- Thermally stable
- Can be easily hot stamped for wire identification
- Ideal for connector backshells
- Wire strain relief
- Excellent physical and chemical properties
- Medium duty harnessing
- Electrical/Electronic identification
- Supplied in easy to use 4 foot lengths



Stock Colours:

Black is Standard. Spooled lengths available (minimums required). Non-standard colours available. Minimums required for Red, Yellow, Blue, White and, Clear.



PART NUMBER	EXPANDED ID D		RECOVERED ID d		RECOVERED NOMINAL WALL THICKNESS W		STANDARD PUT-UP
	in	mm	in	mm	in	mm	
HST/P31-1/16	.063	1.5	.021	0.5	.018	0.45	100
HST/P31-1/8	.125	3.0	.041	1.0	.022	0.55	100
HST/P31-1/4	.250	6.0	.083	2.0	.026	0.65	100
HST/P31-3/8	.375	9.0	.125	3.0	.030	0.75	100
HST/P31-1/2	.500	12.0	.167	4.0	.030	0.75	100
HST/P31-3/4	.750	18.0	.250	6.0	.040	1.00	100
HST/P31-1	1.000	24.0	.333	8.0	.040	1.00	100
HST/P31-1-1/2	1.500	39.0	.500	13.0	.045	1.15	100

Description:

Over expanded general purpose Polyolefin with excellent physical and chemical properties. Ideal for use in bundling wire and cable and over irregularly shaped components.

Specifications:

UL 224 VW-1
MIL-DTL-23053/5
(Exception taken to recovered dimensions)

Properties:

Shrinkage Ratio: 33% (3:1) @ 100°C
Longitudinal Shrinkage: ±15% (maximum)
Operating Temperature Range: -75°C to +135°C
Dielectric Strength: 625 V/mil
UL Rating: 600V @ 125°C
Specific Gravity: 1.30
Tensile Strength: 2,100 psi
Ultimate Elongation: 300%

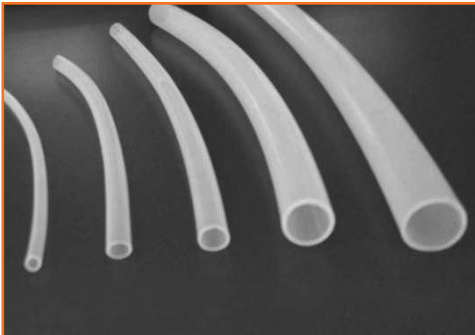
Hot Stamped Tubing and Cable Markers:

For markers made to order, regardless of quantities, the Hot Stamped Wire and Cable Markers can be made from various tubing materials to code, identify, protect, or advertise a cable assembly or circuit installation or terminals. We can also imprint company logos and custom symbols on Polyolefin shrink tubing products. Send drawings or sketches for quotation to our Sales Department.

FEP TEFLON HEAT SHRINKABLE SLEEVING

J10

Heat Shrinkable Sleeving, FEP Teflon



Description:

Heat shrinkable HST/TEF is a high temperature 204°C (400°F) FEP Teflon shrink tubing signed for tight protection of components subject to severe heat, shock and adverse environments.

Specifications:

UL Recognized
CSA Listed
MIL-DTL-23053/11 CL 1

Properties:

Shrinkage Ratio: 1.3:1 (approximately 25%)
Longitudinal Shrinkage: ±10% (maximum)
Operating Temperature Range: -67°C to +204°C
Dielectric Strength: 2,000 V/mil
UL Rating: 150V @ 200°C
Volume Resistivity: 1017 ohm-cm (minimum)
Specific Gravity: 2.15 (maximum)
Tensile Strength: 3,500 psi
Ultimate Elongation: 300% (minimum)

Features:

- Very high heat resistance
- Excellent chemical and solvent resistance
- See-through characteristics for viewing of splices or components
- Outstanding physical and electrical properties
- Excellent cut-through resistance
- Chemically inert
- Will not burn or support flame
- Repairs on high temperature components
- Wide range of sizes
- Supplied in easy to use 4 foot lengths

Stock Colours:

Natural (transparent light blue) is Standard. Standard Put-Up 100 feet (25 x 4 feet).

