



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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FIT[®] Wire Management



FIT® Wire Management

Better wire management means better harnesses



Bringing order to wire harnesses and cable routing means a system that is more reliable, easier to fabricate, and simpler to maintain. Our woven sleeves are tough and flexible. For additional resistance to chemicals, oils, and solvents, our flexible tubing offers exceptional performance and operates at temperatures as high as 260°C. Our braided shields are effective and easy to use for additional EMI protection or a ground connection.

Neatness counts

As a leader in premium products, Alpha Wire knows wire and cable. And we know the challenges you face in creating harnesses, routing, and combating noise. Our FIT wire management products are designed to tame the most unruly applications.

Harnessing

Make any wire harness organized, manageable, and neat with our tubing, sleeving, spiral wrap tubing, zipper tubing, and lacing tape. Our unique ZIP-GRP expandable, enclosure sleeving allows easy re-entry and unlimited wire and cable break outs with its hook and loop fastener system.

Shielding

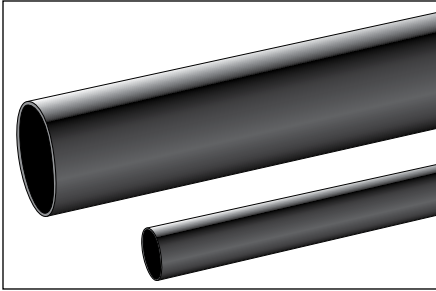
Add shielding easily and quickly. We offer flat, round, and oval braided shielding for additional protection against EMI and for grounding protection. Our copper foil shielding tape is backed with a highly conductive, pressure-sensitive adhesive for use in a wide variety of EMI/RFI shielding applications in cable and connector assemblies.

Routing

Get the advantages of conduit in a flexible non-metallic, liquid-tight tubing and connection system that protects wire, copper cable, and fiber-optic cable in factories, offices, or underground installations. Use our watertight tubing to replace rigid raceways where flexibility, re-entry, or re-usability is required. Additionally, Alpha offers split looms to provide a convenient solution for your routing needs.

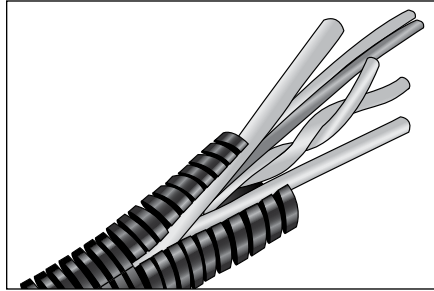
FIT® Wire Management

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PVC-105

PVC tubing is the workhorse choice for protecting, organizing, and routing cables.

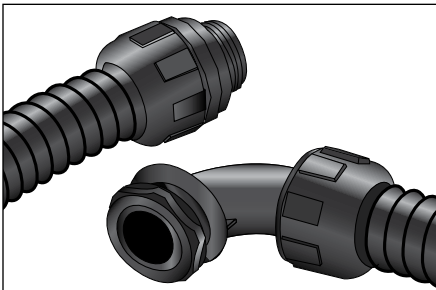


Convoluted Slit Loom Tubing and Tee Connector Fittings

Type 492 Tubing

Type 493 Fittings

Flexible polyethylene loom material permits fast, easy installations and protection of harness and cable assemblies. The loom is slit full length so that it slides over the completed wire assembly easily, but closes after installation to protect the wire bundle. The slit allows for the wires to break out at any point along the cable length for custom installation. Companion snap-on connectors provide simple, clean cable junctions.

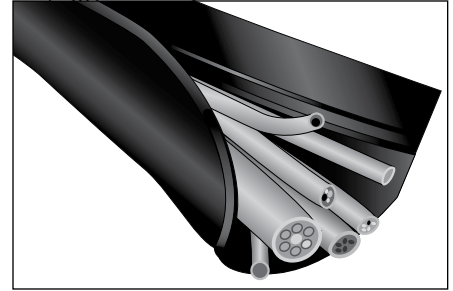


Flexible Liquid-Tight PVC Tubing and Nylon Connectors

FNT Tubing

SLC and RLC Connectors

FNT PVC tubing system of wire management products for electronic and electrical wire protection provides maximum flexibility and can be used in extremely tight quarters. The tubing is excellent for general applications where maximum flexibility is required or in areas where movement, vibration, or flexing is a problem.



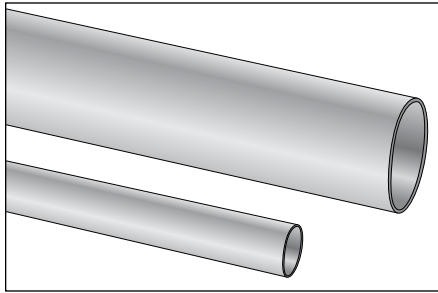
Zipper Tubing™

ZIP-41

Protect wire, cables, and harnesses. Alpha Zipper Tubing provides a professional finish to wiring installations by eliminating exposed wiring and providing added protection against flame, chemicals, and abrasion. With Zipper Tubing, it's possible to isolate any group of wires or cables quickly and easily, without the bother of tape wrapping. Zipper Tubing is an ideal jacketing material for use in harsh environments for production or repair of harness assemblies. Each package contains two plastic sliders.

FIT® Wire Management

Better wire management means better harnesses

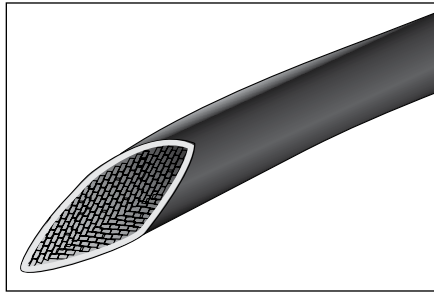


Flexible PTFE Tubing

TFT-200 Thin-Wall Tubing

TFT-250 Standard-Wall Tubing

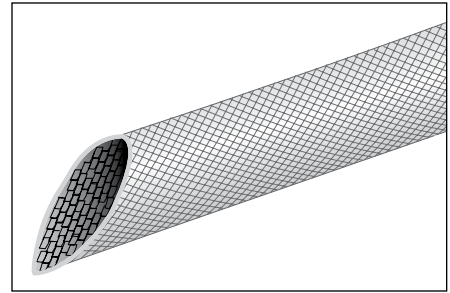
To improve the reliability of cable harnesses, PTFE tubing provides a heat and abrasion resistant wire insulator under the most adverse conditions. With an unmatched temperature range, exceptional abrasion resistance, and excellent dielectric properties, it maintains flexibility over its entire temperature range.



PVC-Coated Fiberglass Sleeving

PIF-130

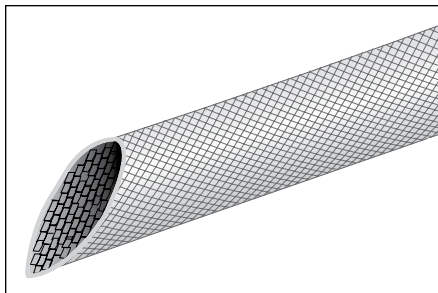
PIF-130 sleeving is a woven fiberglass braid impregnated with a heat-resistant, extremely tough, abrasion-resistant and flexible plastic insulation. The fiberglass is treated to remove all organic matter and resist fraying. The sleeving is completely compatible with all insulation and conductor types.



Uncoated Fiberglass Sleeving

PIF-240

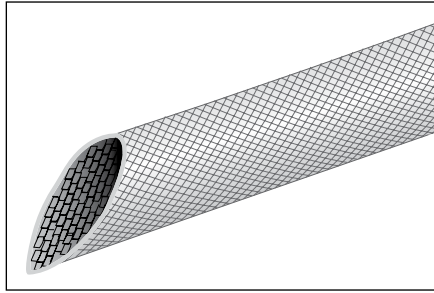
PIF-240 sleeving is extremely flexible and abrasion resistant. It is ideal for applications requiring operation up to 648°C. It is heat treated to remove all organic matter, and it is completely compatible with all insulation and conductor types.



Acrylic-Coated Fiberglass Sleeving

AF-155

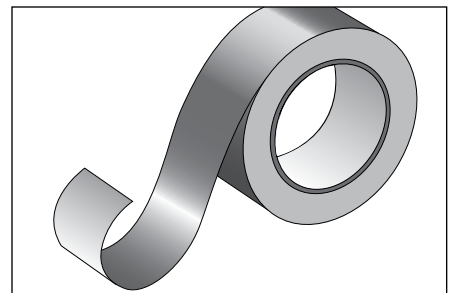
AF-155 is a specially designed fiberglass sleeving coated with a thermally stable, flexible, acrylic resin for wire and cable protection in electrical equipment. The most economical and versatile of all coated sleeving products, it offers high heat resistance, extreme flexibility, and resistance to cracking, abrasion, cut-through, and chemicals.



Silicone-Coated Fiberglass Sleeving

PIF-200, SF-200

PIF-200 and SF-200 sleeving offers high heat and superior electrical characteristics in a closely woven, braided fiberglass, uniformly coated with silicone rubber. It provides low temperature flexibility to -70°C and heat protection to 200°C. The fiberglass sleeving material is heat-set, cuts cleanly, and will not fray. It is easy to “pushback” and form over components, connections, and cables.

