

**FlameShield™ Firesleeve: High Temperature, Heat, Flame, Fire
& Molten Metal Resistant Protection for Hoses, Cables and Wires**
500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods
Industrial Grade & Heavy Duty Grade: *Silicone Rubber Coated Fiberglass Sleeve*



Protection from:

- Heat
- Flame
- Fire
- Molten Metal Splash
- Welding Splatter & Sparks

FlameShield™ firesleeve is the recognized standard for heat, flame and fire protection for hoses, tubing, cables and wiring in harsh environments. Ideal for electric cables and gas hoses in welding applications.

Utilized in most industries with hot processes, liquid metal or welding operations to protect assets and prevent failures, prolonging the life of critical hoses, wires and cables, and reduce unexpected shutdowns.

Also protects personnel from hot or cold hoses and pipes.

Firesleeve can be double sleeved or undersleeved with uncoated braided or knitted sleeves for additional thermal protection.

Industrial grade FlameShield™ firesleeve has minimal radial elasticity (approx 5%) while the Heavy Duty grade has approximately 20% of elasticity, allowing it to pass over couplings and connectors.

The Heavy Duty version sleeve is also used to cover water-cooled high current EAF cables and cooling water hoses at metal processing plants due to the excellent molten metal splash and slag protection. Both Industrial and Heavy Duty sleeve are extremely flexible, pliable and conformable. Used for fuel, brake, oil and hydraulic line / hose protection on mobile construction equipment, mining equipment, rail cars, buses and emergency response vehicles.

Also an excellent cold temperature sleeve with flexibility to -76°C. See further material specifications on Page 1-8.

S-FSHD up to 5" / 127mm ID meets standards: UL 1441 VW-1, DIN EN ISO 15540, EN 45545, NF F 16-101, BS 6853, NF X 10-702, NF X 70 100 & NF X 70 200, BS EN ISO 11925, BS EN ISO 4589-2, BS EN 60695-2-11, ASTM D 2863 OI, DD CEN/TS 45545-2, ASTM G85 Type 2. Also meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test) for use as a wiring/cable protection sleeve.

Industrial Grade firesleeve is fabricated from a E-type glass yarn that is **knitted** and the Heavy Duty Grade is fabricated from a dense E-type yarn that is **braided**. Both the knitted and braided firesleeve receive a thick coating of self-extinguishing silicone rubber that withstands liquid metal splash, flame, slag, sparks, and other hazards in the toughest of environments.

Standard lengths are 100 feet; specific cut lengths are available. Standard color is Oxide-Red in all sizes for both Industrial and Heavy Duty Grades; and Black is available in sizes from -04 through -48 in Heavy Duty Grade. Other colors may be available or can be ordered in lot quantity. Use ABST-LP-1 silicone rubber paint to add color markings. Nominal wall thickness is 0.140" for S-FSHD and 0.160" for S-FS.

FlameShield™ Firesleeve

500°F / 260°C continuous rating with weld splatter / molten metal splash protection.
2200°F / 1205°C for periods up to 15 minutes and short excursions to 3000°F / 1650°C.

FlameShield™ High Temperature Firesleeve: Industrial grade and Heavy Duty grade				
Nominal ID Inches / mm / Dash #			Industrial Grade Knit Part Number	Heavy Duty Grade Braid Part Number
1/4	6	-04	S-FS-M006-04	S-FSHD-M006-04-X
5/16	8	-05	S-FS-M008-05	S-FSHD-M008-05-X
3/8	10	-06	S-FS-M010-06	S-FSHD-M010-06-X
7/16	11	-07	S-FS-M011-07	S-FSHD-M011-07-X
1/2	13	-08	S-FS-M013-08	S-FSHD-M013-08-X
9/16	15	-09	S-FS-M015-09	S-FSHD-M015-09-X
5/8	16	-10	S-FS-M016-10	S-FSHD-M016-10-X
11/16	17	-11	S-FS-M017-11	S-FSHD-M017-11-X
3/4	19	-12	S-FS-M019-12	S-FSHD-M019-12-X
13/16	20	-13	S-FS-M020-13	S-FSHD-M020-13-X
7/8	22	-14	S-FS-M022-14	S-FSHD-M022-14-X
1	25	-16	S-FS-M025-16	S-FSHD-M025-16-X
1 1/8	29	-18	S-FS-M029-18	S-FSHD-M029-18-X
1 1/4	32	-20	S-FS-M032-20	S-FSHD-M032-20-X
1 3/8	35	-22	S-FS-M035-22	S-FSHD-M035-22-X
1 1/2	38	-24	S-FS-M038-24	S-FSHD-M038-24-X
1 5/8	41	-26	S-FS-M041-26	S-FSHD-M041-26-X
1 3/4	44	-28	S-FS-M044-28	S-FSHD-M044-28-X
1 7/8	48	-30	S-FS-M048-30	S-FSHD-M048-30-X
2	51	-32	S-FS-M051-32	S-FSHD-M051-32-X
2 1/4	57	-36	S-FS-M057-36	S-FSHD-M057-36-X
2 3/8	60	-38	S-FS-M060-38	S-FSHD-M060-38-X
2 1/2	64	-40	S-FS-M064-40	S-FSHD-M064-40-X
2 5/8	67	-42	S-FS-M067-42	S-FSHD-M067-42-X
2 3/4	70	-44	S-FS-M070-44	S-FSHD-M070-44-X
2 7/8	73	-46	S-FS-M073-46	S-FSHD-M073-46-X
3	76	-48	S-FS-M076-48	S-FSHD-M076-48-X
3 1/4	83	-52	S-FS-M083-52	S-FSHD-M083-52-X
3 1/2	89	-56	S-FS-M089-56	S-FSHD-M089-56-X
3 3/4	95	-60	S-FS-M095-60	S-FSHD-M095-60-X
4	102	-64	S-FS-M102-64	S-FSHD-M102-64-X
4 1/2	114	-72	S-FS-M114-72	S-FSHD-M114-72-X
5	127	-80	S-FS-M127-80	S-FSHD-M127-80-X
5 1/2	140	-87	S-FS-M140-87	S-FSHD-M140-87
6	152	-96	S-FS-M152-96	S-FSHD-M152-96
8	203	-128	S-FS-M203-128	S-FSHD-M203-128
10	254	-160	S-FS-M254-160	S-FSHD-M254-160
12	305	-193	S-FS-M305-193	S-FSHD-M305-193
14	356	-225	S-FS-M356-225	S-FSHD-M356-225
16	406	-257	S-FS-M406-257	S-FSHD-M406-257

- For 6" ID and larger, the size is customizable - the sizes shown above in the table are example sizes and pricing. Sizes up to 120" ID are available - Priced by quotation.
- On-site custom fabrication over non-moveable or non-disconnectable hoses and pipes is available.

Standard color is Oxide-Red for S-FS. Oxide-red and Black is available for S-FSHD.

Other colors such as Silver/Grey, Yellow, Green and Blue are available – minimums may apply..