PART NUMBER	EXPANDED ID D		RECOVERED ID d		RECOVERED NOMINAL WALL THICKNESS W		M23053/11-MIL STD SIZE CODE
	in	mm	in	mm	in	mm	
HST/TEF-24	.031	0.79	.027	0.69	.008	0.20	01
HST/TEF-22	.036	0.91	.032	0.81	.008	0.20	02
HST/TEF-20	.045	1.14	.039	0.99	.008	0.20	03
HST/TEF-18	.060	1.50	.049	1.24	.008	0.20	04
HST/TEF-16	.075	1.90	.061	1.55	.009	0.23	05
HST/TEF-14	.092	2.30	.072	1.83	.009	0.23	06
HST/TEF-12	.115	2.90	.089	2.26	.009	0.23	07
HST/TEF-10	.141	3.60	.114	2.89	.010	0.25	08
HST/TEF-09	.158	4.00	.124	3.15	.010	0.25	09
HST/TEF-08	.180	4.60	.143	3.63	.010	0.25	10
HST/TEF-07	.197	5.00	.158	4.01	.011	0.27	11
HST/TEF-06	.225	5.70	.180	4.57	.011	0.27	12
HST/TEF-05	.248	6.30	.198	5.03	.011	0.27	13
HST/TEF-04	.290	7.40	.226	5.74	.011	0.27	14
HST/TEF-03	.310	7.90	.249	6.32	.011	0.27	15
HST/TEF-02	.365	9.30	.280	7.11	.012	0.30	16
HST/TEF-01*	.400	10.20	.311	7.90	.012	0.30	17
HST/TEF-0	.440	11.20	.349	8.86	.012	0.30	18
HST/TEF-3/8	.500	12.70	.383	9.73	.015	0.38	19
HST/TEF-7/16	.580	14.70	.448	11.38	.020	0.51	20
HST/TEF-1/2	.666	16.90	.510	12.95	.020	0.51	21
HST/TEF-5/8	.830	21.10	.637	16.18	.025	0.63	22
HST/TEF-3/4	1.000	25.40	.764	19.40	.030	0.76	23
HST/TEF-7/8	1.170	29.70	.891	22.63	.035	0.89	24
HST/TEF-1*	1.330	33.80	1.020	25.90	.035	0.89	25

THICK WALL POLYOLEFIN SELF-SEALING SLEEVING

Heat Shrinkable Sleeving, Thick Wall Polyolefin – Self-Sealing



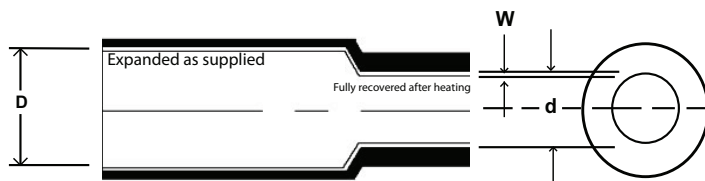
Features:

- 600V use
- Underground or overhead application
- Waterproofs – Insulates – Seals
- For flexible and semi-rigid drops and trunks
- Fits variety of coaxial cable sizes
- Used with THW, RHW, XLP, THHN, XW cables
- May be used with copper or aluminum cables splices
- No greases or sealants necessary
- Installs in minutes



Stock Colours:

Black is Standard. Available in 48", 12" and 6" lengths. Torch is the recommended heat tool for PSS material.



PART NUMBER	EXPANDED ID D		RECOVERED ID d		RECOVERED NOMINAL WALL		M23053/15-MIL STD SIZE
	in	mm	in	mm	in	mm	
HST/PSS-400	.400	10.20	.150	3.8	0.08	2.03	08
HST/PSS-800	.800	20.30	.200	5.1	0.11	2.79	01
HST/PSS-110	1.100	27.90	.370	9.4	0.12	3.05	02
HST/PSS-150	1.500	38.10	.500	12.7	0.17	4.32	03
HST/PSS-170	1.700	43.20	.650	16.5	0.17	4.32	--
HST/PSS-200	2.000	50.80	.750	19.1	0.17	4.32	04
HST/PSS-300	3.000	76.20	1.000	25.4	0.17	4.32	05

Description:

Thick wall adhesive lined tubing for use in outdoor and harsh environments. Ideal for cable splices. Equal to or better than similar wire jacketing materials.

Specifications:

UL Recognized
MIL-DTL-23053/15 CL 1
UL 486D (for cable splicing)

Properties:

Shrinkage Ratio: Approximately 67% (3:1) @ 121°C
Longitudinal Shrinkage: ±10% (maximum)
Operating Temperature Range: -55°C to +110°C
Dielectric Strength: 500 V/mil
UL Rating: 600V
Volume Resistivity: 1013 ohm-cm
Specific Gravity: 1.28 (minimum)
Tensile Strength: 2,400 psi
Ultimate Elongation: 475%
Water Absorption: 0.02%

Applications:

- Moisture proof insulation
- CATV line connectors
- Battery cables
- Cable splices

Application Note:

Alternative method to make breakouts more economical, use tubing with mastic, dual wall or melt liners

Instructions:

- Step 1: Heat tubing.
- Step 2: Squeeze tubing breakout with pliers.
- Step 3: Allow to cool and set mastic will form bridge seal.

NON-SHRINKABLE EXTRUDED PVC SLEEVING

J12

Non-Shrinkable Sleeving, Extruded PVC



Description:

All-purpose, economical extruded plastic tubing with excellent mechanical and electrical properties, self-extinguishing. Designed for general electronic, electrical and aircraft applications involving temperatures as high as 105°C.