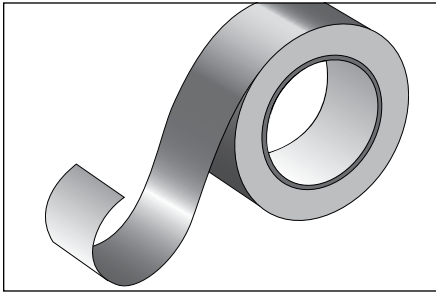


CST Series

The pressure-sensitive adhesive contains a uniform dispersion of unique oxidation-resistant conductive particles that produce very low resistance through the tape. This feature results in shielding performance approximately 5 dB better than other metal foil shielding tapes.

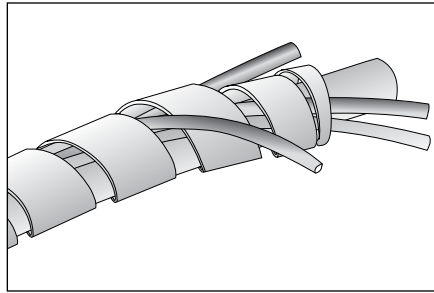
FIT® Wire Management

Better wire management means better harnesses



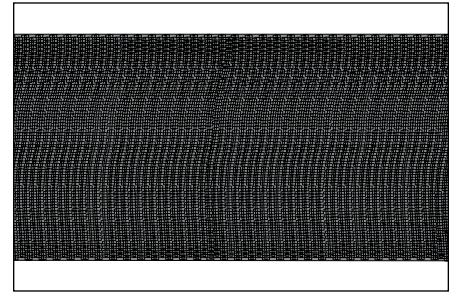
Self-Fusing Silicone Tape

Where a masking wrap or permanently resilient insulation seal is necessary, self-adhering silicone tape is made of special unsupported silicone rubber compound that readily adheres to itself when wrapped under tension and fuses to form a homogenous mass within 24 hours at room temperature or 4 hours at 177°C. The self-adhering silicone is protected with a polyester or polyethylene liner to prevent contamination and blocking.



Spiral Wrap Tubing SW

Spiral wrap tubing simplifies wire harnessing, cabling, and bundling. Alpha's SW tubing wraps tightly to the wire and cable being bundled, yet is flexible and simple to apply. All types maintain flexibility even when bent around sharp edges. Breakouts or tapoff connections may be made through the openings of the wrap. SW spiral wrap is constructed from several semirigid tubing materials and then cut on a continual spiral.



Expandable Braided Polyester Sleeving

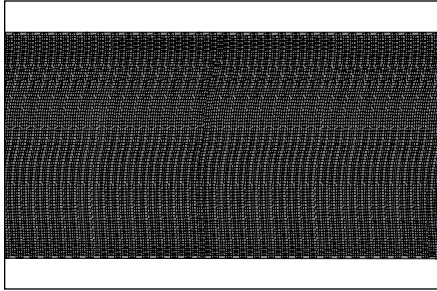
GRP-110, GRP-120

GRP-110/120 is a lightweight, expandable woven polyester sleeving that offers high flexibility with high resistance to abrasion and cut-through. The open weave allows for a great range of expansion of the sleeving diameter, thus ensuring ease of installation and gripping action over a wide range of shapes and sizes. GRP sleeving is an ideal protective sleeve for wire bundles, harnesses, pneumatic hoses, hydraulic lines, and highly polished or threaded machine parts.

To prevent fraying of ends, GRP-110 and GRP-120 should be cut/sealed with a hot knife.

FIT® Wire Management

Better wire management means better harnesses



Non-Fraying, Expandable Braid Sleeving

GRP-110NF, GRP-120NF

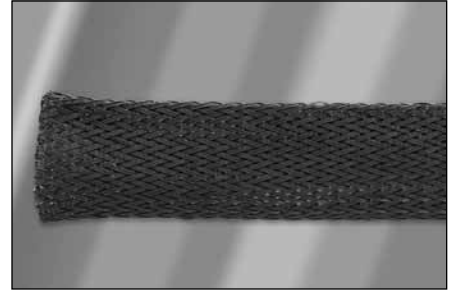
GRP-110NF/120NF sleeving cuts cleanly and fray-free with scissors, with no hot knife required. It is a lightweight, expandable woven polyester sleeving that offers high flexibility with high resistance to abrasion and cut-through. The open weave allows for a great range of expansion of the sleeving diameter, thus ensuring ease of installation and gripping action over a wide range of shapes and sizes. GRP sleeving is an ideal protective sleeve for wire bundles, harnesses, pneumatic hoses, hydraulic lines and highly polished or threaded machine parts.



Wrappable Sleeving

GRP-130 and GRP-130NF

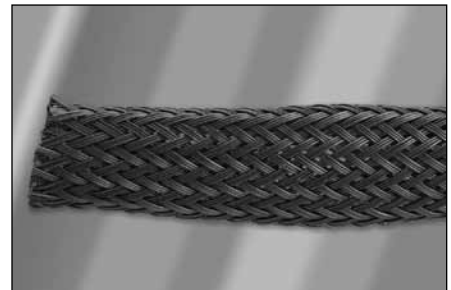
A unique split, semirigid braided construction allows GRP-130 and GRP-130NF sleeving to be installed quickly and easily. The lateral split opens up to accommodate a wide variety of bundling requirements, and then closes around the entire installation without the need for any additional fasteners. The sleeving bends to a tight radius open and, unlike full rigid tubing, will not impair or affect the flexibility of harnesses.



Advanced Protection Expandable Sleeving

GRP-160

This heavy-duty, flexible sleeving is extremely versatile in any industrial application requiring abrasion protection without sacrificing flexibility or durability. GRP-160 sleeving is economical and easy to use, cutting cleanly with a hot knife, and expanding up to 50% for easy installation over plugs and connectors. It resists fuels, UV, solvents, salt water, and most chemicals.



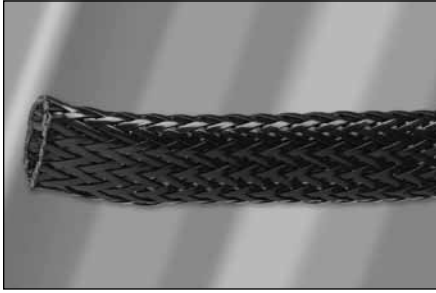
Advanced Chemical-Resistant Expandable Sleeving

GRP-170

GRP-170 is lightweight sleeving, resistant to high temperatures and virtually impervious to solvents. The sleeving resists all known solvents below 200°C chemical resistance, is inert to steam, strong bases, fuels, and acids, and offers high temperature stability, low moisture absorption, excellent dimensional stability and ultra-low wear.

FIT® Wire Management

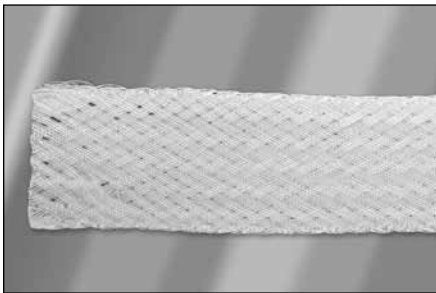
Better wire management means better harnesses



Maximum Protection Expandable Sleeving

GRP-180

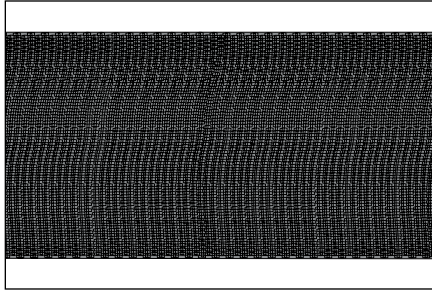
For a thick abrasion guard offering extreme protection against abrasion and cut-through on hoses and cables exposed to harsh conditions. GRP-180 provides fuller coverage for increased resistance to abrasion and penetration, and still expands for easy installation over long lengths. The braided construction allows moisture dissipate quickly to prevent rot and fungus.



Extreme Performance Expandable Sleeving

GRP-200

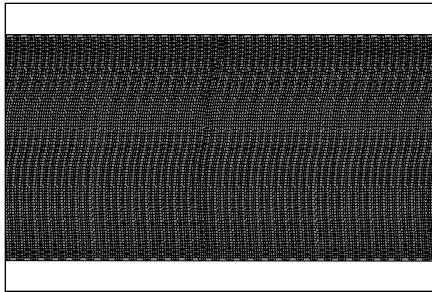
GRP-200 sleeving uses PTFE to allow the highest levels of performance, including resistance to chemicals, flame, and high temperatures. Thermal stability and low outgassing make it suited to aerospace, military, and high-tech applications. GRP-2000 sleeving is suitable for plenum applications.



Expandable Polyester Braided Sleeving

XS-100HD

Spirally cut sleeving simplifies wiring, cabling, harnessing, and bundling where breakout or re-entry is required.