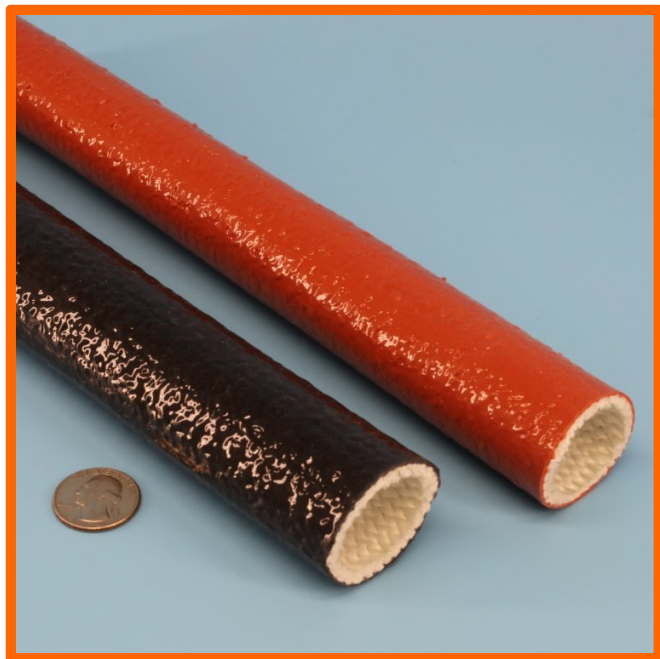
Add the color code after the part number. For the "-X" value above in the part number use "-OR" for Oxide-Red or "-BK" for Black

Sizes up to 5" ID are available By-The-Foot / Metre or in standard 100 foot / 30 metre lengths
Larger diameters up to 6" ID may also be available in 50 foot / 15 metre lengths

SAE AS1072 Aviation / Aerospace Firesleeve: High Temperature, Heat, Flame & Fire Resistant - without markings - Oxide-Red and Black

500°F / 260°C Rating – Higher Temperature for Shorter Periods

Aviation / Aerospace Grade: Meets SAE AS1072 - *Silicone Rubber Coated Fiberglass Sleeve*



FlameShield™ Aviation / Aerospace grade firesleeve is manufactured to the SAE AS1072F specification and allows properly assembled hose assemblies to meet SAE AS1055D testing. We also maintain traceability records for customers buying this product. 500°F / 260°C rating and with a 15 minute FAA "Fireproof" rating when assembled according to SAE AS1055. Also meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test) for use as a wiring/cable protection sleeve.

This sleeve is extremely flexible, pliable, and conformable. Typically used to protect fuel, oil, hydraulic lines and hoses, as well as critical wiring and cables. Remains flexible to -76°C (-104.8°F).

Firesleeve must be cut slightly longer than the hose or cable it is covering so it covers part of the fitting or connector. The longer the hose or cable, and if tight fitting, or if in use the hose/cable will be curved, then the longer the firesleeve needs to be. Firesleeve that is short will pull back from the fitting when the hose is bent, and if this occurs the hose assembly won't meet the TSO. Appropriate clamps must be used over the firesleeve at the fitting for aviation and Marine applications. (See our clamps and tools)

This sleeve has a radial elasticity of approximately 15% allowing it to slide over connectors, fittings, and splices.

See further specifications on Page 1-9.

FlameShield™ S-AS1072 firesleeve also meets the following standards: UL 1441 VW-1, DIN EN ISO 15540, EN 45545, NF F 16-101, BS 6853, NF X 10-702, NF X 70 100 & NF X 70 200, BS EN ISO 11925, BS EN ISO 4589-2, BS EN 60695-2-11, ASTM D 2863 OI, DD CEN/TS 45545-2, ASTM G85 Type 2.

500°F / 260°C continuous rating, 800°F / 426°C for periods up to 30 minutes
2200°F / 1205°C for periods up to 15 minutes and short excursions to 3000°F / 1650°C.

FlameShield™ AS1072 Aviation / Aerospace Grade Firesleeve – without marking									
Nominal ID Inches / mm / Dash #			Part Number	Nominal ID Inches / mm / Dash #			Part Number		
1/4	6	-04	S-AS1072-M006-04-X	1 3/4	44	-28	S-AS1072-M044-28-X		
5/16	8	-05	S-AS1072-M008-05-X	1 7/8	48	-30	S-AS1072-M048-30-X		
3/8	10	-06	S-AS1072-M010-06-X	2	51	-32	S-AS1072-M051-32-X		
7/16	11	-07	S-AS1072-M011-07-X	2 1/4	57	-36	S-AS1072-M057-36-X		
1/2	13	-08	S-AS1072-M013-08-X	2 3/8	60	-38	S-AS1072-M060-38-X		
9/16	15	-09	S-AS1072-M015-09-X	2 1/2	64	-40	S-AS1072-M064-40-X		
5/8	16	-10	S-AS1072-M016-10-X	2 5/8	67	-42	S-AS1072-M067-42-X		
11/16	17	-11	S-AS1072-M017-11-X	2 3/4	70	-44	S-AS1072-M070-44-X		
3/4	19	-12	S-AS1072-M019-12-X	2 7/8	73	-46	S-AS1072-M073-46-X		
13/16	20	-13	S-AS1072-M020-13-X	3	76	-48	S-AS1072-M076-48-X		
7/8	22	-14	S-AS1072-M022-14-X	3 1/4	83	-52	S-AS1072-M083-52-X		
1	25	-16	S-AS1072-M025-16-X	3 1/2	89	-56	S-AS1072-M089-56-X		
1 1/8	29	-18	S-AS1072-M029-18-X	3 3/4	95	-60	S-AS1072-M095-60-X		
1 1/4	32	-20	S-AS1072-M032-20-X	4	102	-64	S-AS1072-M102-64-X		
1 3/8	35	-22	S-AS1072-M035-22-X	4 1/2	114	-72	S-AS1072-M114-72-X		
1 1/2	38	-24	S-AS1072-M038-24-X	5	127	-80	S-AS1072-M127-80-X		
1 5/8	41	-26	S-AS1072-M041-26-X	6	162	-96	S-AS1072-M162-96-X		

For the "-X" value above in the part number, use "-OR" for Oxide-Red or "-BK" for Black

Fabricated from a dense E-type braided sleeve and then receives a thick coating of self-extinguishing silicone rubber that withstands flame exposure, allowing qualified hose assemblies to meet FAA TSO-C42 (Propeller feathering hose assemblies), TSO-C53a (Fuel and Oil system hose assemblies) and TSO-C75 (Hydraulic hose assemblies). Standard color is Oxide-Red in all sizes and Black is available in sizes -04 through -32. Nominal wall thickness is 0.16".

This product is available By-The-Foot / Metre or in standard 100 foot / 30 metre lengths
Larger sizes available in 50 foot / 15 metre lengths

SAE AS1072 Aviation / Aerospace Firesleeve: High Temperature, Heat, Flame & Fire Resistant Type 2 with SAE Marking Silicone Rubber Composite 500°F / 260°C Rating – Higher Temperature for Shorter Periods



FlameShield™ Aviation / Aerospace grade firesleeve is manufactured to the SAE AS1072F specification. CofC and Test Report available with orders. Our company QMS has been reviewed and accepted by major aerospace OEMs. Allows properly assembled hose assemblies to meet SAE AS1055D testing. We also maintain traceability records for customers buying this product. 500°F / 260°C rating and with a 15 minute FAA "Fireproof" rating when assembled according to SAE AS1055. Also meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test) for use as a wiring/cable protection sleeve.

This sleeve is extremely flexible, pliable and conformable. Typically used to protect fuel, oil, hydraulic lines and hoses, as well as critical wiring and cables. Remains flexible to -76°C (-104.8°F).

Firesleeve must be cut slightly longer than the hose or cable it is covering so it covers part of the fitting or connector. The longer the hose or cable, and if tight fitting, or if in use the hose/cable will be curved, then the longer the firesleeve needs to be. Firesleeve that is short will pull back from the fitting when the hose is bent, and if this occurs the hose assembly won't meet the TSO. Appropriate clamps must be used over the firesleeve at the fitting for aviation and Marine applications. (See our clamps and tools)

This sleeve has a radial elasticity of approximately 15% allowing it to slide over connectors, fittings, and splices.

For further specifications see Technical Data page 1-9. This sleeve is marked per the AS1072 specification. Other markings such as tradenames or part numbers may be added.

FlameShield™ S-AS1072 firesleeve is also compliant to the following standards: UL 1441 VW-1, DIN EN ISO 15540, EN 45545, NF F 16-101, BS 6853, NF X 10-702, NF X 70 100 & NF X 70 200, BS EN ISO 11925, BS EN ISO 4589-2, BS EN 60695-2-11, ASTM D 2863 OI, DD CEN/TS 45545-2, ASTM G85 Type 2.

