

# H.B. ETLIN CO. LTD.

1850 Wilson Avenue, Toronto,  
 Ontario, Canada, M9M 1A1  
 Ph: 416-741-7336 Fax: 416-741-9104

## SECTION K HEAT SHRINK & PROTECTIVE SLEEVING

K1



HEAT SHRINK & PROTECTIVE SLEEVING

### Heat Shrink & Protective Sleeving

Cross Reference	K2
Technical Data	K3
Estimator Chart	K4
Non-Irradiated PVC	K5
<b>Polyolefin</b>	
Irradiated Polyolefin	K6-K8
Cross Linked Polyolefin	K9
FEP Teflon	K10
Thick Wall Polyolefin	K11
Non-Shrinkable PVC	K12
<b>Fiberglass</b>	
Acrylic Coated	K13
Uncoated	K14
Vinyl Coated	K15
Silicon Rubber Coated	K16

HB Etlin Co Ltd reserves the right to discontinue, modify designs and change specifications without incurring obligation. While every effort is made to ensure that descriptions, specifications and other information in this catalogue are correct, no warranty is given in respect thereof and the company shall not be liable for any error herein.  
 Copyright © 2003 HB Etlin Co Ltd

H.B. ETLIN CO. LTD.

Protective Sleeving

TECHNICAL DATA FOR HEAT SHRINKABLE SLEEVING

K2

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	SK1105 (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

ETLIN	HUBBLE-KELLEMS	HEYCO	THOMAS & BETTS	CARLON	ALPHA
TYPE 960	P038N-GY TO P100N-GY	HFC 1/4 - 1"	APC038 THROUGH 100	LT43C-F	SLC
TYPE 450	POLYTUFF 1	HI-FLEX 1	XTRAFLEX LTC	IS004 THROUGH 11	ENC

Protective Sleeving

## TECHNICAL DATA FOR HEAT SHRINKABLE SLEEVING

K3

### 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 1/2", tubing be when the tubing is recovered 30%?

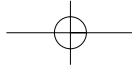
**Solution:** Constant K, from the table, for 30% recovery is 0.650. The fully recovered nominal wall thickness of the tubing per the product specification is 0.020 inches (0.051 mm). Therefore: 0.020" (0.051mm) X 0.650 = 0.013" (0.03315 mm) wall thickness at 30% recovery.

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.



**Protective Sleeving**

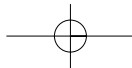
**ESTIMATOR CHART FOR CUT TUBING PIECES**