Braided Sleeving

XS-200N

Durable overbraiding for military and commercial cable assemblies protects against abrasion, mildew, and aging. Type XS-200N nylon braided self-fitting cable sleeving has been designed to cover and protect both round and flat cable assemblies. The variety of sizes and self-fitting features make selection easy for solving many of the cable assembly design problems found in electronic, electrical, aerospace, process control, and robotic-automation equipment.



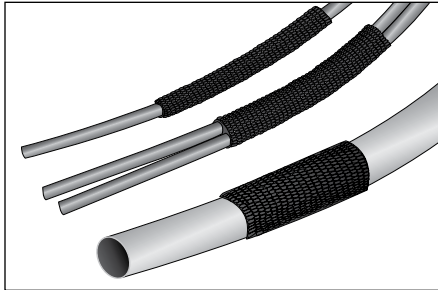
Abrasion-Resistant Nylon Sleeving

XS-300

Tightly woven nylon, with a 45-mil wall thickness, makes XS3000 sleeving the perfect solution for protecting cables, hoses and ropes from weather, sunlight and abrasion damage. The sleeving is resistant to chemicals, UV damage and rot, making it suitable for continuous outdoor use under all weather conditions. The flexible sleeving cuts with a scissor and slides easily over any application.

FIT® Wire Management

Better wire management means better harnesses



Expandable Polyester Webbed Sleeving

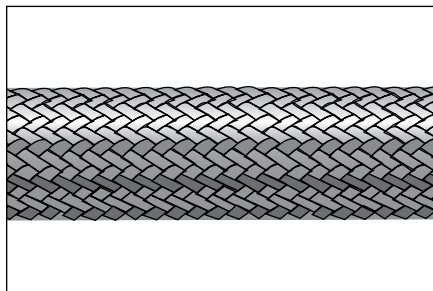
ZIP-GRP

ZIP-GRP expandable webbing offers superb flexibility and high tensile strength while providing added protection against flame, chemicals, and abrasion. With its hook and loop fastening, wires, cable assemblies, and wire harnesses are always accessible and can be easily opened for any number of breakouts. To prevent fraying of ends, ZIP-GRP should be cut/sealed with a hot knife.



Lacing Tape

Alpha lacing tapes offer high tensile strength and knot retention. Designed to allow a wider contact area with the insulation so that it remains in place, lacing tape is flexible and easy on the assembler's hands. Once knotted, tape resists slipping and does not increase diameter of harness. Nylon has excellent tensile strength and resists acids, abrasion, flame, and fungus. Polyester has all the characteristics of nylon, but has better resistance to acids, and no appreciable discoloration.



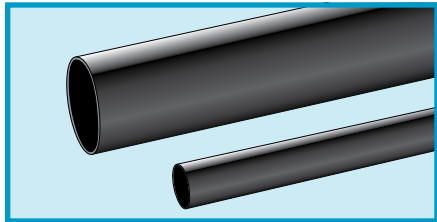
Tinned and Silver-Plated Copper Braid

A tight weave of multistrand, soft drawn copper wire, either tinned or silver plated, copper braid is an ideal shielding material for short-run cables providing easy radial termination. In retrofit applications, provides additional shielding efficiency. Tinned copper flat braid, used as a ground strap, provides an excellent, low-resistance ground path.

FIT® Wire Management

Multipurpose PVC Tubing

PVC-105



UL 224 VW-1
CSA 198
MIL-I-631D Type F, Form U,
Subform Ua, Grade C
ASTM D922

- Flexible wire protection for harnesses and ground straps
- Resistance to heat, oil, and abrasion

Operating Temperature

- -20°C to +105°C

Colors

- Size #24 to 1-1/2 inches: Black, clear
- 2 Inches to 2-1/2 inches: Black

Physical Properties

- Tensile strength: 2780 psi (19.17 N/mm²)
- Elongation: 260%
- Specific gravity: 1.32
- Flammability: UL 224 VW-1

Chemical Properties

- Corrosive effect: non-corrosive
- Fungus resistance: no growth
- UV stable
- Lead free

Electrical Properties

- Dielectric strength: 870 V/mil (343 kV/cm)
- Volume resistivity: 2 x 10¹⁴ ohm-cm
- UL voltage rating
 Sizes #24 to #1: UL rated 300 V
 5/16 to 2 inches: UL rated 600 V

Availability

- See table
- PVC-105-24 to PVC-105-1 are available air spooled on the largest put-ups only

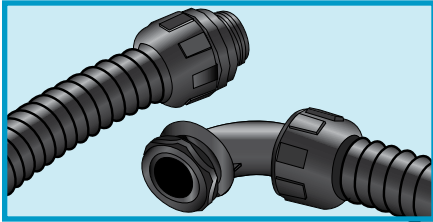
Part No.	Inside Diameter, Min.		Inside Diameter, Max.		Wall Thickness, Nom.		Standard Put-Ups	
	Inch	mm	Inch	mm	Inch	mm	Ft	m
PVC-105-24	0.022	0.56	0.027	0.69	0.012	0.30	1000	305
PVC-105-22	0.025	0.64	0.032	0.81	0.012	0.30	100, 1000	30.5, 305
PVC-105-20	0.032	0.81	0.039	0.99	0.016	0.41	1000	305
PVC-105-19	0.036	0.91	0.044	1.12	0.016	0.41	1000	305
PVC-105-18	0.040	1.02	0.049	1.24	0.016	0.41	100, 1000	30.5, 305
PVC-105-17	0.045	1.14	0.054	1.37	0.016	0.41	100, 1000	30.5, 305
PVC-105-16	0.051	1.30	0.061	1.55	0.016	0.41	100, 1000	30.5, 305
PVC-105-15	0.057	1.45	0.067	1.70	0.016	0.41	100, 1000	30.5, 305
PVC-105-14	0.064	1.63	0.072	1.83	0.016	0.41	100, 500	30.5, 152
PVC-105-13	0.072	1.83	0.08	2.03	0.016	0.41	100, 500	30.5, 152
PVC-105-12	0.081	2.06	0.089	2.26	0.016	0.41	500	152
PVC-105-11	0.091	2.31	0.101	2.57	0.016	0.41	100, 500	30.5, 152
PVC-105-10	0.102	2.59	0.112	2.84	0.016	0.41	500	152
PVC-105-9	0.114	2.90	0.124	3.15	0.020	0.51	500	152
PVC-105-8	0.129	3.28	0.141	3.58	0.020	0.51	100, 500	30.5, 152
PVC-105-7	0.144	3.66	0.158	4.01	0.020	0.51	100, 500	30.5, 152
PVC-105-6	0.162	4.11	0.178	4.52	0.020	0.51	100, 500	30.5, 152
PVC-105-5	0.183	4.65	0.198	5.03	0.020	0.51	100, 500	30.5, 152
PVC-105-4	0.204	5.18	0.224	5.69	0.020	0.51	100, 250	30.5, 76
PVC-105-3	0.229	5.82	0.249	6.32	0.020	0.51	100, 250	30.5, 76
PVC-105-2	0.258	6.55	0.278	7.06	0.020	0.51	250	76
PVC-105-1	0.289	7.34	0.311	7.90	0.020	0.51	100, 250	30.5, 76
PVC-105-5/16	0.313	7.95	0.334	8.48	0.025	0.64	100, 250	30.5, 76
PVC105-0	0.325	8.26	0.347	8.81	0.020	0.51	100, 250	30.5, 76
PVC-105-3/8	0.375	9.53	0.399	10.13	0.025	0.64	100, 250	30.5, 76
PVC-105-7/16	0.438	11.13	0.462	11.73	0.025	0.64	100	30.5
PVC-105-1/2A	0.500	12.70	0.524	13.31	0.025	0.64	100	30.5
PVC-105-9/16	0.562	14.27	0.592	15.04	0.030	0.76	100	30.5
PVC-105-5/8	0.625	15.88	0.655	16.64	0.030	0.76	100	30.5
PVC-105-3/4	0.750	19.05	0.786	19.96	0.035	0.89	50	15.2
PVC-105-7/8	0.875	22.23	0.911	23.14	0.035	0.89	50	15.2
PVC-105-1IN	1.000	25.40	1.036	26.31	0.035	0.89	50	15.2
PVC-105-1-1/8	1.125	28.58	1.161	29.49	0.010	0.25	50	15.2
PVC-105-1-1/4	1.250	31.75	1.29	32.77	0.040	1.02	50	15.2
PVC-105-1-1/2	1.500	38.10	1.55	39.37	0.045	1.14	50	15.2
PVC-105-2IN	2.000	50.80	2.07	52.58	0.060	1.52	50	15.2
PVC-105-2-1/2	2.500	63.50	2.53	64.26	0.070	1.78	50	15.2