**500°F / 260°C continuous rating, 800°F / 426°C for periods up to 30 minutes
2200°F / 1205°C for periods up to 15 minutes and short excursions to 3000°F / 1650°C.**

FlameShield™ SAE AS1072 Aviation / Aerospace Grade Firesleeve with Marking						
Nominal ID Inches / mm / Dash #			Part Number			
1/4	6	-04	AS1072-04 SIL-FG	1 3/4	44	-28
5/16	8	-05	AS1072-05 SIL-FG	1 7/8	48	-30
3/8	10	-06	AS1072-06 SIL-FG	2	51	-32
7/16	11	-07	AS1072-07 SIL-FG	2 1/4	57	-36
1/2	13	-08	AS1072-08 SIL-FG	2 3/8	60	-38
9/16	15	-09	AS1072-09 SIL-FG	2 1/2	64	-40
5/8	16	-10	AS1072-10 SIL-FG	2 5/8	67	-42
11/16	17	-11	AS1072-11 SIL-FG	2 3/4	70	-44
3/4	19	-12	AS1072-12 SIL-FG	2 7/8	73	-46
13/16	20	-13	AS1072-13 SIL-FG	3	76	-48
7/8	22	-14	AS1072-14 SIL-FG	3 1/4	83	-52
1	25	-16	AS1072-16 SIL-FG	3 1/2	89	-56
1 1/8	29	-18	AS1072-18 SIL-FG	3 3/4	95	-60
1 1/4	32	-20	AS1072-20 SIL-FG	4	102	-64
1 3/8	35	-22	AS1072-22 SIL-FG	4 1/2	114	-72
1 1/2	38	-24	AS1072-24 SIL-FG	5	127	-80
1 5/8	41	-26	AS1072-26 SIL-FG	6	162	-96
						AS1072-28 SIL-FG
						AS1072-30 SIL-FG
						AS1072-32 SIL-FG
						AS1072-36 SIL-FG
						AS1072-38 SIL-FG
						AS1072-40 SIL-FG
						AS1072-42 SIL-FG
						AS1072-44 SIL-FG
						AS1072-46 SIL-FG
						AS1072-48 SIL-FG
						AS1072-52 SIL-FG
						AS1072-56 SIL-FG
						AS1072-60 SIL-FG
						AS1072-64 SIL-FG
						AS1072-72 SIL-FG
						AS1072-80 SIL-FG
						AS1072-96 SIL-FG

Fabricated from a dense E-type braided sleeve and then receives a thick coating of self-extinguishing silicone rubber that withstands flame exposure, allowing qualified hose assemblies to meet FAA TSO-C42 (Propeller feathering hose assemblies), TSO-C53a (Fuel and Oil system hose assemblies) and TSO-C75 (Hydraulic hose assemblies). Standard color is Oxide-Red with black printing. Black sleeve with white printing is available. Other colors available.

**This product is available By-The-Foot / Metre or in standard 100 foot / 30 metre lengths
Larger sizes available in 50 foot / 15 metre lengths**

NSN / NATO Aerospace Sleeve meeting SAE AS1072 Flame & Fire Resistant Type 2 with SAE Marking Silicone Rubber Composite for "Sleeve, hose assembly, fire protection" 500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods



FlameShield™ NSN / NATO firesleeve is manufactured to SAE AS1072 Aerospace specification. CofC and Test Report available with orders. Our company QMS has been reviewed and accepted by major aerospace OEMs. Allows properly assembled hose assemblies to meet SAE AS1055D testing. We also maintain traceability records for customers buying this product. 500°F / 260°C continuous rating and with a 15 minute FAA "Fireproof" rating when assembled according to SAE AS1055. Also meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test) for use as a wiring/cable protection sleeve.

This sleeve is extremely flexible, pliable and conformable. Typically used to protect fuel, oil, hydraulic lines and hoses, as well as critical wiring and cables. Remains flexible to -76°C (-104.8°F).

Firesleeve must be cut slightly longer than the hose or cable it is covering so it covers part of the fitting or connector. The longer the hose or cable, and if tight fitting, or if in use the hose/cable will be curved, then the longer the firesleeve needs to be. Firesleeve that is short will pull back from the fitting when the hose is bent, and if this occurs the hose assembly won't meet the TSO. Appropriate clamps must be used over the firesleeve at the fitting for aviation and Marine applications. (See our clamps and tools)

This sleeve has a radial elasticity of approximately 15% allowing it to slide over connectors, fittings and splices.

For further specifications see Technical Data Page. This sleeve is marked per the AS1072 specification. Other markings such as tradenames, symbols, etc. may be added. Cage L8347.

FlameShield™ S-AS1072 firesleeve is also compliant to the following standards: UL 1441 VW-1, DIN EN ISO 15540, EN 45545, NF F 16-101, BS 6853, NF X 10-702, NF X 70 100 & NF X 70 200, BS EN ISO 11925, BS EN ISO 4589-2, BS EN 60695-2-11, ASTM D 2863 OI, DD CEN/TS 45545-2, ASTM G85 Type 2.

500°F / 260°C continuous rating, 800°F / 426°C for periods up to 30 minutes
2200°F / 1205°C for periods up to 15 minutes and short excursions to 3000°F / 1650°C.

FlameShield™ NSN / NATO SAE AS1072 Aerospace Grade Sleeve with Marking											
Nominal ID Inches / mm / Dash #			Part Number (Yellow highlights NSN/NATO Spec)			Nominal ID Inches / mm / Dash #			Part Number (Yellow highlights NSN/NATO Spec)		
1/4	6	-04	AS1072-04 SIL-FG			1 3/4	44	-28	5970-14-413-6220		
5/16	8	-05	5970-14-455-2318			1 7/8	48	-30	AS1072-30 SIL-FG		
3/8	10	-06	5970-14-455-2322			2	51	-32	5970-14-413-6221		
7/16	11	-07	AS1072-07 SIL-FG			2 1/4	57	-36	5970-14-413-6222		
1/2	13	-08	5970-14-455-2324			2 3/8	60	-38	AS1072-38 SIL-FG		
9/16	15	-09	AS1072-09 SIL-FG			2 1/2	64	-40	5970-14-455-2328		
5/8	16	-10	5970-14-413-6212			2 5/8	67	-42	AS1072-42 SIL-FG		
11/16	17	-11	AS1072-11 SIL-FG			2 3/4	70	-44	AS1072-44 SIL-FG		
3/4	19	-12	5970-14-413-6213			2 7/8	73	-46	AS1072-46 SIL-FG		
13/16	20	-13	AS1072-13 SIL-FG			3	76	-48	5970-14-455-2331		
7/8	22	-14	5970-14-413-6214			3 1/4	83	-52	AS1072-52 SIL-FG		
1	25	-16	5970-14-413-6215			3 1/2	89	-56	5970-14-455-2332		
1 1/8	29	-18	AS1072-18 SIL-FG			3 3/4	95	-60	AS1072-60 SIL-FG		
1 1/4	32	-20	5970-14-413-6216			4	102	-64	5970-14-455-2334		
1 3/8	35	-22	AS1072-22 SIL-FG			4 1/2	114	-72	AS1072-72 SIL-FG		
1 1/2	38	-24	5970-14-413-6217			5	127	-80	AS1072-80 SIL-FG		
1 5/8	41	-26	AS1072-26 SIL-FG			6	162	-96	AS1072-96 SIL-FG		

Fabricated from a dense E-type braided sleeve and then receives a thick coating of self-extinguishing silicone rubber that withstands flame exposure, allowing qualified hose assemblies to meet FAA TSO-C42 (Propeller feathering hose assemblies), TSO-C53a (Fuel and Oil system hose assemblies) and TSO-C75 (Hydraulic hose assemblies). Standard color is Oxide-Red with black printing. Black sleeve with white printing is available. Other colors available.