**K4 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
			3-1/16	255.2	3,950	6-1/16	505.2	1,975	9-1/16	755.2	1,300
1/8	10.4	96,000	3-1/8	260.5	3,850	6-1/8	510.4	1,950	9-1/8	760.4	1,300
3/16	15.7	64,000	3-3/16	265.7	3,800	6-3/16	515.6	1,925	9-3/16	765.7	1,300
1/4	20.9	48,000	3-1/4	270.9	3,700	6-1/4	520.8	1,900	9-1/4	770.8	1,275
5/16	26.1	38,400	3-5/16	276.1	3,650	6-5/16	526.0	1,900	9-5/16	776.1	1,275
3/8	31.3	32,000	3-3/8	281.3	3,600	6-3/8	531.3	1,875	9-3/8	781.3	1,275
7/16	36.5	27,500	3-7/16	286.5	3,500	6-7/16	536.5	1,850	9-7/16	786.5	1,250
1/2	41.7	24,000	3-1/2	291.7	3,450	6-1/2	541.7	1,825	9-1/2	791.7	1,250
9/16	46.9	21,400	3-9/16	296.9	3,400	6-9/16	546.9	1,800	9-9/16	796.9	1,250
5/8	52.1	19,200	3-5/8	302.1	3,350	6-5/8	552.1	1,800	9-5/8	802.1	1,225
11/16	57.3	17,500	3-11/16	307.3	3,300	6-11/16	557.3	1,775	9-11/16	807.3	1,225
3/4	62.5	16,000	3-3/4	312.5	3,200	6-3/4	562.5	1,775	9-3/4	812.5	1,225
13/16	67.7	14,800	3-13/16	317.7	3,150	6-13/16	567.7	1,750	9-13/16	817.7	1,200
7/8	73.0	13,750	3-7/8	323.0	3,100	6-7/8	572.9	1,725	9-7/8	823.0	1,200
15/16	78.2	12,800	3-15/16	328.2	3,050	6-15/16	578.1	1,725	9-15/16	828.1	1,200
1	83.4	12,000	4	333.4	3,000	7	583.4	1,714	10	833.3	1,200
1-1/16	88.6	11,300	4-1/16	338.6	2,950	7-1/16	588.5	1,700	10-1/16	838.5	1,175
1-1/8	93.8	10,700	4-1/8	343.8	2,850	7-1/8	593.7	1,650	10-1/8	843.7	1,175
1-3/16	99.0	10,100	4-3/16	349.0	2,800	7-3/16	598.9	1,650	10-3/16	848.9	1,150
1-1/4	104.2	9,600	4-1/4	354.2	2,800	7-1/4	604.2	1,650	10-1/4	854.1	1,150
1-5/16	109.4	9,150	4-5/16	363.3	2,775	7-5/16	609.4	1,625	10-5/16	859.4	1,150
1-3/8	114.6	8,750	4-3/8	364.6	2,725	7-3/8	614.6	1,625	10-3/8	864.5	1,150
1-7/16	119.8	8,350	4-7/16	369.9	2,700	7-7/16	619.8	1,600	10-7/16	869.8	1,125
1-1/2	125.0	8,000	4-1/2	375.0	2,650	7-1/2	625.0	1,600	10-1/2	875.0	1,125
1-9/16	130.2	7,700	4-9/16	380.3	2,625	7-9/16	630.2	1,575	10-9/16	880.2	1,125
1-5/8	135.5	7,400	4-5/8	385.4	2,575	7-5/8	635.4	1,575	10-5/8	885.4	1,125
1-11/16	140.7	7,150	4-11/16	390.7	2,550	7-11/16	640.6	1,550	10-11/16	890.6	1,100
1-3/4	145.9	6,900	4-3/4	395.9	2,525	7-3/4	645.8	1,550	10-3/4	895.9	1,100
1-13/16	151.1	6,650	4-13/16	401.1	2,475	7-13/16	651.0	1,525	10-13/16	901.0	1,100
1-7/8	156.3	6,400	4-7/8	406.2	2,450	7-7/8	656.2	1,500	10-7/8	906.2	1,100
1-15/16	161.5	6,200	4-15/16	411.5	2,425	7-15/16	661.4	1,500	10-15/16	911.5	1,075
2	166.7	6,000	5	416.7	2,400	8	666.7	1,500	11	916.7	1,075
2-1/16	171.9	5,850	5-1/16	421.9	2,350	8-1/16	671.9	1,475	11-1/16	921.8	1,075
2-1/8	177.1	5,650	5-1/8	427.1	2,325	8-1/8	677.1	1,475	11-1/8	927.0	1,075
2-3/16	182.3	5,500	5-3/16	432.3	2,300	8-3/16	682.3	1,450	11-3/16	932.2	1,050
2-1/4	187.5	5,350	5-1/4	437.5	2,275	8-1/4	687.5	1,450	11-1/4	937.4	1,050
2-5/16	192.7	5,200	5-5/16	442.8	2,250	8-5/16	692.7	1,425	11-5/16	942.7	1,050
2-3/8	198.0	5,100	5-3/8	447.9	2,225	8-3/8	698.0	1,425	11-3/8	947.9	1,050
2-7/16	203.2	4,950	5-7/16	453.2	2,200	8-7/16	703.2	1,400	11-7/16	953.1	1,025
2-1/2	208.4	4,800	5-1/2	458.4	2,175	8-1/2	708.4	1,400	11-1/2	958.3	1,025
2-9/16	213.6	4,700	5-9/16	463.6	2,150	8-9/16	713.6	1,400	11-9/16	963.5	1,025
2-5/8	218.8	4,600	5-5/8	468.8	2,125	8-5/8	718.8	1,375	11-5/8	968.7	1,025
2-11/16	224.0	4,500	5-11/16	474.0	2,100	8-11/16	723.9	1,375	11-11/16	973.9	1,000
2-3/4	229.2	4,400	5-3/4	479.2	2,075	8-3/4	729.2	1,350	11-3/4	979.1	1,000
2-13/16	234.4	4,300	5-13/16	484.4	2,050	8-13/16	734.4	1,350	11-13/16	984.3	1,000
2-7/8	239.6	4,200	5-7/8	489.6	2,025	8-7/8	739.6	1,350	11-7/8	989.5	1,000
2-15/16	244.8	4,100	5-15/16	494.8	2,000	8-15/16	744.8	1,325	11-15/16	994.7	1,000
3	250	4,000	6	500	2,000	9	750	1,325	12	1,000	1,000