FIT® Wire Management

Flexible Liquid-Tight PVC Tubing

FNT Tubing



PVC Tubing

Part No.	Trade Size	Inside Diameter, Min.		Inside Diameter, Max.		Outside Diameter, Min.		Outside Diameter, Max.	
		Inch	mm	Inch	mm	Inch	mm	Inch	mm
FNT-1/4*	1/4	0.385	9.78	0.405	10.29	0.560	14.22	0.575	14.61
FNT-3/8	3/8	0.484	12.29	0.504	12.80	0.690	17.53	0.710	18.03
FNT-1/2	1/2	0.622	15.80	0.642	16.31	0.820	20.83	0.840	21.34
FNT-3/4	3/4	0.820	20.83	0.840	21.34	1.030	26.16	1.050	26.67
FNT-1	1	1.041	26.44	1.066	27.08	1.290	32.77	1.315	33.40

*Not CSA certified

UL 1696

CSA C22.2 No. 227.3-05

Operating Temperature

- -18°C to +50°C

Color

- Black

Materials

- Liquid-tight PVC tubing

Chemical Properties

- Corrosive effect: none
- Fungus resistance: no growth
- Resists oil and water
- Lead free

Availability

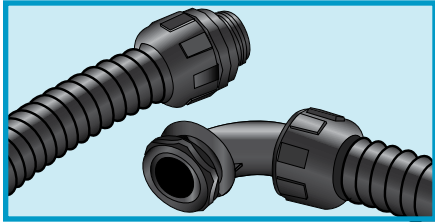
25 ft (7.5 m)

100 ft (30.5 m)



FIT® Wire Management

Liquid-Tight Nylon Connectors SLC or RLC



Part No.		Trade Size	Thread Size
Straight	90°		
SLC-1/4*	—	1/4	—
SLC-3/8	RLC-3/8	3/8	1/2 NPT
SLC-1/2	RLC-1/2	1/2	1/2 NPT
SLC-3/4	RLC-3/4	3/4	3/4 NPT
SLC-1	RLC-1	1	1 NPT

*Snap-on connector, not CSA certified

Operating Temperature

- +125°C

Color

- Black

Materials

- Nylon connector
- Supplied with o-ring and steel locking nut

Properties

- Resists salt water, weak acids, gasoline, alcohol, oil, grease, and common solvents
- Flammability rating: UL 94V-2

Availability

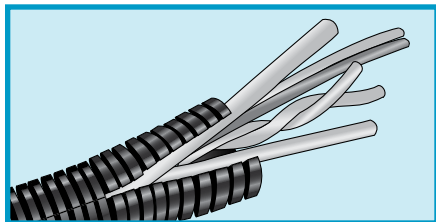
- 10-piece packages
- 100-piece packages



FIT® Wire Management

Convuluted Slit Loom Tubing

Type 492



- Abrasion and fluid resistant
- Light weight
- Easy, flexible cable breakouts

Part No.	Inside Diameter, Min.		Inside Diameter, Max.		Outside Diameter, Min.		Outside Diameter, Max.	
	Inch	mm	Inch	mm	Inch	mm	Inch	mm
492250	0.256	6.50	0.276	7.01	0.373	9.47	0.398	10.11
492350	0.341	8.66	0.38	9.65	0.496	12.60	0.526	13.36
492413	0.399	10.13	0.437	11.10	0.569	14.45	0.597	15.16
492500	0.473	12.01	0.516	13.11	0.664	16.87	0.70	17.78
492625	0.603	15.32	0.639	16.23	0.802	20.37	0.837	21.26
492750	0.707	17.96	0.759	19.28	0.95	24.13	0.989	25.12
492100	1.020	25.91	1.069	27.15	1.251	31.78	1.304	33.12
492150	1.566	39.78	1.647	41.83	1.867	47.42	1.947	49.45
492200	1.969	50.01	2.038	51.77	2.285	58.04	2.388	60.66

Operating Temperature

- -40°C to +93°C

Color

- Black

Material

- Polyethylene

Chemical Properties

- Corrosive effect: none
- Fungus resistance: no growth
- Lead free

Electrical Properties

- Volume resistivity: 10¹⁵ ohm-cm

Availability

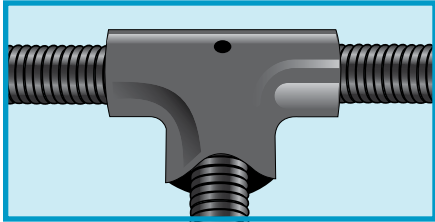
100 ft (30.5 m)



FIT® Wire Management

Loom Tee Connector Fittings

Type 493



Part No.	Mating Loom Size					
	Left		Center		Right	
	Inch	mm	Inch	mm	Inch	mm
493100	0.413 or 0.500	10.49 or 12.70	0.413 or 0.500	10.49 or 12.70	0.413 or 0.500	10.49 or 12.70
493101	0.500	12.70	0.350	8.89	0.750	19.05
493102	0.500	12.70	0.413	10.49	0.750	19.05
493103	0.750	19.05	0.500	12.70	0.750	19.05
493110	0.413	10.49	0.350	8.89	0.350	8.89
493118	1.000	25.40	0.625	15.88	0.100	2.54

Operating Temperature

- -40°C to +90°C

Color

- Black

Material

- Polypropylene

Chemical Properties

- Corrosive effect: none
- Fungus resistance: no growth
- Lead free

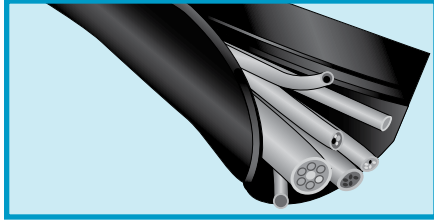
Availability

Single pieces

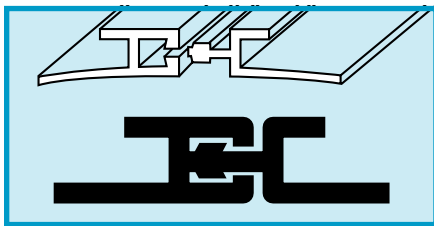
FIT® Wire Management

Zipper Tubing™

ZIP-41



**MIL-I-631
UL 224 VW-1**



Loc-Trac® provides an effective closure that is ideal for use where the assembly will be subjected to random flexing.

Protection against flame, chemicals, and abrasion.

Operating Temperature

- -20°C to +105°C

Color

- Black

Material

- PVC

Physical Properties

- Tensile strength: 1800 psi (12.4 N/mm²)
- Elongation: 200% min.
- Flammability: UL VW-1

Chemical Properties

- Fungus resistance: no growth
- Lead free

Electrical Properties

- Dielectric strength: 700 V/mil (275.8 kV/cm)
- Volume resistivity: 10¹⁰ ohms/cm

Availability

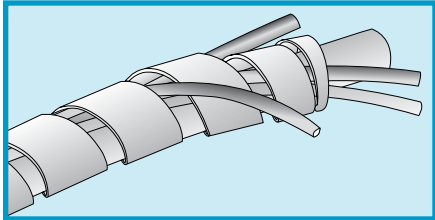
25 ft (30.5 m)
100 ft (30.5 m)

Each spool comes with two Loc-Trac fasteners and installation instructions.

Part No.	Inside Diameter, Nom.		Wall Thickness, Nom.		Flat Width, Nom.	
	Inch	mm	Inch	mm	Inch	mm
ZIP-41-1/2	0.500	12.70	0.020	0.51	2.000	50.80
ZIP-41-5/8	0.625	15.88	0.020	0.51	2.375	60.33
ZIP-41-3/4	0.750	19.05	0.020	0.51	2.750	69.85
ZIP-41-7/8	0.875	22.23	0.020	0.51	3.125	79.38
ZIP-41-1IN	1.000	25.40	0.020	0.51	3.562	90.47
ZIP-41-1-1/4	1.250	31.75	0.020	0.51	4.125	104.78
ZIP-41-1-1/2	1.500	38.10	0.020	0.51	4.875	123.83
ZIP-41-1-3/4	1.750	44.45	0.020	0.51	5.625	142.88
ZIP-41-2IN	2.000	50.80	0.020	0.51	6.375	161.93
ZIP-41-2-1/4	2.250	57.15	0.020	0.51	7.500	190.50
ZIP-41-3IN	3.000	76.20	0.020	0.51	10.000	254.00