Specifications:

UL 224 VW-1
CSA 198 Approved
MIL-I-631D Type F, Form U, Grade C, CL 1, Category 1

Properties:

Operating Temperature Range: -20°C to +105°C
Dielectric Strength: 800 V/mil
UL Rating: 600V @ 105°C



Volume Resistivity: 1013 ohm-cm
Specific Gravity: 1.35 (Black); 1.25 (Clear)
Tensile Strength: 2,800 psi (minimum)

Features:

- Economical tubing
- Highly flexible
- High dielectric strength
- Excellent heat, oil and chemical resistance
- Will not support fungus
- Exceptional abrasion resistance
- Can be easily hot stamped for wire identification
- Indefinite shelf life

Stock Colours:

Black is Standard; add suffix -CL for Clear.

Available Colours: White, Yellow, Red, Green (minimums required).

Items shown are for Grade C material per MIL-I-631D (-20°C to +105°C).

Consult factory for quotations for Grade A (-30°C to +85°C) low temperature material (minimums required).

Hot Stamped Tubing and Cable Markers:

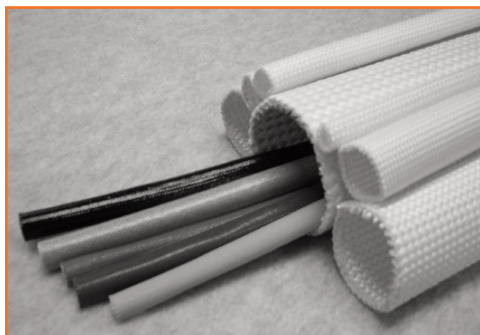
For markers made to order, regardless of quantities, the Hot Stamped Wire and Cable Markers can be made from various tubing materials to code, identify, protect, or advertise a cable assembly or circuit installation or terminals. We can also imprint company logos and custom symbols on Polyolefin shrink tubing products. Send drawings or sketches for quotation to our Sales Department.

PART NUMBER	NOMINAL ID		NOMINAL WALL THICKNESS		STANDARD PUT-UP
	in	mm	in	mm	feet
EVT-24	.022	0.56	.012	0.30	100, 1000 SPOOLS
EVT-22	.027	0.68	.012	0.30	100, 1000 SPOOLS
EVT-20	.034	0.86	.016	0.41	100, 1000 SPOOLS
EVT-19	.038	0.96	.016	0.41	100, 1000 SPOOLS
EVT-18	.042	1.07	.016	0.41	100, 1000 SPOOLS
EVT-17	.047	1.19	.016	0.41	100, 1000 SPOOLS
EVT-16	.053	1.35	.016	0.41	100, 1000 SPOOLS
EVT-15	.059	1.50	.016	0.41	100, 1000 SPOOLS
EVT-14	.066	1.68	.016	0.41	100, 500 SPOOLS
EVT-13	.076	1.93	.016	0.41	100, 500 SPOOLS
EVT-12	.085	2.16	.016	0.41	100, 500 SPOOLS
EVT-11	.095	2.41	.016	0.41	100, 500 SPOOLS
EVT-10	.106	2.69	.016	0.41	100, 500 SPOOLS
EVT-09	.118	3.00	.020	0.50	100, 500 SPOOLS
EVT-08	.133	3.38	.020	0.50	100, 500 SPOOLS
EVT-07	.148	3.76	.020	0.50	100, 500 SPOOLS
EVT-06	.166	4.22	.020	0.50	100, 500 SPOOLS
EVT-05	.186	4.72	.020	0.50	100, 500 SPOOLS
EVT-04	.208	5.28	.020	0.50	100, 250 SPOOLS
EVT-03	.234	5.94	.020	0.50	100, 250 SPOOLS
EVT-02	.263	6.68	.020	0.50	100, 250 SPOOLS
EVT-01	.294	7.47	.020	0.50	100, 250 COILS
EVT-0	.330	8.38	.020	0.50	100, 250 COILS
EVT-5/16	.312	7.92	.025	0.64	100, 250 COILS
EVT-3/8	.375	9.50	.025	0.64	100, 250 COILS
EVT-7/16	.438	11.10	.025	0.64	250 COILS
EVT-1/2	.500	12.70	.025	0.64	100 COILS
EVT-9/16	.562	14.30	.030	0.75	101 COILS
EVT-5/8	.625	15.90	.030	0.75	50 COILS
EVT-3/4	.750	19.10	.035	0.89	50 COILS
EVT-7/8	.875	22.20	.035	0.89	50 COILS
EVT-1	1.000	25.40	.035	0.89	50 COILS
EVT-1-1/8	1.125	28.60	.035	0.89	50 COILS
EVT-1-1/4	1.250	31.70	.040	1.01	50 COILS
EVT-1-3/8	1.375	34.90	.040	1.01	50 COILS
EVT-1-1/2	1.500	38.10	.045	1.14	50 COILS
EVT-1-3/4	1.750	44.40	.055	1.40	50 COILS
EVT-2	2.000	50.80	.060	1.52	50 COILS
EVT-2-1/4	2.250	57.10	.065	1.65	50 COILS
EVT-2-1/2	2.500	63.50	.070	1.78	50 COILS

HIGH TEMPERATURE, ACRYLIC COATED FIBERGLASS - POLYESTER SLEEVING

Fiberglass – Polyester Sleeving – High Temperature – Acrylic Coated

J13



Description:

Specially designed fiberglass sleeving coated with a thermally stable, flexible, acrylic resin for wire and cable protection in electrical equipment. Most economical and versatile of all coated sleeving products.