This product is available By-The-Foot / Metre or in standard 100 foot / 30 metre lengths
Larger sizes available in 50 foot / 15 metre lengths

DIN EN ISO15540 Marine Grade Firesleeve: High Temperature, Heat, Flame & Fire Resistant

500°F / 260°C Continuous Rating - 800°F / 426°C For Up To 30 Minutes

Marine Grade - Meets DIN EN ISO 15540 / USCG / SOLAS

Silicone Rubber Coated Fiberglass Sleeve



FlameShield™ Marine grade firesleeve allows properly assembled hose assemblies to meet ISO 15540 testing. We also maintain traceability records for customers buying this product. 500°F / 260°C continuous rating and with a 30 minute "Fireproof" 800°F / 426°C rating. Also meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test) for use as a wiring/cable protection sleeve.

This sleeve is extremely flexible, pliable and conformable. Typically used to protect fuel, oil, hydraulic lines and hoses, as well as critical wiring and cables. Remains flexible to -76°C (-104.8°F).

Firesleeve must be cut slightly longer than the hose or cable it is covering so it covers part of the fitting or connector. The longer the hose or cable, and if tight fitting, or if in use the hose/cable will be curved, then the longer the firesleeve needs to be. Firesleeve that is short will pull back from the fitting when the hose is bent, and if this occurs the hose assembly won't meet the ISO standard. Appropriate clamps must be used over the firesleeve at the fitting for aviation and Marine applications. (See our clamps and tools)

This sleeve has a radial elasticity of approximately 15% allowing it to slide over connectors, fittings and splices.

S-ISO15540 also meets the following standards: UL 1441 VW-1, EN 45545, NF F 16-101, BS 6853, NF X 10-702, NF X 70 100 & NF X 70 200, BS EN ISO 11925, BS EN ISO 4589-2, BS EN 60695-2-11, ASTM D 2863 OI, DD CEN/TS 45545-2, ASTM G85 Type 2.

**500°F / 260°C continuous rating, 800°F / 426°C for periods up to 30 minutes
2200°F / 1205°C for periods up to 15 minutes and short excursions to 3000°F / 1650°C.**

FlameShield™ DIN EN ISO15540 Marine Grade Firesleeve												
Nominal ID Inches / mm / Dash #			Part Number			Nominal ID Inches / mm / Dash #			Part Number			
1/4	6	-04	S-ISO15540-M006-04-X			1 7/8	48	-30	S-ISO15540-M048-30-X			
3/8	10	-06	S-ISO15540-M010-06-X			2	51	-32	S-ISO15540-M051-32-X			
7/16	11	-07	S-ISO15540-M011-07-X			2 1/4	57	-36	S-ISO15540-M057-36-X			
1/2	13	-08	S-ISO15540-M013-08-X			2 1/2	64	-40	S-ISO15540-M064-40-X			
9/16	15	-09	S-ISO15540-M015-09-X			2 5/8	67	-42	S-ISO15540-M067-42-X			
5/8	16	-10	S-ISO15540-M016-10-X			2 3/4	70	-44	S-ISO15540-M070-44-X			
3/4	19	-12	S-ISO15540-M019-12-X			2 7/8	73	-46	S-ISO15540-M073-46-X			
7/8	22	-14	S-ISO15540-M022-14-X			3	76	-48	S-ISO15540-M076-48-X			
1	25	-16	S-ISO15540-M025-16-X			3 1/4	83	-52	S-ISO15540-M083-52-X			
1 1/8	29	-18	S-ISO15540-M029-18-X			3 1/2	89	-56	S-ISO15540-M089-56-X			
1 1/4	32	-20	S-ISO15540-M032-20-X			3 3/4	95	-60	S-ISO15540-M095-60-X			
1 3/8	35	-22	S-ISO15540-M035-22-X			4	102	-64	S-ISO15540-M102-64-X			
1 1/2	38	-24	S-ISO15540-M038-24-X			4 1/2	114	-72	S-ISO15540-M114-72-X			
1 5/8	41	-26	S-ISO15540-M041-26-X			5	127	-80	S-ISO15540-M127-80-X			
1 3/4	44	-28	S-ISO15540-M044-28-X									

For the "-X" value above in the part number, use "-OR" for Oxide-Red or "-BK" for Black

ISO15540 Marine grade firesleeve is fabricated from a dense E-type braided sleeve and then receives a thick coating of self-extinguishing silicone rubber that withstands flame exposure, allowing qualified hose assemblies to meet DIN EN ISO 15560 for fuel and lubricating oil marine systems.

Standard lengths are 100 feet; specific cut lengths are available. Standard color is Oxide-Red in all sizes and Black is available in sizes -04 through -32. Nominal wall thickness is 0.16".

**This product is available By-The-Foot / Metre or in standard 100 foot / 30 metre lengths
Larger sizes available in 50 foot / 15 metre lengths**

MineShield™ MSHA Approved Firesleeve for Mining Applications

High Temperature, Heat, Flame & Fire Resistant

500°F / 260°C Continuous Rating - 800°F / 426°C For Up To 30 Minutes

Silicone Rubber Coated Fiberglass Sleeve



FlameShield™ MSHA Mining approved firesleeve protects hoses and lines on mobile and fixed mining equipment. 500°F / 260°C continuous rating and with a 30 minute 800°F / 426°C rating. Also meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test) for use as a wiring/cable protection sleeve.

This sleeve is extremely flexible, pliable and conformable. Typically used to protect fuel, oil, hydraulic lines and hoses, as well as critical wiring and cables. Remains flexible to -76°C (-104.8°F).

Firesleeve must be cut slightly longer than the hose or cable it is covering in such a manner that it covers part of the fitting or connector. The longer the hose or cable, and if tight fitting, or if in use the hose/cable will be curved, then the longer the firesleeve needs to be.

This sleeve has a radial elasticity of approximately 15% allowing it to slide over connectors, fittings and splices.

500°F / 260°C continuous rating, 800°F / 426°C for periods up to 30 minutes
2200°F / 1205°C for periods up to 15 minutes and short excursions to 3000°F / 1650°C.

FlameShield™ MSHA Mining Approved Firesleeve											
Nominal ID Inches / mm / Dash #			Part Number			Nominal ID Inches / mm / Dash #			Part Number		
1/4	6	-04	S-FSHD-MSHA-M006-04			1 7/8	48	-30	S-FSHD-MSHA-M048-30		
3/8	10	-06	S-FSHD-MSHA-M010-06			2	51	-32	S-FSHD-MSHA-M051-32		
7/16	11	-07	S-FSHD-MSHA-M011-07			2 1/4	57	-36	S-FSHD-MSHA-M057-36		
1/2	13	-08	S-FSHD-MSHA-M013-08			2 1/2	64	-40	S-FSHD-MSHA-M064-40		
9/16	15	-09	S-FSHD-MSHA-M015-09			2 5/8	67	-42	S-FSHD-MSHA-M067-42		
5/8	16	-10	S-FSHD-MSHA-M016-10			2 3/4	70	-44	S-FSHD-MSHA-M070-44		
3/4	19	-12	S-FSHD-MSHA-M019-12			2 7/8	73	-46	S-FSHD-MSHA-M073-46		
7/8	22	-14	S-FSHD-MSHA-M022-14			3	76	-48	S-FSHD-MSHA-M076-48		
1	25	-16	S-FSHD-MSHA-M025-16			3 1/4	83	-52	S-FSHD-MSHA-M083-52		
1 1/8	29	-18	S-FSHD-MSHA-M029-18			3 1/2	89	-56	S-FSHD-MSHA-M089-56		
1 1/4	32	-20	S-FSHD-MSHA-M032-20			3 3/4	95	-60	S-FSHD-MSHA-M095-60		
1 3/8	35	-22	S-FSHD-MSHA-M035-22			4	102	-64	S-FSHD-MSHA-M102-64		
1 1/2	38	-24	S-FSHD-MSHA-M038-24			4 1/2	114	-72	S-FSHD-MSHA-M114-72		
1 5/8	41	-26	S-FSHD-MSHA-M041-26			5	127	-80	S-FSHD-MSHA-M127-80		
1 3/4	44	-28	S-FSHD-MSHA-M044-28								

MSHA approved firesleeve is fabricated from a dense E-type braided sleeve and then receives a thick coating of self-extinguishing silicone rubber that withstands flame exposure.