FIT® Wire Management

Spiral Wrap Tubing SW



- Flexible cable bundling
- Easy breakouts

See table for specifications

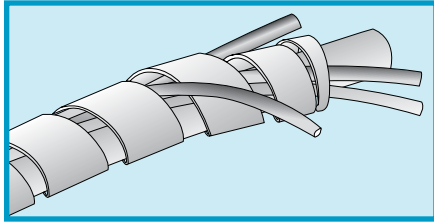
	SW-1 to SW-6	SW-10 to SW-14	SW-20 to SW-25	SW-30 to SW-35	SW-40 to SW-45	SW-50 to SW-53
Material	Natural Polyethylene	Flame-Retardant Polyethylene	Nylon	PTFE	UV-Resistant Polyethylene	PVC
Colors	Natural	White	Natural	Natural, Black	Black	Black
Temperature Range (°C)	-66 to +88	-20 to +80	-40 to +121	-268 to +260	-66 to +88	-20 to +80
Abrasion Resistance (Taber)	22	27	6 - 8	7	20	Excellent
Flame Rating	Not rated	UL 1441 Self-extinguishing	Self-extinguishing	UL VW-1	Not rated	Self-extinguishing
Tensile Strength (psi (N/mm²))	1800 (12.41)	1300 (8.96)	12,000 (82.74)	3000 (20.68)	2000 (13.79)	3000 (20.68)
Water Absorption (%)	0.014	0.02	1.5	0.005	0.03	—
Dielectric Constant (Max.)	—	2.58	4.0	2.1	—	—
Effects of Alkalis and Acids	None	None	None	None	None	Satisfactory*
Weather Resistance	N/A	N/A	N/A	Excellent	N/A	N/A
Specs	UL UZKX2 MIL-I-631D, Type A, Form U MIL-P-21922B ASTM 1248-65T Type 1 Class A, Grade 3 A-A-59602, Type 1, Class 1	UL UZKX2 A-A-59602, Type 1, Class 3	UL UZKX2 ASTM-D-4066, Group 2, Class 1	UL UZKX2 ASTM-D-3295-01, Group 4 A-A-59602, Type 3, Class 1 (as noted)	UL UZKX2 MIL-I-631D, Type A, Form U MIL-P-21922B, Type 1 Class L A-A-59602, Type 1, Class 2	—

*Satisfactory except for high concentrations; not recommended for organic solvents.

FIT® Wire Management

Spiral Wrap Tubing

SW



- Flexible cable bundling
- Easy breakouts

See table for specifications

Part No.	Material	Trade Size	Outside Diameter, Nom.		Wall Thickness, Nom.		Right-Hand Pitch, Nom.		Standard Put-Ups*	
			Inch	mm	Inch	mm	Inch	mm	Ft	m
SW-1	Natural PE	1/8	0.125	3.18	0.032	0.81	0.187	4.75	25, 100, 500	7.6, 30.5, 152
SW-2	Natural PE	1/4	0.250	6.35	0.045	1.14	0.375	9.53	25, 100, 500	7.6, 30.5, 152
SW-3	Natural PE	3/8	0.375	9.53	0.052	1.32	0.438	11.13	25, 100	7.6, 30.5
SW-4	Natural PE	1/2	0.500	12.70	0.062	1.57	0.563	14.30	25, 100	7.6, 30.5
SW-5	Natural PE	3/4	0.750	19.05	0.065	1.65	0.750	19.05	25, 100, 500	7.6, 30.5, 152
SW-6	Natural PE	1	1.000	25.40	0.080	2.03	1.000	25.40	25, 100, 500	7.6, 30.5, 152
SW-10	FR PE	1/8	0.125	3.18	0.032	0.81	0.187	4.75	25, 100, 500	7.6, 30.5, 152
SW-11	FR PE	1/4	0.250	6.35	0.045	1.14	0.375	9.53	25, 100, 500	7.6, 30.5, 152
SW-12	FR PE	3/8	0.375	9.53	0.052	1.32	0.438	11.13	25, 100	7.6, 30.5
SW-13	FR PE	1/2	0.500	12.70	0.062	1.57	0.563	14.30	25, 100	7.6, 30.5
SW-14	FR PE	3/4	0.750	19.05	0.065	1.65	0.750	19.05	25, 100	7.6, 30.5
SW-20	Nylon	1/8	0.125	3.18	0.015	0.38	0.187	4.75	25, 100, 500	7.6, 30.5, 152
SW-21	Nylon	1/4	0.250	6.35	0.025	0.64	0.375	9.53	25, 100, 500	7.6, 30.5, 152
SW-22	Nylon	3/8	0.375	9.53	0.035	0.89	0.438	11.13	25, 100	7.6, 30.5
SW-23	Nylon	1/2	0.500	12.70	0.035	0.89	0.500	12.70	25, 100	7.6, 30.5
SW-24	Nylon	3/4	0.750	19.05	0.032	0.81	0.750	19.05	25, 100, 500	7.6, 30.5, 152
SW-25	Nylon	1	1.000	25.40	0.032	0.81	1.000	25.40	25, 100	7.6, 30.5
SW-30	PTFE	1/8	0.125	3.18	0.030	0.76	0.187	4.75	25, 100	7.6, 30.5
SW-31	PTFE	1/4	0.250	6.35	0.030	0.76	0.375	9.53	25, 100	7.6, 30.5
SW-32**	PTFE	3/8	0.375	9.53	0.030	0.76	0.438	11.13	25, 100	7.6, 30.5
SW-33**	PTFE	1/2	0.500	12.70	0.030	0.76	0.500	12.70	25, 100	7.6, 30.5
SW-34**	PTFE	3/4	0.750	19.05	0.032	0.81	0.750	19.05	25, 100	7.6, 30.5
SW-35	PTFE	1	1.000	25.40	0.040	1.02	1.000	25.40	25, 100	7.6, 30.5
SW-40	UV-Res. PE	1/8	0.125	3.18	0.032	0.81	0.187	4.75	25, 100, 500	7.6, 30.5, 152
SW-41	UV-Res. PE	1/4	0.250	6.35	0.045	1.14	0.375	9.53	25, 100, 500	7.6, 30.5, 152
SW-42	UV-Res. PE	3/8	0.375	9.53	0.052	1.32	0.438	11.13	25, 100	7.6, 30.5
SW-43	UV-Res. PE	1/2	0.500	12.70	0.062	1.57	0.500	12.70	25, 100	7.6, 30.5
SW-44	UV-Res. PE	3/4	0.750	19.05	0.065	1.65	0.750	19.05	25, 100, 500	7.6, 30.5, 152
SW-45	UV-Res. PE	1	1.000	25.40	0.080	2.03	1.000	25.40	25, 100, 500	7.6, 30.5, 152
SW-50	PVC	1/8	0.125	3.18	0.032	0.81	0.187	4.75	25, 100	7.6, 30.5
SW-51	PVC	1/4	0.250	6.35	0.045	1.14	0.375	9.53	25, 100	7.6, 30.5
SW-52	PVC	3/8	0.375	9.53	0.052	1.32	0.438	11.13	25, 100	7.6, 30.5
SW-53	PVC	1/2	0.500	12.70	0.062	1.57	0.500	12.70	25, 100	7.6, 30.5

*May contain multiple lengths.

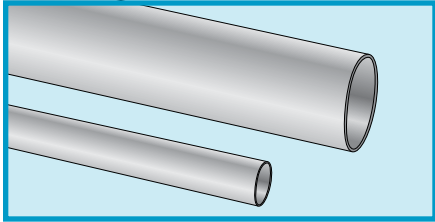
**Does not meet A-A-59602 Type 3 Class 1



FIT® Wire Management

Flexible PTFE Thin-Wall Tubing

TFT-200



**ASTM D 3295-81a Type I
Class B
AMS 3655**

- Flexible wire protection for harnesses and ground straps
- Resistance to heat, oil, and abrasion

Operating Temperature

- -75°C to +260°C

Color

- Natural

Material

- PTFE

Physical Properties

- Tensile strength: 2000 psi (13.7 N/mm²)
- Elongation: 200% min.
- Specific gravity: 2.18
- Flammability rating: UL 94V-0

Chemical Properties

- Corrosive effect: none
- Fungus resistance: no growth
- Water absorption: 0.01%
- Lead free

Electrical Properties

- Dielectric strength: 1400 V/mil (55 kV/cm)
- Volume resistivity: 10¹⁸ ohm-cm
- Dielectric constant: 2.1