Specifications:

UL Recognized
(AF-155A Grade A only)
MIL-I-3190/3
NEMA VS-1
ASTM D 372



Properties:

Temperature Class F: 155°C
Low Temperature Brittleness: -30°C
Dielectric Strength:
AF-155 (Grade C-1):
3,000 V/mil
AF-155A (Grade A):
8,800 V/mil

Features:

Economical tubing
High heat resistance
Extremely flexible
Resists cracking or splitting
Excellent abrasion and cut-through
resistance
Superior mechanical and electrical
properties
Excellent chemical resistance
Will not support flame
Economical
Supplied in spooled lengths to
minimize waste

Stock Colours:

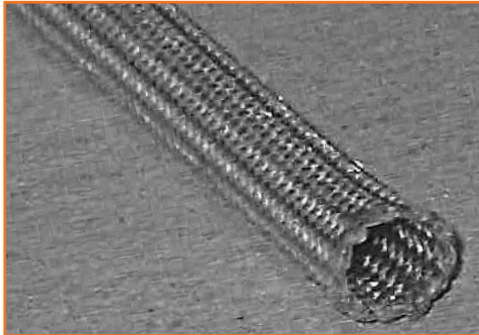
Natural (White) is Standard. Stock
Grade: C-1, Grade A material
available, order FSHT/AC-A, contact
factory for minimums. Other colours
available, contact factory. Not QPL
Listed.

PART NUMBER	NOMINAL ID		STANDARD PUT-UP	M3190/3- MIL STD SIZE CODE
	in	mm	feet	
FSHT/AC-24	.022	0.56	100,500	01
FSHT/AC-22	.027	0.68	100,500	02
FSHT/AC-20	.034	0.86	100,500	03
FSHT/AC-18	.042	1.07	100,500	04
FSHT/AC-17	.047	1.19	100,500	05
FSHT/AC-16	.053	1.35	100,500	06
FSHT/AC-15	.059	1.50	100,500	07
FSHT/AC-14	.066	1.68	100,500	08
FSHT/AC-13	.076	1.93	100,250	09
FSHT/AC-12	.085	2.16	100,250	10
FSHT/AC-11	.095	2.41	100,250	11
FSHT/AC-10	.106	2.69	100,250	12
FSHT/AC-09	.118	3.00	100,250	13
FSHT/AC-08	.133	3.38	100,250	14
FSHT/AC-07	.148	3.76	100,250	15
FSHT/AC-06	.166	4.22	100,250	16
FSHT/AC-05	.186	4.72	100,250	17
FSHT/AC-04	.206	5.23	100,250	18
FSHT/AC-03	.234	5.94	100,250	19
FSHT/AC-02	.263	6.68	100,250	20
FSHT/AC-01	.294	7.47	125	21
FSHT/AC-0	.330	8.38	125	22
FSHT/AC-3/8	.387	9.83	125	23
FSHT/AC-7/16	.450	11.40	125	24
FSHT/AC-1/2	.512	13.00	100	25
FSHT/AC-5/8	.640	16.20	100	26
FSHT/AC-3/4	.768	19.50	100	27
FSHT/AC-7/8	.802	22.70	100	28
FSHT/AC-1	1.018	25.90	100	29

BRAIDED FIBERGLASS UNCOATED SLEEVING

J14

Fiberglass Sleeving – High Temperature – Uncoated



Description:

Heat-treated braided fiberglass designed to improve protection of wires while maintaining flexibility.

Specifications:

UL VW-1
NEMA VS-1

Properties:

Temperature Class C: +240°C

Intermittent Temperature Range: -75°C to +648°C guaranteed value

Dielectric Strength: Determined by a space factor



Features:

- High heat resistance
- Extremely flexible
- Good mechanical properties
- Excellent chemical properties
- Supplied in spooled lengths for minimize waste

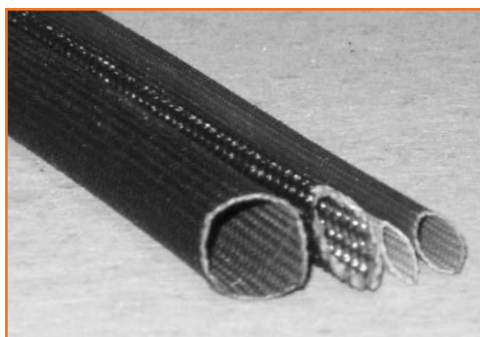
Stock Colours:

Natural (Silver) is Standard.
Saturated types and colours available, contact factory.