Standard lengths are 100 feet; specific cut lengths are available. Standard color is Oxide-Red.

This product is available By-The-Foot / Metre or in standard 100 foot / 30 metre lengths
Larger sizes available in 50 foot / 15 metre lengths

**DualShield™ Dual Layer Firesleeve: High Temperature, Heat,
Flame & Fire Resistant - without markings - Oxide-Red and Black**
500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods
Aviation / Aerospace Grade: - Silicone Rubber Coated Fiberglass Sleeve



DualShield™ firesleeve is built from two layers of aviation grade sleeve, providing superior protection to hoses, wiring, cables and tubing from heat, flame, molten splatter, sparks and other environmental factors. The first completed sleeve is oversleeved with another layer of fiberglass braid, and that braid is also coated with the same thick coating of self-extinguishing silicone rubber.

This sleeve is highly flexible, pliable and conformable. Typically used to protect fuel, oil, hydraulic lines and hoses, as well as critical wiring and cables. Remains flexible to -76°C (-104.8°F).

Firesleeve must be cut slightly longer than the hose or cable it is covering so it covers part of the fitting or connector. The longer the hose or cable, and if tight fitting, or if in use the hose/cable will be curved, then the longer the firesleeve needs to be. Firesleeve that is short will pull back from the fitting when the hose is bent. Appropriate clamps and end seal dip or liquid can be used to finish the sleeve ends. (See our clamps and tools)

This sleeve has a radial elasticity of approximately 15% allowing it to slide over connectors, fittings and splices.

See further specifications on Page 1-8.

Also meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test) for use as a wiring/cable protection sleeve

DualShield™ firesleeve also meets the following standards: UL 1441 VW-1, DIN EN ISO 15540, EN 45545, NF F 16-101, BS 6853, NF X 10-702, NF X 70 100 & NF X 70 200, BS EN ISO 11925, BS EN ISO 4589-2, BS EN 60695-2-11, ASTM D 2863 OI, DD CEN/TS 45545-2, ASTM G85 Type 2.

500°F / 260°C continuous rating, 800°F / 426°C for periods up to 30 minutes
2200°F / 1205°C for periods up to 15 minutes and short excursions to 3000°F / 1650°C.

DualShield™ Dual Layer Firesleeve											
Nominal ID Inches / mm / Dash #			Part Number			Nominal ID Inches / mm / Dash #			Part Number		
1/4	6	-04	S-DualFSDH-M006-04-X-Y			1 3/4	44	-28	S-DualFSDH-M044-28-X-Y		
5/16	8	-05	S-DualFSDH-M008-05-X-Y			1 7/8	48	-30	S-DualFSDH-M048-30-X-Y		
3/8	10	-06	S-DualFSDH-M010-06-X-Y			2	51	-32	S-DualFSDH-M051-32-X-Y		
7/16	11	-07	S-DualFSDH-M011-07-X-Y			2 1/4	57	-36	S-DualFSDH-M057-36-X-Y		
1/2	13	-08	S-DualFSDH-M013-08-X-Y			2 3/8	60	-38	S-DualFSDH-M060-38-X-Y		
9/16	15	-09	S-DualFSDH-M015-09-X-Y			2 1/2	64	-40	S-DualFSDH-M064-40-X-Y		
5/8	16	-10	S-DualFSDH-M016-10-X-Y			2 5/8	67	-42	S-DualFSDH-M067-42-X-Y		
11/16	17	-11	S-DualFSDH-M017-11-X-Y			2 3/4	70	-44	S-DualFSDH-M070-44-X-Y		
3/4	19	-12	S-DualFSDH-M019-12-X-Y			2 7/8	73	-46	S-DualFSDH-M073-46-X-Y		
13/16	20	-13	S-DualFSDH-M020-13-X-Y			3	76	-48	S-DualFSDH-M076-48-X-Y		
7/8	22	-14	S-DualFSDH-M022-14-X-Y			3 1/4	83	-52	S-DualFSDH-M083-52-X-Y		
1	25	-16	S-DualFSDH-M025-16-X-Y			3 1/2	89	-56	S-DualFSDH-M089-56-X-Y		
1 1/8	29	-18	S-DualFSDH-M029-18-X-Y			3 3/4	95	-60	S-DualFSDH-M095-60-X-Y		
1 1/4	32	-20	S-DualFSDH-M032-20-X-Y			4	102	-64	S-DualFSDH-M102-64-X-Y		
1 3/8	35	-22	S-DualFSDH-M035-22-X-Y			4 1/2	114	-72	S-DualFSDH-M114-72-X-Y		
1 1/2	38	-24	S-DualFSDH-M038-24-X-Y			5	127	-80	S-DualFSDH-M127-80-X-Y		
1 5/8	41	-26	S-DualFSDH-M041-26-X-Y			6	162	-96	S-DualFSDH-M162-96-X-Y		

For the "-X" value above in the part number, use "-OR" for Oxide-Red or "-BK" for Black for the outer layer color.

For the "-Y" value above in the part number, use "-OR" for Oxide-Red or "-BK" for Black for the inner layer color.

Other color combinations are available

DualShield™ firesleeve is fabricated from a dense E-type braided sleeve and then receives a thick coating of self-extinguishing silicone rubber that withstands fire, flame, molten metal and sparks exposure. Standard lengths are 100 feet; specific cut lengths are available.

This product is available By-The-Foot / Metre or in standard 100 foot / 30 metre lengths
Larger sizes available in 50 foot / 15 metre lengths

FlameShield™ Firesleeve Technical Data

For Part Numbers S-FS / S-FSHD / S-FSHD-MSHA / S-AS1072 / S-ISO15540 / NSN-NATO

Base Fiberglass Substrate – All Versions

Fiber Type:	E Glass
Specific Gravity:	2.54-2.69
Breaking Tenacity:	1.71 gf/TEX. Std. 1.71 gf/TEX Wet
Tensile Strength:	450,000-500,000 psi.
Breaking Elongation:	4.81% Std. 4.81% Wet
Elastic Recovery:	100%
Average Stiffness:	2824.3 cn/TEX

Effect of Heat: Will not burn; Retains 75% tensile at 343°C; Softens at 732-877°C; Melts at 1121-1182°C.

Effect of Acids and Alkalis; Resistance to acids is fair. Good resistance to most alkalis.

Effect of Bleaches and Solvents: Unaffected.

Silicone Rubber Coating – All Versions

Durometer, Shore A:	Initial; 35	Aged 240 hours @ 200°C; 45
Tensile Strength (psi):	Initial; 875	Aged 240 hours @ 200°C; 800
Elongation %:	Initial; 500	Aged 240 hours @ 200°C; 200
Flammability, UL94; V-1		
Dielectric Strength (volts/mil); 485		

Elasticity

S-FSHD: Linear elasticity of approximately 2% and a radial elasticity of approximately 15%.

S-FS: Linear elasticity of approximately 2% and a radial elasticity of approximately 2%.

S-FSHD / S-AS1072 / S-ISO15540 sleeve meeting SAE AS1072 & DIN EN ISO15540 Specifications; Additional Data

Coating Thickness

AS1072 Specification: Minimum: .03" (0.8mm)

Fluid Resistance

Phosphate Ester hydraulic fluids	MIL-H-5606 hydraulic fluid
MIL-T-5624 Jet Fuel	MIL-L-6082 lubricating oil
MIL-L-7808 lubricating oil	MIL-L-23699 lubricating oil
MIL-H-83282 hydraulic fluid	

UL 1441 VW-1, EN 45545, NF F 16-101, BS 6853, NF X 10-702, NF X 70 100 & NF X 70 200, BS EN ISO 11925, BS EN ISO 4589-2, BS EN 60695-2-11, ASTM D 2863 OI, DD CEN/TS 45545-2, ASTM G85 Type 2.

Meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test).