Availability

See table

Spools may contain multiple lengths

TFT-200-7 and larger supplied as coils

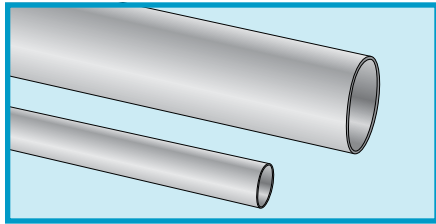
Part No.	Inside Diameter, Min.		Inside Diameter, Max.		Wall Thickness, Min.		Standard Put-Ups	
	Inch	mm	Inch	mm	Inch	mm	Ft	m
TFT-200-30	0.010	0.25	0.015	0.38	0.009	0.23	100, 500, 1000	30.5, 152, 305
TFT-200-28	0.013	0.33	0.018	0.46	0.009	0.23	100, 500, 1000	30.5, 152, 305
TFT-200-26	0.016	0.41	0.021	0.53	0.009	0.23	100, 500, 1000	30.5, 152, 305
TFT-200-24	0.020	0.51	0.026	0.66	0.010	0.25	100, 500, 1000	30.5, 152, 305
TFT-200-22	0.026	0.66	0.032	0.81	0.010	0.25	100, 500, 1000	30.5, 152, 305
TFT-200-20	0.032	0.81	0.04	1.02	0.012	0.30	100, 500, 1000	30.5, 152, 305
TFT-200-19	0.036	0.91	0.042	1.07	0.012	0.30	100, 1000	30.5, 305
TFT-200-18	0.040	1.02	0.046	1.17	0.012	0.30	100, 500, 1000	30.5, 152, 305
TFT-200-17	0.045	1.14	0.052	1.32	0.012	0.30	100, 500, 1000	30.5, 152, 305
TFT-200-16	0.051	1.30	0.058	1.47	0.012	0.30	100, 1000	30.5, 305
TFT-200-15	0.057	1.45	0.065	1.65	0.012	0.30	100, 1000	30.5, 305
TFT-200-14	0.064	1.63	0.072	1.83	0.012	0.30	100, 500	30.5, 152
TFT-200-13	0.072	1.83	0.081	2.06	0.012	0.30	100, 500	30.5, 152
TFT-200-12	0.081	2.06	0.091	2.31	0.012	0.30	100, 500	30.5, 152
TFT-200-11	0.091	2.31	0.101	2.57	0.012	0.30	100, 500	30.5, 152
TFT-200-10	0.102	2.59	0.112	2.84	0.012	0.30	100, 500	30.5, 152
TFT-200-9	0.114	2.90	0.124	3.15	0.012	0.30	100, 500	30.5, 152
TFT-200-8	0.129	3.28	0.139	3.53	0.015	0.38	100	30.5
TFT-200-7	0.144	3.66	0.155	3.94	0.015	0.38	100	30.5
TFT-200-6	0.162	4.11	0.174	4.42	0.015	0.38	100*	30.5*
TFT-200-5	0.182	4.62	0.195	4.95	0.015	0.38	100*	30.5*
TFT-200-4	0.204	5.18	0.218	5.54	0.015	0.38	100*	30.5*
TFT-200-3	0.229	5.82	0.244	6.20	0.015	0.38	100*	30.5*
TFT-200-2	0.258	6.55	0.273	6.93	0.015	0.38	100*	30.5*
TFT-200-1	0.289	7.34	0.305	7.75	0.015	0.38	100*	30.5*
TFT-200-0	0.325	8.26	0.342	8.69	0.015	0.38	100*	30.5*

*Supplied as coils.



FIT® Wire Management

Flexible PTFE Standard-Wall Tubing TFT-250



ASTM D 3295-81a Type I Class C MIL-I-22129

- Excellent heat and chemical resistance
- Flexible wire protection for harnesses and ground straps
- Resistance to heat, oil, and abrasion

Operating Temperature

- -75°C to +260°C

Color

- Natural

Material

- PTFE

Physical Properties

- Tensile strength: 2000 psi (13.7 N/mm²)
- Elongation: 200% min.
- Specific gravity: 2.18
- Flammability rating: UL 94V-0

Chemical Properties

- Corrosive effect: none
- Fungus resistance: no growth
- Water absorption: 0.01%
- Lead free

Electrical Properties

- Dielectric strength: 1400 V/mil (551 kV/cm)
- Volume resistivity: 10¹⁸ ohm-cm
- Dielectric constant: 2.1

Availability

See table

Spools may contain multiple lengths

TFT-200-7 and larger supplied as coils

Part No.	Inside Diameter, Min.		Inside Diameter, Max.		Wall Thickness, Min.		Standard Put-Ups	
	Inch	mm	Inch	mm	Inch	mm	Ft	m
TFT-250-24	0.020	0.51	0.026	0.66	0.012	0.30	100, 500, 1000	30.5, 152, 305
TFT-250-22	0.025	0.64	0.032	0.81	0.012	0.30	100, 500, 1000	30.5, 152, 305
TFT-250-20	0.032	0.81	0.040	1.02	0.016	0.41	100, 500, 1000	30.5, 152, 305
TFT-250-19	0.036	0.91	0.044	1.12	0.016	0.41	100, 500, 1000	30.5, 152, 305
TFT-250-18	0.040	1.02	0.049	1.24	0.016	0.41	100, 500, 1000	30.5, 152, 305
TFT-250-17	0.045	1.14	0.054	1.37	0.016	0.41	100, 1000	30.5, 305
TFT-250-16	0.051	1.30	0.061	1.55	0.016	0.41	100, 500, 1000	30.5, 152, 305
TFT-250-15	0.057	1.45	0.067	1.70	0.016	0.41	100, 500	30.5, 152
TFT-250-14	0.064	1.63	0.074	1.88	0.016	0.41	100, 500	30.5, 152
TFT-250-13	0.072	1.83	0.082	2.08	0.016	0.41	100	30.5
TFT-250-12	0.081	2.06	0.091	2.31	0.016	0.41	100	30.5
TFT-250-11	0.091	2.31	0.101	2.57	0.016	0.41	100, 500	30.5, 152
TFT-250-10	0.102	2.59	0.112	2.84	0.016	0.41	100, 500	30.5, 152
TFT-250-9	0.114	2.90	0.124	3.15	0.020	0.51	100, 500	30.5, 152
TFT-250-8	0.129	3.28	0.141	3.58	0.020	0.51	100	30.5
TFT-250-7	0.144	3.66	0.158	4.01	0.020	0.51	100	30.5
TFT-250-6	0.162	4.11	0.178	4.52	0.020	0.51	100*	30.5*
TFT-250-5	0.182	4.62	0.196	4.98	0.020	0.51	100*	30.5*
TFT-250-4	0.204	5.18	0.224	5.69	0.020	0.51	100*	30.5*
TFT-250-3	0.229	5.82	0.249	6.32	0.020	0.51	100*	30.5*
TFT-250-2	0.258	6.55	0.278	7.06	0.020	0.51	100*	30.5*
TFT-250-1	0.289	7.34	0.311	7.90	0.020	0.51	100*	30.5*
TFT-250-0	0.325	8.26	0.342	8.69	0.020	0.51	100*	30.5*

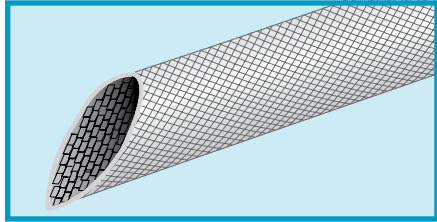
*Supplied as coils.



FIT® Wire Management

Acrylic-Coated Fiberglass Sleeving

AF-155



**MIL-I-3190/3 Grade C1
NEMA TF-1**

Operating Temperature

- -30°C to +155°C

Color

- Natural

Material

- Acrylic-coated fiberglass braid

Physical Properties

- Elongation: 150% min.
- Low-temperature (-10°C) flexing: no cracking

Chemical Properties

- Corrosive effect: none
- Fungus resistance: no growth
- Lead free

Electrical Properties

- Dielectric strength: 2500 V/mil (984 kV/cm)
- Dielectric constant: 2.5
- Volume resistivity: 10¹⁰ ohm-cm

Availability

See table

Spools may contain multiple lengths

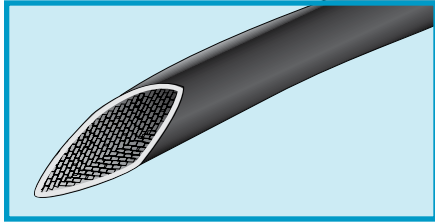
Part No.	Inside Diameter, Min.		Inside Diameter, Max.		Wall Thickness, Min.		Standard Put-Ups	
	Inch	mm	Inch	mm	Inch	mm	Ft	m
AF-155-24	0.020	0.51	0.027	0.69	0.006	0.15	100, 500	30.5, 152
AF-155-22	0.025	0.64	0.032	0.81	0.006	0.15	100, 500	30.5, 152
AF-155-20	0.032	0.81	0.039	0.99	0.006	0.15	100, 500	30.5, 152
AF-155-18	0.040	1.02	0.049	1.24	0.006	0.15	100, 500	30.5, 152
AF-155-16	0.051	1.30	0.061	1.55	0.006	0.15	100, 500	30.5, 152
AF-155-15	0.057	1.45	0.067	1.70	0.006	0.15	100, 500	30.5, 152
AF-155-14	0.064	1.63	0.074	1.88	0.006	0.15	100, 500	30.5, 152
AF-155-13	0.072	1.83	0.082	2.08	0.006	0.15	100, 250	30.5, 76
AF-155-12	0.081	2.06	0.091	2.31	0.006	0.15	100, 250	30.5, 76
AF-155-11	0.091	2.31	0.101	2.57	0.008	0.20	100, 250	30.5, 76
AF-155-10	0.102	2.59	0.112	2.84	0.008	0.20	100, 250	30.5, 76
AF-155-9	0.114	2.90	0.124	3.15	0.008	0.20	100, 250	30.5, 76
AF-155-8	0.129	3.28	0.141	3.58	0.008	0.20	100, 250	30.5, 76
AF-155-7	0.144	3.66	0.158	4.01	0.008	0.20	100, 250	30.5, 76
AF-155-6	0.162	4.11	0.178	4.52	0.010	0.25	100, 250	30.5, 76
AF-155-5	0.182	4.62	0.198	5.03	0.010	0.25	100, 250	30.5, 76
AF-155-4	0.204	5.18	0.224	5.69	0.010	0.25	100, 250	30.5, 76
AF-155-3	0.229	5.82	0.249	6.32	0.010	0.25	100, 250	30.5, 76
AF-155-2	0.258	6.55	0.278	7.06	0.010	0.25	100, 250	30.5, 76
AF-155-1	0.289	7.34	0.311	7.90	0.010	0.25	100, 125	30.5, 38
AF-155-0	0.325	8.26	0.347	8.81	0.016	0.41	100, 125	30.5, 38
AF-155-3/8	0.375	9.53	0.399	10.13	0.016	0.41	125, 250	38, 76
AF-155-7/16	0.438	11.13	0.462	11.73	0.016	0.41	125	38
AF-155-1/2	0.500	12.70	0.524	13.31	0.016	0.41	100	30.5
AF-155-5/8	0.625	15.88	0.655	16.64	0.016	0.41	100	30.5
AF-155-3/4	0.750	19.05	0.786	19.96	0.016	0.41	100	30.5
AF-155-7/8	0.875	22.23	0.911	23.14	0.016	0.41	100	30.5
AF-155-1IN	1.000	25.40	1.036	26.31	0.016	0.41	100	30.5