PART NUMBER	NOMINAL ID		NOMINAL WALL THICKNESS		STANDARD PUT-UP feet
	in	mm	in	mm	
T500MB-24	.022	0.56	.012	.030	100, 1000
T500MB-22	.027	0.68	.012	.030	100, 1000
T500MB-20	.034	0.86	.012	.030	100, 1000
T500MB-18	.042	1.07	.012	.030	100, 1000
T500MB-17	.047	1.19	.013	.033	100, 1000
T500MB-16	.053	1.35	.013	.033	100, 500
T500MB-15	.059	1.50	.015	.038	100, 500
T500MB-14	.066	1.68	.015	.038	100, 500
T500MB-13	.076	1.93	.015	.038	100, 250
T500MB-12	.085	2.16	.015	.038	100, 250
T500MB-11	.095	2.41	.015	.038	100, 250
T500MB-10	.106	2.69	.015	.038	100, 250
T500MB-09	.118	3.00	.015	.038	100, 250
T500MB-08	.133	3.38	.015	.038	100, 250
T500MB-07	.148	3.76	.015	.038	100, 250
T500MB-06	.166	4.22	.015	.038	100, 250
T500MB-05	.186	4.72	.015	.038	100, 250
T500MB-04	.206	5.23	.015	.038	100, 250
T500MB-03	.234	5.94	.018	.046	100, 250
T500MB-02	.263	6.68	.018	.046	100, 250
T500MB-01	.294	7.47	.018	.046	125
T500MB-0	.330	8.38	.018	.046	125
T500MB-3/8	.387	9.83	.022	.056	125
T500MB-7/16	.450	11.40	.022	.056	125
T500MB-1/2	.512	13.00	.022	.056	100
T500MB-5/8	.640	16.20	.022	.056	100
T500MB-3/4	.768	19.50	.022	.056	100
T500MB-7/8	.802	22.70	.022	.056	100
T500MB-1	1.018	25.90	.022	.056	100

BRAIDED FIBERGLASS SATURATED SLEEVING

Fiberglass Sleeving High Temperature – Saturated Sleeving



Description:

Heat-treated acrylic saturated braided fiberglass is tightly woven, flexible, 100% electrical grade.

Specifications:

UL VW
NEMA TF-2
ASTM D 350 / 372
MIL-Y-1140H
Ford ESE-M12G17-B



Properties:

Temperature Class C: 240°C

Provides thermal and space factor insulation at temperatures from -59°C up to 650°C and has a continuous operating temperature of 450°C.r

Features:

- High heat resistance
- Extremely flexible
- Good mechanical properties
- Excellent chemical properties
- Supplied in spooled lengths for minimize waste
- Used in high temperature, low voltage applications and wherever repeated flexing or temperature extremes prohibit the use of other materials. Its expandability and flexibility enables it to slip over irregular shapes and electrical connections to provide effective thermal, mechanical and electrical protection.

Stock Colours:

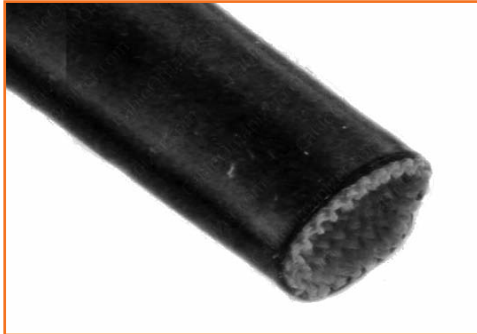
Natural(Tan) & Black is Standard. Other colours available, contact factory.

PART NUMBER	NOMINAL ID		NOMINAL WALL THICKNESS		STANDARD PUT-UP
	in	mm	in	mm	
TB1200MB-22	.029	0.74	.025	.032	1000
TB1200MB-20	.036	0.91	.032	.039	1000
TB1200MB-18	.044	1.12	.040	.049	1000
TB1200MB-17	.049	1.24	.045	.054	1000
TB1200MB-16	.056	1.42	.051	.061	1000
TB1200MB-15	.062	1.57	.057	.067	1000
TB1200MB-14	.069	1.75	.064	.074	1000
TB1200MB-13	.077	1.96	.072	.082	1000
TB1200MB-12	.086	2.18	.081	.091	1000
TB1200MB-11	.096	2.44	.091	.101	1000
TB1200MB-10	.107	2.72	.102	.112	1000
TB1200MB-09	.119	3.02	.114	.124	1000
TB1200MB-08	.135	3.43	.129	.141	1000
TB1200MB-07	.148	3.76	.144	.158	1000
TB1200MB-06	.166	7.22	.162	.178	1000
TB1200MB-05	.186	4.72	.182	.198	500
TB1200MB-04	.208	5.28	.204	.224	500
TB1200MB-03	.234	5.94	.229	.249	500
TB1200MB-02	.263	6.68	.258	.278	500
TB1200MB-01	.294	7.47	.289	.311	250
TB1200MB-0	.330	8.38	.325	.347	250
TB1200MB-3/8	.387	9.83	.375	.399	250
TB1200MB-7/16	.450	11.43	.438	.462	250
TB1200MB-1/2	.512	13.00	.500	.524	250
TB1200MB-5/8	.640	16.26	.625	.655	250
TB1200MB-3/4	.893	22.68	.875	.991	100
TB1200MB-7/8	1.018	25.86	1.000	1.036	100
TB1200MB-1	1.143	29.03	1.125	1.161	100