Printed/Marked Sleeve Options

FlameShield™ SAE AS1072 firesleeve is available unmarked but package labelled with the SAE nomenclature, or with SAE standard marking. Sleeve can also be printed/marked with other identification, part numbers, instructions, warnings, etc. Non standard SAE marking cost of an etched print wheel is \$275.00. A setup charge of \$75.00 per print run applies. Please enquire for cost of print run.



End Dip & End Seal Paste for Firesleeve Sealing

High Temperature & Heat Resistant Sealant For Industrial, Heavy Duty, Aerospace, Marine Grade Firesleeve



SleeveSeal™

End Seal Dip – Liquid Silicone Rubber

End Seal Paste – Silicone Rubber RTV

The ends of firesleeve can be sealed against the absorption of liquids by dipping the end in this liquid silicone rubber end dip sealant or by using end seal paste.

Available in any color: Oxide-Red and Black are the most common (other colors 1 gallon minimum).

Becomes tack free in 60 to 90 minutes and cures fully in 16 to 24 hours*. Cure can be accelerated by increasing relative humidity and also adding heat.

500°F / 260°C rating once cured. Non-hazardous to ship. Liquid End Seal Dip may be thinned with odourless mineral spirits (xylene). Non corrosive and meets Mil-A-46146 as per NAVAIR 01-1A-20.

The 4 oz mini container opening can accommodate sleeve up to 1 3/4" ID.

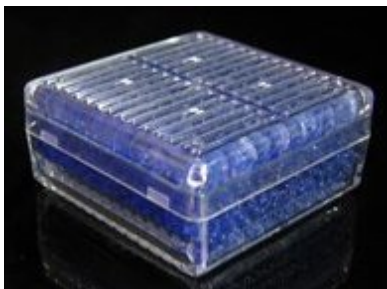
The 16 oz container opening can accommodate sleeve up to 3 1/4" ID. Larger sleeve can be carefully convoluted to fit inside the jar opening.

A Low VOC version is available: Maximum VOC is 20g/L.

SleeveSeal™ High Temperature Liquid End Seal Dip and End Seal Paste	
Quantity	Part Number
Liquid End Seal Dip	
4 oz	US-ESD-04-X
16 oz (Pint)	US-ESD-16-X
128 oz (1 gallon)	US-ESD-128-X
128 oz (1 gallon)	US-ESD-LV-128-X*
640 oz (5 gallon)	US-ESD-640-X
End Seal Paste	
3 oz tube	US-ESP-03-X
10.3 oz cartridge	US-ESP-10-X
Desiccant Box	
1.5oz Desiccant in Box	AB-SGD-1

X = "OR" for oxide-red or "BK" for black. Other colors are available for the Dip: min quantity is 1 gallon.
* = Low VOC version.

Desiccant Box



Desiccant box can be placed with uncured SleeveSeal™ Dip container in a sealed container or bag to considerably extend shelf life. Can be re-generated for unlimited re-use.

Perforated plastic box is approx 2 1/4" x 2 1/4" x 1". Total weight is 2.3oz (67g). Can be recharged at low temperature in an oven or microwave. Dry desiccant is blue in color and changes to pink as it absorbs moisture.

Firesleeve EndWrap™ Tape / High Temperature Electrical Tape 500°F/260°C Silicone Rubber Self Fusing / Self Binding / Self Amalgamating Compression Tape



FlameShield™ end wrap & electrical amalgamating compression tape is a unique adhesive-free tape which self-fuses / self-bonds within 24 hours or less at room temperature or shorter time at elevated temperatures when wrapped over itself, providing an excellent water-tight and air-tight seal.

Tape is adhesive free; leaves no residue when removed. Typically used to protect the free ends of firesleeve from wicking liquids once installed on hoses or cables. Also used for electrical wire and cable splice protection and protection of wires at connector shell clamp band locations. Exceptional electrical insulation resistance in a single wrap.

Tested to:

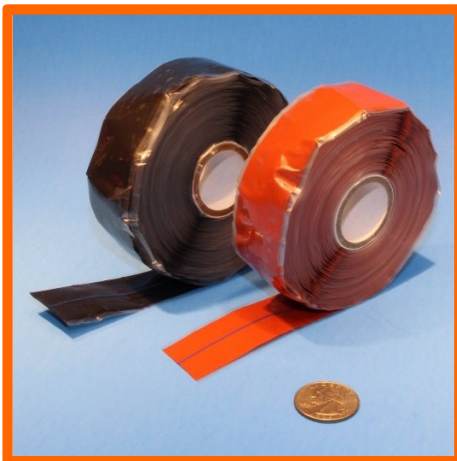
- ASTM D 149; tested for minimum 400 V/mil. for .010" to .030" thick tape, 300 V/mil for .040" thick tape and 250 V/mil for .060" thick tape.
- ASTM D 412; tested for minimum 700 psi tensile strength and minimum 300% elongation.
- ASTM D 2240; Durometer (Shore A); 55. Other test data available.

Using triangular profile tapes results in a smooth surface contour when spiral wrapped. The most common tapes are 1" wide triangular profile with either a 0.020", 0.030" or 0.040" center thickness. Meets Mil-I-46852C & A-A-59163 specifications. All tapes are available in 12 yard / 36 foot long rolls. Some tapes available in 20 yard / 60 foot long rolls.

Triangular tapes have a center guideline to aid in properly spacing the tape when spiral wrapping.

T-SR-SA25 and T-SR-SA15 reinforced limited stretch tapes meeting MIL-I-22444 provides uniform thickness even on sharp corners and edges.

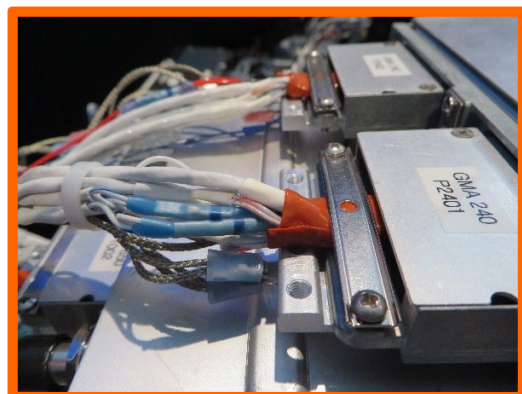
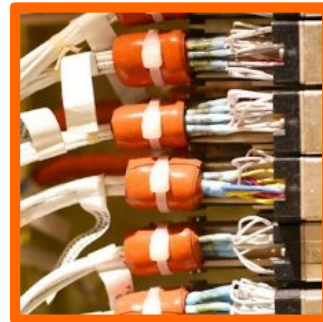
Tape part numbers ending in "BK" are Black color; "OR" are Oxide-Red color. Other colors are available by custom run.



Type II tapes (above) have a center guideline and edge thickness taper



Type I tapes have uniform thickness



Firesleeve EndWrap™ Tape / High Temperature Electrical Tape 500°F/260°C

(Continued)

FlameShield™ High Temperature Silicone Rubber Self Fusing Firesleeve EndWrap™ Tape Meets MIL-I-46852 / A-A-59163 specifications - Type I and Type II			
Part Number	Tape Width Inches / mm	Thickness inches / mm	Color / Type / Profile
T-SR-M013-08-RBK-20	1/2 / 12.7	0.020 / 0.508	Black / I / Rectangular
T-SR-M013-08-RXX-30	1/2 / 12.7	0.030 / 0.760	Black or Red / I / Rectangular
T-SR-M016-10-RBK-20	5/8 / 15.7	0.020 / 0.508	Black / I / Rectangular
T-SR-M019-12-ROR-10	3/4 / 19	0.010 / 0.254	Oxide-Red / I / Rectangular
T-SR-M019-12-RBK-20	3/4 / 19	0.020 / 0.508	Black / I / Rectangular
T-SR-M025-16-TXX-20	1 / 25.4	0.020 / 0.508	Black or Red / II / Triangular
T-SR-M025-16-RXX-20	1 / 25.4	0.020 / 0.508	Black or Red / I / Rectangular
T-SR-M025-16-TXX-30	1 / 25.4	0.030 / 0.760	Black or Red / II / Triangular
T-SR-M025-16-RXX-30	1 / 25.4	0.030 / 0.760	Black or Red / I / Rectangular
T-SR-M025-16-TXX-40	1 / 25.4	0.040 / 1.000	Black or Red / II / Triangular
T-SR-M025-16-RXX-40	1 / 25.4	0.040 / 1.000	Black or Red / I / Rectangular
T-SR-M038-24-RXX-20	1 1/2 / 38.1	0.020 / 0.508	Black or Red / I / Rectangular
T-SR-M038-24-RXX-12	1 1/2 / 38.1	0.012 / 0.304	Black or Red / I / Rectangular
T-SR-M051-32-RXX-20	2 / 50.8	0.020 / 0.508	Black or Red / I / Rectangular
T-SR-M051-32-TXX-20	2 / 50.8	0.020 / 0.508	Black or Red / II / Triangular
T-SR-M051-32-RXX-30	2 / 50.8	0.030 / 0.760	Black / I / Rectangular
Guideline Color Triangular Type II Tapes Only: .020" = blue / .030" = white / .040" = green			