FIT® Wire Management

PVC-Coated Fiberglass Sleeving

PIF-130



UL 1441 (600 V_{RMS})
UL VW-1
MIL-I-3190/2 Class 130
Type B Category b
NEMA TF-1 Grade A

- High temperature, abrasion, and oil resistance
- Resists fraying, bending, and knotting

Operating Temperature

- -20°C to +130°C

Color

- Black

Material

- PVC-coated fiberglass braid

Chemical Properties

- Corrosive effect: non-corrosive
- Fungus resistance: no growth
- Lead free

Electrical Properties

- Dielectric strength: 5000 V/mil (1968 kV/cm)
- Volume resistivity: 10⁹ ohm-cm

Availability

See tables

Spools may contain multiple lengths

Standard Wall Thickness

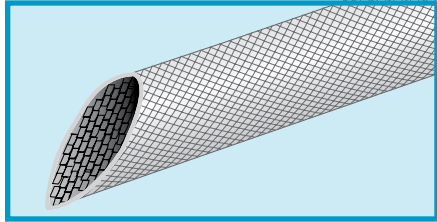
Part No.	Inside Diameter, Min.		Inside Diameter, Max.		Wall Thickness, Min.		Standard Put-Ups	
	Inch	mm	Inch	mm	Inch	mm	Ft	m
PIF-130-20	0.032	0.81	0.039	0.99	0.013	0.33	100, 500, 1000	30.5, 152, 305
PIF-130-18	0.040	1.02	0.049	1.24	0.015	0.38	100, 500, 1000	30.5, 152, 305
PIF-130-16	0.051	1.30	0.061	1.55	0.015	0.38	100, 1000	30.5, 305
PIF-130-14	0.064	1.63	0.074	1.88	0.015	0.38	100	30.5
PIF-130-12	0.081	2.06	0.091	2.31	0.015	0.38	100, 500	30.5, 152
PIF-130-10	0.102	2.59	0.112	2.84	0.018	0.46	100, 500	30.5, 152
PIF-130-8	0.129	3.28	0.141	3.58	0.018	0.46	100, 500	30.5, 152
PIF-130-6	0.162	4.11	0.178	4.52	0.020	0.51	100, 250	30.5, 76
PIF-130-4	0.204	5.18	0.224	5.69	0.020	0.51	100, 250	30.5, 76
PIF-130-2	0.258	6.55	0.278	7.06	0.020	0.51	100, 250	30.5, 76
PIF-130-0	0.325	8.26	0.347	8.81	0.025	0.64	100	30.5
PIF-130-3/8	0.375	9.53	0.399	10.13	0.025	0.64	100	30.5
PIF-130-7/16	0.438	11.13	0.462	11.73	0.025	0.64	100	30.5
PIF-130-1/2A	0.500	12.70	0.524	13.31	0.025	0.64	100	30.5
PIF-130-5/8	0.625	15.88	0.655	16.64	0.025	0.64	100	30.5
PIF-130-3/4	0.750	19.05	0.786	19.96	0.025	0.64	100	30.5
PIF-130-7/8	0.875	22.23	0.911	23.14	0.025	0.64	100	30.5
PIF-130-1IN	1.000	25.40	1.036	26.31	0.025	0.64	100	30.5



FIT® Wire Management

Silicone-Coated Fiberglass Sleeving

PIF-200, SF-200



**UL 1441 (600 V_{RMS})
MIL-I-3190/6 Class 20 Type D
Category C
NEMA TF-1 Grade A**

- Highly flexible routing
- Extreme abrasion resistance
- Superior electrical properties

Operating Temperature

- -70°C to +200°C

Color

- Natural

Material

- Silicone rubber-coated fiberglass braid

Physical Properties

- Tensile strength: 1200 psi (8.2 N/mm²)
- Elongation: 420% min.

Chemical Properties

- Corrosive effect: none
- Fungus resistance: no growth
- Lead free

Electrical Properties

- Dielectric strength: 15,000 V/mil (5905 kV/cm)
- Volume resistivity: 6 x 10¹³ ohm-cm
- Dielectric constant: 2.8

Availability

See table

Spools may contain multiple lengths

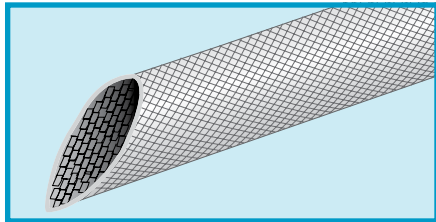
Part No.	Inside Diameter, Min.		Inside Diameter, Max.		Wall Thickness, Min.		Standard Put-Ups	
	Inch	mm	Inch	mm	Inch	mm	Ft	m
PIF-200-24	0.020	0.51	0.027	0.69	0.011	0.28	100, 500, 1000	30.5, 152, 305
PIF-200-22	0.025	0.64	0.032	0.81	0.013	0.33	100, 500, 1000	30.5, 152, 305
PIF-200-20	0.032	0.81	0.039	0.99	0.013	0.33	100, 500, 1000	30.5, 152, 305
PIF-200-18	0.040	1.02	0.049	1.24	0.015	0.38	100, 500, 1000	30.5, 152, 305
PIF-200-17	0.045	1.14	0.054	1.37	0.015	0.38	500, 1000	152, 305
PIF-200-16	0.051	1.30	0.061	1.55	0.015	0.38	100, 500, 1000	30.5, 152, 305
PIF-200-15	0.057	1.45	0.067	1.70	0.015	0.38	100, 1000	30.5, 305
PIF-200-14	0.064	1.63	0.074	1.88	0.015	0.38	100, 500	30.5, 152
PIF-200-13	0.072	1.83	0.082	2.08	0.015	0.38	100, 500	30.5, 152
PIF-200-12	0.081	2.06	0.091	2.31	0.015	0.38	100, 500	30.5, 152
PIF-200-11	0.091	2.31	0.101	2.57	0.018	0.46	500	152
PIF-200-10	0.102	2.59	0.112	2.84	0.018	0.46	100, 500	30.5, 152
PIF-200-9	0.114	2.90	0.124	3.15	0.018	0.46	100, 500	30.5, 152
PIF-200-8	0.129	3.28	0.141	3.58	0.018	0.46	100, 500	30.5, 152
PIF-200-7	0.144	3.66	0.158	4.01	0.018	0.46	100, 500	30.5, 152
PIF-200-6	0.162	4.11	0.178	4.52	0.020	0.51	25, 100	7.6, 30.5
PIF-200-5	0.182	4.62	0.198	5.03	0.020	0.51	25, 100	7.6, 30.5
PIF-200-4	0.204	5.18	0.224	5.69	0.020	0.51	100	30.5
PIF-200-3	0.229	5.82	0.249	6.32	0.020	0.51	25, 100	7.6, 30.5
PIF-200-2	0.258	6.55	0.278	7.06	0.020	0.51	25, 100	7.6, 30.5
PIF-200-1	0.289	7.34	0.311	7.90	0.020	0.51	100	30.5
PIF-200-0	0.313	7.95	0.347	8.81	0.020	0.51	100	30.5
PIF-200-3/8	0.375	9.53	0.398	10.11	0.025	0.64	25, 100	7.6, 30.5
PIF-200-7/16	0.438	11.13	0.462	11.73	0.025	0.64	25, 100	7.6, 30.5
PIF-200-1/2A	0.500	12.70	0.524	13.31	0.025	0.64	25, 100	7.6, 30.5
PIF-200-5/8	0.625	15.88	0.655	16.64	0.025	0.64	25, 100	7.6, 30.5
SF-200-3/4	0.750	19.05	0.786	19.96	0.025	0.64	100	30.5
SF-200-7/8	0.875	22.23	0.911	23.14	0.025	0.64	100	30.5
SF-200-1IN	1.000	25.40	1.036	26.31	0.025	0.64	100	30.5