BRAIDED FIBERGLASS VINYL COATED SLEEVING

J16

Fiberglass Sleeving – High Temperature – Vinyl Coated



Description:

Fiberglass sleeving coated with a specially formulated vinyl compound to provide the maximum in electrical characteristics, chemical resistance, heat stability and abrasion resistance.

Specifications:

UL Recognized
VW-1 (PF-130A – Grade A only)
MIL-I-3190/2
NEMA VS-1



Properties:

Temperature Class B: +130°C
Low Temperature Brittleness: -40°C
Dielectric Strength:
PF-130 Grade B: 4,000 V/mil
PF-130A Grade A: 8,000 V/mil

Applications:

- Electric motors
- For generators as resistor leads
- Environments requiring high flexibility

Features:

- High heat resistance
- Extremely flexible
- Resists cracking or splitting
- Excellent abrasion and cut-through resistance
- Excellent chemical and solvent resistance
- Superior mechanical and electrical properties
- Will not support flame
- Heat-treated for roundness
- Excellent colour retention
- Non-fraying when cut
- Supplied in spooled lengths for minimize waste

Stock Colours:

Black only. Stock Grade B

PART NUMBER	NOMINAL ID		NOMINAL WALL THICKNESS		STANDARD PUT-UP	M3190/2-MIL STD SIZE CODE
	in	mm	in	mm	feet	
FSHT/VC-24	.022	0.56	.030	0.76	100, 500	01
FSHT/VC-22	.027	0.68	.030	0.76	100, 500	02
FSHT/VC-20	.034	0.86	.030	0.76	100, 500	03
FSHT/VC-19	.038	0.96	.030	0.76	100, 500	--
FSHT/VC-18	.042	1.07	.030	0.76	100, 500	04
FSHT/VC-17	.047	1.19	.030	0.76	100, 500	05
FSHT/VC-16	.053	1.35	.030	0.76	100, 500	06
FSHT/VC-15	.059	1.50	.030	0.76	100, 500	07
FSHT/VC-14	.066	1.68	.045	1.14	100, 500	08
FSHT/VC-13	.076	1.93	.045	1.14	100, 250	09
FSHT/VC-12	.085	2.16	.045	1.14	100, 250	10
FSHT/VC-11	.095	2.41	.045	1.14	100, 250	11
FSHT/VC-10	.106	2.69	.045	1.14	100, 250	12
FSHT/VC-09	.118	3.00	.045	1.14	100, 250	13
FSHT/VC-08	.133	3.38	.045	1.14	100, 250	14
FSHT/VC-07	.148	3.76	.045	1.14	100, 250	15
FSHT/VC-06	.166	4.22	.045	1.14	100, 250	16
FSHT/VC-05	.186	4.72	.045	1.14	100, 250	17
FSHT/VC-04	.206	5.23	.045	1.14	100, 250	18
FSHT/VC-03	.234	5.94	.045	1.14	100, 250	19
FSHT/VC-02	.263	6.68	.055	1.40	100, 250	20
FSHT/VC-01	.294	7.47	.055	1.40	125	21
FSHT/VC-0	.330	8.38	.055	1.40	125	22
FSHT/VC-3/8	.387	9.83	.055	1.40	125	23
FSHT/VC-7/16	.450	11.40	.065	1.65	125	24
FSHT/VC-1/2	.512	13.00	.065	1.65	100	25
FSHT/VC-5/8	.640	16.20	.065	1.65	100	26
FSHT/VC-3/4	.768	19.50	.075	1.90	100	27
FSHT/VC-7/8	.802	22.70	.075	1.90	100	28
FSHT/VC-1	1.018	25.90	.075	1.90	50	29

BRAIDED FIBERGLASS SILICON RUBBER COATED SLEEVING

Fiberglass Sleeving – High Temperature – Silicon Rubber Coated

J17



Description:

Fiberglass sleeving coated with a silicon formulation to provide exceptional flexibility in extreme temperature ranges.