**Protective Sleeving**

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****K5****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		RECOVERED ID		RECOVERED NOMINAL WALL THICKNESS		STANDARD PUT-UP	M23053/CL2 MIL STD SIZE CODE
	in	mm	in	mm	in	mm	feet	
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 10<sup>12</sup> ohm-cm  
Specific Gravity: 1.33  
Tensile Strength: 2,500 psi (176 kg/cm<sup>2</sup>)  
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.

## Protective Sleeving

# IRRADIATED INDUSTRIAL GRADE POLYOLEFIN HEAT SHRINKABLE SLEEVING

K6

Heat Shrinkable Sleeving, Irradiated Polyolefin – Industrial Grade

# FPO

### 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 only.

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

Protective  
Sleeving

## IRRADIATED THICK WALL POLYOLEFIN HEAT SHRINKABLE SLEEVING

Heat Shrinkable Sleeving, Irradiated Polyolefin – Thick Wall

K7

FPO

**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		RECOVERED ID		RECOVERED NOMINAL WALL THICKNESS		STANDARD PUT-UP	M23053/6- MIL STD SIZE CODE	
	in	mm	in	mm	in	mm	feet	CL 1	CL 2
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: 10<sup>14</sup> ohm-cm (minimum)  
 Specific Gravity: 1.35 CL 1 (maximum)/1.00 CL 2 (maximum)  
 Tensile Strength: 2,000 psi  
 Ultimate Elongation: 200%

Protective Sleeving

## Protective Sleeving

### IRRADIATED POLYOLEFIN, SEMI-RIGID ADHESIVE LINED SLEEVING

K8

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

# FPO

#### 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		RECOVERED ID		RECOVERED NOMINAL WALL THICKNESS		STANDARD PUT-UP	M23053/CL2 MIL STD SIZE CODE
	in	mm	in	mm	in	mm	feet	
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)

Protective Sleeving

**CROSS LINKED POLYOLEFIN, 3:1  
SHRINK RATIO SLEEVING**

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

K9

FPO

**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		RECOVERED ID		RECOVERED NOMINAL WALL THICKNESS		STANDARD PUT-UP
	in	mm	in	mm	in	mm	feet
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.

# Protective Sleeving

## FEP TEFLON HEAT SHRINKABLE SLEEVING

K10

### Heat Shrinkable Sleeving, FEP Teflon

# FPO

#### 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

PART NUMBER	EXPANDED ID		RECOVERED ID		RECOVERED NOMINAL WALL THICKNESS		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	12.10	.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

#### 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).

Protective Sleeving

## THICK WALL POLYOLEFIN SELF-SEALING SLEEVING

Heat Shrinkable Sleeving, Thick Wall Polyolefin – Self-Sealing

K11

FPO

**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		RECOVERED ID		RECOVERED NOMINAL WALL THICKNESS		M23053/15-MIL STD SIZE CODE
	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.

Protective Sleeving

# Protective Sleeving

## NON-SHRINKABLE EXTRUDED PVC SLEEVING

K12

### Non-Shrinkable Sleeving, Extruded PVC

# FPO

#### 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

Protective Sleeving

H.B. ETLIN CO. LTD.

FOR MORE INFORMATION CALL  
1-800-661-9610 (Canada) 1-888-762-5384 (USA)

**HIGH TEMPERATURE, ACRYLIC COATED  
FIBERGLASS - POLYESTER SLEEVING**

Fiberglass – Polyester Sleeving – High Temperature – Acrylic Coated

K13

**FPO****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

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

**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.

# Protective Sleeving

## BRAIDED FIBERGLASS UNCOATED SLEEVING

K14

Fiberglass Sleeving – High Temperature – Uncoated

# FPO

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

Protective Sleeving

**BRAIDED FIBERGLASS  
VINYL COATED SLEEVING**

Fiberglass Sleeving – High Temperature – Vinyl Coated

K15

**FPO****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

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

**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

# Protective Sleeving

## BRAIDED FIBERGLASS SILICON RUBBER COATED SLEEVING

K16

Fiberglass Sleeving – High Temperature – Silicon Rubber Coated

# FPO

### 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.

Protective Sleeving