Supported Tape with Limited Elongation Meets MIL-I-22444 (also meets ABS 5334 Specifications)			
T-SR-SA25-08-20-RXX*	1/2 / 12.7	0.020 / 0.508	Red or Black / I / Rectangular
T-SR-SB15-08-20-RXX*	1/2 / 12.7	0.020 / 0.508	Red or Black / I / Rectangular
T-SR-SA25-12-20-RXX*	3/4 / 19	0.020 / 0.508	Red or Black / I / Rectangular
T-SR-SB15-12-20-RXX*	3/4 / 19	0.020 / 0.508	Red or Black / I / Rectangular
T-SR-SA25-16-20-RXX*	1 / 25.4	0.020 / 0.508	Red or Black / I / Rectangular
T-SR-SB15-16-20-RXX*	1 / 25.4	0.020 / 0.508	Red or Black / I / Rectangular
T-SR-SA25-16-40-RXX*	1 / 25.4	0.040 / 1.000	Red or Black / I / Rectangular
T-SR-SB15-16-40-RXX*	1 / 25.4	0.040 / 1.000	Red or Black / I / Rectangular

For the "-XX" value above in the part number, use "-OR" for Oxide-Red or "-BK" for Black

All tapes are available in 12 yard / 36 foot long rolls. Some tapes available in 20 yard / 60 foot long rolls.

* NOTE: T-SR-SA25/SB15 tapes have an encapsulated sinusoidal weave fiberglass reinforcement layer, limiting stretch of the tape to a maximum of 25% (SA25), or 15% (SB15) ensuring that the tape thickness remains constant over irregular surfaces and edges.

A Certificate of Conformity is available at \$6.00 per roll or \$25.00 per line item. Test report is available at \$150.00 per line item. This tape is also available meeting several other OEM and National Stock Number / NATO Stock Number specifications (available under military cage code is L8347).

These tapes are guaranteed to meet specification for 2 years from date of manufacture providing tapes are stored dry at 21°C +/- 3°C or 70°F +/- 5°F. Standard tapes have an interleaved liner of polyethylene (Mylar®). Polyester liner available.

Firesleeve Accessories: Stainless Steel Clamps & Clamp Tools

Type 201 Stainless Steel - 1/4" / 6.4mm wide



Preformed Stainless Steel Twice-Around clamps are the strongest clamps available for firesleeve or hose assembly. Use our Firesleeve Clamp Tool for closing and locking these clamps. Clamp widths available are 0.25", 0.375", 0.5", 0.625" and 0.75" wide. 0.25" wide clamps are type 201 stainless steel.



The inside of the clamp is formed to provide a smooth surface as possible to the underlying material being clamped - reducing potential damage to the surface integrity during installation.

Free-end or twice-around clamps are used to secure firesleeve over hoses at the fitting. Twice-around clamps offer better tensile strength than free end clamps and provide superior clamping of hydraulic hoses onto fittings.

FlameShield™ Type 201 Stainless Steel Preformed Twice Around Clamps 1/4" / 0.25" / 6.35mm wide - .020"/.51mm thick	
Part Number	Max Sleeve or Hose OD Inches / mm
C-TA-250-13-201SS	13/16 / 20
C-TA-250-16-201SS	1 / 25
C-TA-250-22-201SS	1 3/8 / 34
C-TA-250-24-201SS	1 1/2 / 38
C-TA-250-32-201SS	2 / 51
C-TA-250-40-201SS	2 1/2 / 63
C-TA-250-44-201SS	2 3/4 / 70
C-TA-250-48-201SS	3 / 76
C-TA-250-56-201SS	3 1/2 / 88
C-TA-250-64-201SS	4 / 101
C-TA-250-72-201SS	4 1/2 / 114

Full box quantity is 100 clamps. Discount for full box purchase is 25%
Half-box quantity is 50 clamps. Discount for half-box purchase is 15%

FlameShield™ Type 201 / 316 Stainless Steel / Galvanized Carbon Steel Preformed Twice Around Clamps 3/8" / 0.375" / 9.6mm wide - .025"/.64mm thick	
Part Number	Max Sleeve or Hose OD Inches / mm
C-TA-375-13-X	13/16 / 20
C-TA-375-16-X	1 / 25
C-TA-375-22-X	1 3/8 / 34
C-TA-375-32-X	2 / 51
C-TA-375-40-X	2 1/2 / 63
C-TA-375-48-X	3 / 76
C-TA-375-56-X	3 1/2 / 88
C-TA-375-64-X	4 / 101

For the "X" value, substitute:

"201SS" for 201 Stainless Steel

"316SS" for 316 Stainless Steel

"GAL" for Galvanized Carbon Steel

Full box quantity is 100 clamps. Discount for full box purchase is 25%

Half-box quantity is 50 clamps. Discount for half-box purchase is 15%

FlameShield™ Type 201 / 316 Stainless Steel / Galvanized Carbon Steel Preformed Twice Around Clamps 1/2" / 0.5" / 12.7mm wide - .030"/.76mm thick	
Part Number	Max Sleeve or Hose OD Inches / mm
C-TA-500-16-X	1 / 25
C-TA-500-20-X	1 1/4 / 31
C-TA-500-24-X	1 1/2 / 38
C-TA-500-28-X	1 3/4 / 44
C-TA-500-32-X	2 / 51
C-TA-500-40-X	2 1/2 / 63
C-TA-500-44-X	2 3/4 / 69
C-TA-500-48-X	3 / 76
C-TA-500-56-X	3 1/2 / 88
C-TA-500-64-X	4 / 101

For the "X" value, substitute:

"201" for 201 Stainless Steel

"316" for 316 Stainless Steel

"GAL" for Galvanized Carbon Steel

Full box quantity is 100 clamps. Discount for full box purchase is 25%

Half-box quantity is 50 clamps. Discount for half-box purchase is 15%

FlameShield™ Type 201 / 316 Stainless Steel / Galvanized Carbon Steel Preformed Twice Around Clamps 5/8" / 0.625" / 15.9mm wide - .030"/.76mm thick	
Part Number	Max Sleeve or Hose OD Inches / mm
C-TA-625-24-X	1 1/2 / 38
C-TA-625-28-X	1 3/4 / 38
C-TA-625-32-X	2 / 51
C-TA-625-36-X	2 1/4 / 57
C-TA-625-40-X	2 1/2 / 63

For the "X" value, substitute:

"201" for 201 Stainless Steel

"316" for 316 Stainless Steel

"GAL" for Galvanized Carbon Steel

Full box quantity is 100 clamps. Discount for full box purchase is 25%

Half-box quantity is 50 clamps. Discount for half-box purchase is 15%

FlameShield™ Type 201 / 316 Stainless Steel / Galvanized Carbon Steel Preformed Twice Around Clamps 3/4" / 0.75" / 19.1mm wide - .030"/.76mm thick	
Part Number	Max Sleeve or Hose OD Inches / mm
C-TA-750-32-X	2 / 51
C-TA-750-44-X	2 3/4 / 69
C-TA-750-48-X	3 / 76
C-TA-750-56-X	3 1/2 / 88
C-TA-750-64-X	4 / 101
C-TA-750-72-X	4 1/2 / 114
C-TA-750-80-X	5 / 127
C-TA-750-84-X	5 1/4 / 133
C-TA-750-96-X	6 / 152
C-TA-750-100-X	6 1/4 / 165
C-TA-750-112-X	7 / 177
C-TA-750-128-X	8 / 203

For the "X" value, substitute:

"201" for 201 Stainless Steel

"316" for 316 Stainless Steel

"GAL" for Galvanized Carbon Steel

Full box quantity is 100 clamps. Discount for full box purchase is 25%

Half-box quantity is 50 clamps. Discount for half-box purchase is 15%

Firesleeve Stainless Steel Free End Clamps – 316 Stainless

Free End Clamps & Clamp Tool



Clamps – Stainless Steel; Free End; Self Locking

These stainless steel clamps are self locking and can be closed with common hand tools such as standard or needle nose pliers. A tighter clamping can be achieved with the Firesleeve Clamp Tools.