Specifications:

UL 1441 Recognized
CSA Listed
MIL-I-3190/6
NEMA VS-1
ASTM D-372
ASTM D-350



PART NUMBER	NOMINAL ID		NOMINAL WALL THICKNESS		STANDARD PUT-UP	M3190/6-MIL STD SIZE CODE
	in	mm	in	mm	feet	
FSHT/SR-24	.022	0.56	.030	0.76	100, 500	01
FSHT/SR-22	.027	0.68	.030	0.76	100, 500	02
FSHT/SR-20	.034	0.86	.030	0.76	100, 500	03
FSHT/SR-18	.042	1.07	.030	0.76	100, 500	04
FSHT/SR-17	.047	1.19	.030	0.76	100, 500	05
FSHT/SR-16	.053	1.35	.030	0.76	100, 500	06
FSHT/SR-15	.059	1.50	.030	0.76	100, 500	07
FSHT/SR-14	.066	1.68	.045	1.14	100, 500	08
FSHT/SR-13	.076	1.93	.045	1.14	100, 250	09
FSHT/SR-12	.085	2.16	.045	1.14	100, 250	10
FSHT/SR-11	.095	2.41	.045	1.14	100, 250	11
FSHT/SR-10	.106	2.69	.045	1.14	100, 250	12
FSHT/SR-09	.118	3.00	.045	1.14	100, 250	13
FSHT/SR-08	.133	3.38	.045	1.14	100, 250	14
FSHT/SR-07	.148	3.76	.045	1.14	100, 250	15
FSHT/SR-06	.166	4.22	.045	1.14	100, 250	16
FSHT/SR-05	.186	4.72	.045	1.14	100, 250	17
FSHT/SR-04	.206	5.23	.045	1.14	100, 250	18
FSHT/SR-03	.234	5.94	.045	1.14	100, 250	19
FSHT/SR-02	.263	6.68	.055	1.40	100, 250	20
FSHT/SR-01	.294	7.47	.055	1.40	100	21
FSHT/SR-0	.330	8.38	.055	1.40	100	22
FSHT/SR-3/8	.387	9.83	.055	1.40	100	23
FSHT/SR-7/16	.450	11.40	.065	1.65	100	24
FSHT/SR-1/2	.512	13.00	.065	1.65	100	25
FSHT/SR-5/8	.640	16.20	.065	1.65	100	26
FSHT/SR-3/4	.768	19.50	.075	1.90	100	27
FSHT/SR-7/8	.802	22.70	.075	1.90	100	28
FSHT/SR-1	1.018	25.90	.075	1.90	100	29

Properties:

Temperature Class H: +200°C
Low Temperature Brittleness: -70°C
Dielectric Strength: 8,000 V/mil

Features:

- High heat resistance
- Extremely resilient
- Long service life
- Extremely durable
- Excellent abrasion and cut-through resistance
- Excellent performance throughout temperature range
- Outstanding chemical and solvent resistance
- High tear strength
- Outstanding ozone, corona and weathering properties
- Will not support flame
- Supplied in spooled lengths for minimize waste

Stock Colours:

White (Natural) is Standard. Other colours available, contact factory for minimums.

BRAIDED POLYETHYLENE TEREPHTHALATE (PET)

J18

General Purpose Expandable Braided Monofilament Sleeving



Description:

Tough, lightweight expandable sleeving made of specially formulated Polyethylene Terephthalate (PET) .010" (10mil) monofilaments braided into a cylindrical sleeve.

Specifications:

UL & CSA Recognized Component:
UL File #E131769, CSA File #LR92464
Ford E8ZB-18K459-AA (Chart)
Ford E77H-18K459-AA (Chart)
Ford E9TB-18K459-CA (Chart)
Chrysler 441414566 (Chart)
RoHS and WEEE compliant.



General Purpose Expandable Sleeving Dimensions

PART NUMBER	Nominal I.D. (inches)	Nominal I.D. (mm)	Size Range (inches)	Standard Put up (feet)	Approximate Weight (lbs/1000 ft)
PETS/GP-321	1/8	3.18	3/32 - 9/32	1000	1.8
PETS/GP-481	1/4	6.35	1/8 - 3/8	1000	2.7
PETS/GP-243	1/4	6.35	1/8 - 3/8	1000	3.9
PETS/GP-363	3/8	9.53	3/16 - 5/8	500	5.7
PETS/GP-483	1/2	12.70	1/4 - 3/4	500	7.4
PETS/GP-683	3/4	19.05	1/2 - 1 1/4	100	10.4
PETS/GP-963	1 1/4	31.75	3/4 - 1 3/4	100	15.9
PETS/GP-964	1 3/4	44.45	1 - 2 1/2	100	19.6
PETS/GP-1204	2	50.80	1 1/4 - 2 3/4	100	18.5
PETS/GP-1205	2 1/2	63.50	1 1/2 - 3 1/4	100	30.0
PETS/GP-1206	3	76.20	2 - 4	50	34.0

Properties:

Rated for continuous use between -70°C to +125°C and can stand intermittent operation up to 150°C

Applications & Features:

Expandable monofilament braided sleeveings provide a tough, durable protection over tubing, hoses, wire, wire bundles, wire harnesses, cable assemblies and flat ribbon cable without adding critical weight, bulk and extra cost. The resistance of the polyester monofilaments to most oils, salt water, fuels, cleaners, solvents and chemicals makes it ideal for applications in harsh environments and in electronics, marine, and industrial wire harness applications. It exhibits excellent stretch and flexibility even at low temperatures making it ideal for applications in machine tools, robotics, automated equipment and wherever exposure to extreme weather conditions is a concern..