FIT® Wire Management

Uncoated Fiberglass Sleeving

PIF-240



UL 1441 (500 V_{RMS})
UL VW-1
MIL-Y-1140
ASTM D 350/372 Class C

- Extreme flexibility
- Extreme heat environments

Operating Temperature

- -60°C to +648°C

Color

- Natural

Material

- Heat-annealed braided fiberglass

Chemical Properties

- Corrosive effect: none
- Fungus resistance: no growth
- Lead free

Electrical Properties

- Volume resistivity: 10¹⁵ ohm-cm

Availability

100 ft (30.5 m)

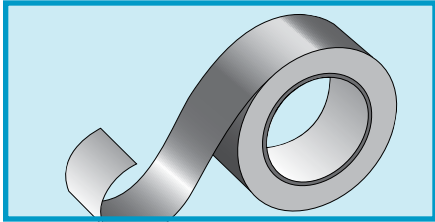
Spools may contain multiple lengths

Part No.	Inside Diameter, Min.		Inside Diameter, Max.		Wall Thickness, Min.	
	Inch	mm	Inch	mm	Inch	mm
PIF-240-20	0.032	0.81	0.039	0.99	0.009	0.23
PIF-240-18	0.040	1.02	0.049	1.24	0.011	0.28
PIF-240-16	0.051	1.30	0.061	1.55	0.011	0.28
PIF-240-15	0.057	1.45	0.067	1.70	0.011	0.28
PIF-240-14	0.064	1.63	0.074	1.88	0.011	0.28
PIF-240-12	0.081	2.06	0.091	2.31	0.011	0.28
PIF-240-11	0.091	2.31	0.101	2.57	0.011	0.28
PIF-240-10	0.102	2.59	0.112	2.84	0.011	0.28
PIF-240-9	0.114	2.90	0.124	3.15	0.011	0.28
PIF-240-8	0.129	3.28	0.141	3.58	0.011	0.28
PIF-240-7	0.144	3.66	0.158	4.01	0.013	0.33
PIF-240-6	0.162	4.11	0.178	4.52	0.013	0.33
PIF-240-5	0.182	4.62	0.198	5.03	0.013	0.33
PIF-240-4	0.204	5.18	0.224	5.69	0.016	0.41
PIF-240-3	0.229	5.82	0.249	6.32	0.016	0.41
PIF-240-2	0.258	6.55	0.278	7.06	0.016	0.41
PIF-240-1	0.289	7.34	0.311	7.90	0.016	0.41
PIF-240-0	0.325	8.26	0.347	8.81	0.016	0.41
PIF-240-3/8	0.375	9.53	0.399	10.13	0.016	0.41
PIF-240-7/16	0.438	11.13	0.462	11.73	0.018	0.46
PIF-240-1/2A	0.500	12.70	0.524	13.31	0.018	0.46
PIF-240-5/8	0.625	15.88	0.655	16.64	0.018	0.46
PIF-240-3/4	0.750	19.05	0.783	19.89	0.018	0.46
PIF-240-7/8	0.875	22.23	0.991	25.17	0.018	0.46
PIF-240-1IN	1.000	25.40	1.026	26.06	0.018	0.46



FIT® Wire Management

Copper EMI Shielding Tape CST Series



UL 510 ASTM D 1000, Method 303 MIL-STD-202C

- EMI shielding
- Highly conductive pressure-sensitive adhesive seal

Operating Temperature

- -40°C to +205°C

Color

- Copper

Material

- Copper foil on pressure-sensitive adhesive

Physical Properties

- Tensile strength: 21 lb/inch (0.145 N/mm²)
- Adhesion: 40 oz/inch
- Foil thickness: 0.0014 inch (0.04 mm)
- Adhesive thickness: 0.00015 inch (0.004 mm)
- Flammability: flame resistant per UL 510

Electrical Properties

- Electrical resistance through tape: <0.003 ohms/inch² (<0.0005 ohms/cm²)
- Shielding effectiveness: 50 dB at 153 MHz

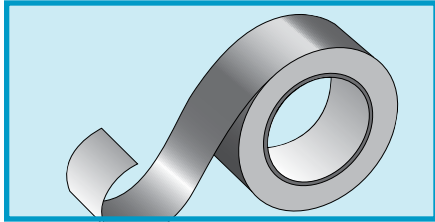
Availability

36-yard (33 m) rolls

Part No.	Width	
	Inch	mm
CST-5	0.50	12.70
CST-10	1.00	25.40
CST-15	1.50	38.10
CST-20	2.00	50.80

FIT® Wire Management

Self-Fusing Silicone Tape



A-A-59163

- Cures within 48 hours at room temperature or 4 hours at 177°C
- No adhesive required
- Low-cost seal for electrical insulation, cables harnesses, splices, hot air ducting, and electrical wire wrap
- Conforms to irregular shapes to protect, secure, insulate, mask
- Resists outside weathering

Operating Temperature

- -90°C to +260°C (continuous)

Colors

- Red, black, blue, yellow, white, green

Material

- Silicone

Physical Properties

- Tensile strength: 700 psi (4.8 N/mm²) min.
- Elongation: 300% min.
- Water absorption: 3% max.
- Bond strength: 20 lbf (25 kgf)
- Shelf life: 1 year at 37.3°C for unopened container

Electrical Properties

- Dielectric strength: 400 V/mil (157 kV/cm)
- Volume resistivity: 1 x 10¹³ ohm-cm

Availability

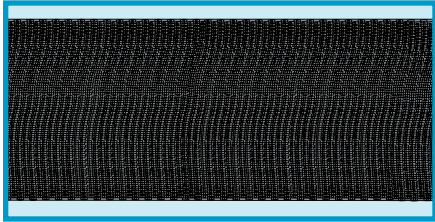
- 14-ft put-ups (all colors)
- 35-ft put-ups (black, red)

Part No.	Width		Thickness	
	Inch	mm	Inch	mm
TY2001	1.000	25.40	0.020	0.51

FIT® Wire Management

Expandable Braided Sleeving

GRP-110, GRP-120



UL UZKX2
UL VW-1 (GRP-120)
MIL-I-631

- Light weight, flexible routing
- High abrasion and cut-through resistance

Operating Temperature

- -75°C to +125°C
- 250°C melt temperature

Color

- GRP-110: Black or natural
- GRP-120: Black with white tracer thread or white with black tracer thread

Material

- Braided polyester
- Should be cut with hot knife

Physical Properties

- Tensile strength:
 GRP-110: 85,000 psi (586 N/mm²)
 GRP-120: 55,000 psi (379 N/mm²)

Chemical Properties

- Corrosive effect: noncorrosive
- Fungus resistance: no growth
- GRP-120: flame retardant
- Halogen free
- Lead free

Availability

See tables

Spools may contain multiple lengths

General-Purpose Sleeving

Part No.	Inside Diameter, Min.		Expanded Inside Diameter, Max.		Wall Thickness		Construction			Standard Put-Ups	
	Inch	mm	Inch	mm	Inch	mm	Carriers	Yarns	Total	Ft	m
GRP-110-1/8	0.093	2.36	0.250	6.35	0.025	0.64	32	1	32	100, 500	30.5, 152
GRP-110-1/4	0.125	3.18	0.375	9.53	0.025	0.64	24	3	72	100, 500	30.5, 152
GRP-110-1/2	0.250	6.35	0.750	19.05	0.025	0.64	48	3	144	100, 500	30.5, 152
GRP-110-3/4	0.500	12.70	1.250	31.75	0.025	0.64	72	3	216	100, 500	30.5, 152
GRP-110-1-1/4	0.750	19.05	1.750	44.45	0.025	0.64	96	3	288	50, 250	15.2, 76
GRP-110-1-3/4	1.250	31.75	2.750	69.85	0.025	0.64	120	4	480	50, 250	15.2, 76
GRP-110-2IN	1.500	38.10	3.500	88.90	0.025	0.64	120	4	480	50, 250	15.2, 76

Flame-Retardant Sleeving

Part No.	Inside Diameter, Min.		Expanded Inside Diameter, Max.		Wall Thickness		Construction			Standard Put-Ups	
	Inch	mm	Inch	mm	Inch	mm	Carriers	Yarns	Total	Ft	m
GRP-120-1/8	0.093	2.36	0.250	6.35	0.025	0.64	32	1	32	100, 500	30.5, 152
GRP-120-1/4	0.125	3.18	0.375	9.53	0.025	0.64	24	3	72	100, 500	30.5, 152
GRP-120-1/2	0.250	6.35	0.750	19.05	0.025	0.64	48	3	144	100, 500	30.5, 152
GRP-120-3/4	0.500	12.70	1.250	31.75	0.025	0.64	72	3	216	100, 500	30.5, 152
GRP-120-1-1/4	0.750	19.05	1.750	44.45	0.025	0.64	96	3	288	50, 250	15.2, 76
GRP-120-1-3/4	1.250	31.75	2.750	69.85	0.025	0.64	120	4	480	50, 250	15.2, 76
GRP-120-2IN	1.500	38.10	3.500	88.90	0.025	0.64	120	4	480	50, 250	15.2, 76