Characteristics of General Purpose Expandable Sleeveings

Property	Test Method	Performance
Tensile strength	ASTM D 876	100,000 psi
Elongation	ASTM D 876	25%
Specific Gravity	ASTM D 792	1.31
Moisture Absorption 24 hours	ASTM D 570	0.08%
Shrinkage @ 180°C		4%
Max. Operating temp.	UL 224	150°C
Melt Temperature	ASTM D 2117	250°C
Low Temp. Flexibility	MIL I 23053	-70°C
Flammability	UL 224	Does not burn
Thermal Aging	ASTM D 3045	175°C for 3 hrs.
Flexural Modules 10 ³ psi @ 73°	ASTM D 790	400
Fungus Resistance	MIL STD 810 (508)	No Growth
Copper Corrosiveness	MIL I 23053	No effect

Stock Colours:

Black is Standard. Other colours available, please contact factory.

BRAIDED POLYETHYLENE TEREPHTHALATE (PET)

Flame Retardent Expandable Braided Monofilament Sleeving



Description:

Tough, lightweight expandable sleeving made of specially formulated Flame Retardent Polyethylene Terephthalate (PET) .010" (10mil) monofilaments braided into a cylindrical sleeve.

Specifications:

Complies with UL 1441 VW-1
UL & CSA VW-1 Recognized Component:
UL File #E131769, CSA File #LR92464
Ford E8ZB-18K459-AA (Chart)
Ford E77H-18K459-AA (Chart)
Ford E9TB-18K459-CA (Chart)
Chrysler 441414566 (Chart)



Halogen Free (HF). RoHS and WEEE compliant.

Flame Retardent Expandable Sleeving Dimensions

PART NUMBER	Nominal I.D. (inches)	Nominal I.D. (mm)	Size Range (inches)	Standard Put up (feet)	Approximate Weight (lbs/1000 ft)
PETS/FR-321	1/8	3.18	3/32 - 9/32	1000	1.8
PETS/FR-481	1/4	6.35	1/8 - 3/8	1000	2.7
PETS/FR-243	1/4	6.35	1/8 - 3/8	1000	3.9
PETS/FR-363	3/8	9.53	3/16 - 5/8	500	5.7
PETS/FR-483	1/2	12.70	1/4 - 3/4	500	7.4
PETS/FR-683	3/4	19.05	1/2 - 1 1/4	100	10.4
PETS/FR-963	1 1/4	31.75	3/4 - 1 3/4	100	15.9
PETS/FR-964	1 1/4	44.45	1 - 2 1/2	100	19.6
PETS/FR-1204	2	50.80	1 1/4 - 2 3/4	100	18.5
PETS/FR-1205	2 1/2	63.50	1 1/2 - 3 1/4	100	30.0
PETS/FR-1206	3	76.20	2 - 4	50	34.0

Properties:

Rated for continuous use between -70°C to +125°C and can stand intermittent operation up to 150°C

Applications & Features:

Expandable monofilament braided sleeveings provide a tough, durable protection over tubing, hoses, wire, wire bundles, wire harnesses, cable assemblies and flat ribbon cable without adding critical weight, bulk and extra cost. The resistance of the polyester monofilaments to most oils, salt water, fuels, cleaners, solvents and chemicals makes it ideal for applications in harsh environments and in electronics, marine, and industrial wire harness applications. It exhibits excellent stretch and flexibility even at low temperatures making it ideal for applications in machine tools, robotics, automated equipment and wherever exposure to extreme weather conditions is a concern. It is also used in aerospace, automotive, electronic, and military applications where flame resistance and selfextinguishing properties are required.

Stock Colours:

Available in black with contrasting white tracers or white with contrasting black tracers. For other tracer colors consult the factory.

Characteristics of Flame Retardent Expandable Sleeveings

Property	Test Method	Performance
Tensile strength	ASTM D 876	100,000 psi
Elongation	ASTM D 876	25%
Specific Gravity	ASTM D 792	1.31
Moisture Absorption 24 hours	ASTM D 570	0.08%
Shrinkage @ 180°C		4.2%
Max. Operating temp.	UL 224	150°C
Melt Temperature	ASTM D 2117	250°C
Low Temp. Flexibility	MIL I 23053	-70°C
Flammability	UL 224	VW-1/FR-1
Thermal Aging	ASTM D 3045	175°C for 3 hrs.
Flexural Modules 10 ³ psi @ 73°	ASTM D 790	410
Fungus Resistance	MIL STD 810 (508)	No Growth
Copper Corrosiveness	MIL I 23053	No Effect