Clamps are available in two widths: .181" (tensile 150 lbs) and .311" (tensile 300 lbs). Clamps longer than 20" are available – call for details. 316 Stainless Steel.



Premium tool for free end clamps

Free End Clamps – .18" / 5mm wide - 316 Stainless Steel – Self Locking – 150# Tensile			
Part Number	Max Sleeve OD using tool to close Inches / mm *	Max Sleeve OD using pliers to close Inches / mm *	Open Length inch / mm
C-SSSL-316-W181-L06	0.44 / 11		6" / 152
C-SSSL-316-W181-L08	1.12 / 28		8" / 203
C-SSSL-316-W181-L10	1.75 / 44		10" / 254
C-SSSL-316-W181-L14	3.00 / 76		14" / 355
C-SSSL-316-W181-L20	5.00 / 127		20" / 508
C-SSSL-316-W181-L27	7.25 / 183		27" / 685

Free End Clamps – .31" / 8mm wide - 316 Stainless Steel – Self Locking – 300# Tensile			
C-SSSL-316-W311-L08	0.44 / 28		8" / 203
C-SSSL-316-W311-L11	1.40 / 35		11" / 279
C-SSSL-316-W311-L14	3.00 / 76		14" / 355
C-SSSL-316-W311-L20	5.00 / 127		20" / 508
C-SSSL-316-W311-L27	7.25 / 183		27" / 685

Clamp Tool	
C-FCT-1	Basic tool and cutter combination
C-FCT-2	Premium tool for free end clamps

- The maximum sleeve OD is based on using the C-FCT-1 tool to close the clamp. A portion of the clamp free end must be inserted into the winder of the tool, and that length is lost from the total available length of the clamp – and therefore the OD that the clamp is capable of fitting is smaller than if the clamp tool is not used and the clamp is closed by other means such as a combination of pliers.

Firesleeve Stainless Steel Clamp Tools

Free End & Twice Around & Clamp Tools



C-FCT-2

Firesleeve Clamp Tools

Firesleeve Clamp Tool aids in the tightening of either style of clamp up to 3/8" wide. On the C-FCT-1 built-in handles for the winder and cutter or a standard 1/2" wrench can be used for additional torque on the winder. The tool requires 4.5" of clamp free end for the winder to be properly loaded.

The C-FCT-2 features self tensioning jaws that capture the clamp and draw it tighter with each pull of the tool handle. Built-in cutter trims close to the buckle.



C-FCT-1

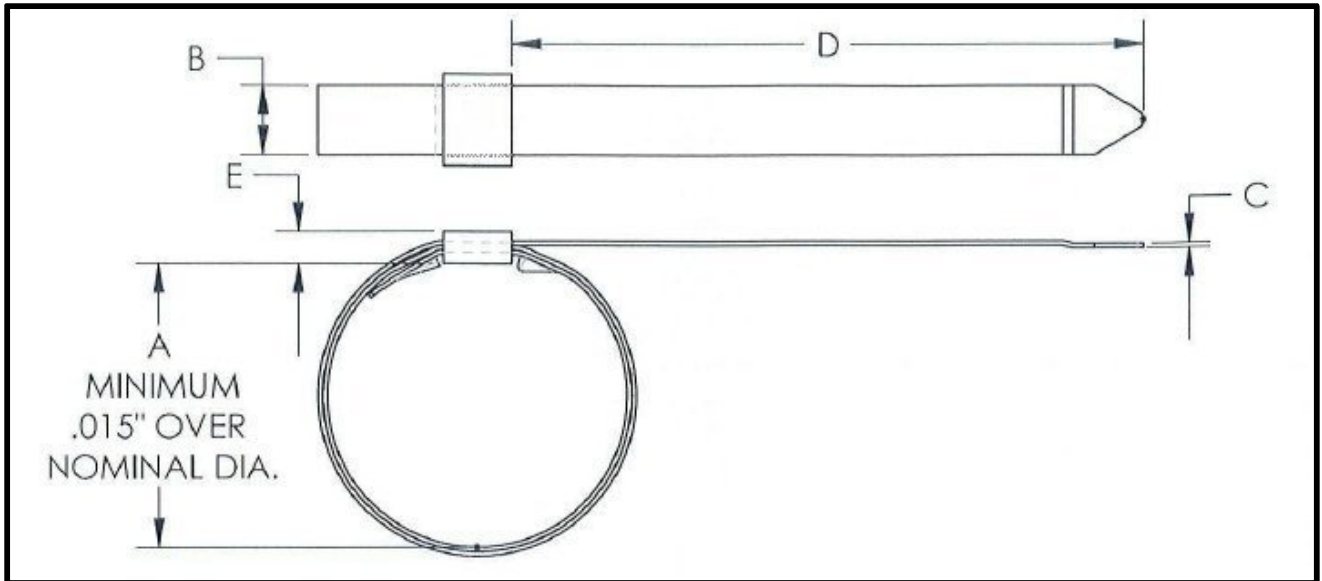
Clamp Tool	
Part Number	Description
C-FCT-1	Basic tool and cutter combination
C-FCT-2	Premium tool for free end clamps



Using FlameShield™ end wrap compression tape over the clamp makes for a neat and clean installation that prevents contamination of the sleeve end.

Firesleeve Stainless Steel Preformed Twice Around Clamps – Smooth ID

Dimensional Data



Twice Around Clamp Physical Dimensions and Material Specifications

Part Number	Material Band / Buckle	Nominal I.D.	Width +/- .005	Thickne ss +/- .002	Tail Length	Buckle Height Max
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InsulDynamic™ HiFlex Firesleeve with VELCRO® Brand Hook & Loop Closure 500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods High Temperature, Heat, Flame, Fire, Weld Splatter and Molten Splash & Slag Resistant



InsulDynamic™ Firesleeve with flame retardant hook and loop or VELCRO® Brand closure is a high temperature heavy duty sleeve for protecting industrial hose and cable, but with the benefits of being installed & removed as required without disconnecting the hose, cable or wire.

The sleeve is fabricated from a braided base fabric (similar to our S-FSHD sleeve construction) which provides radial elasticity, easily accommodating connectors and splices.

Typical applications include:

- Electric Arc Furnace cable covers
- Robotic welding cable protection
- Steel mill roll-stand hydraulic hose protection
- Steel mill cooling water hose protection
- Vehicle under-hood wire, cable and hose protection or as a cover in extreme environments where serviceability is required.

The closure remains inside of the sleeve and is protected by the fabric overlap. The thread used is a high temperature e-fiberglass for installation with no or minimal flexing. A Nomex thread is used for installations subject to flexing.

Visit our website for a you tube video which compares the HiFlex and LoFlex versions..

Flame retardant hook & loop is utilized meeting MIL-F-21840, AA-55126, NFPA 1971-1991, FMVSS 302, FAA 25.853a. VELCRO® Brand hook and loop is also available. Meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test).

This product may be suitable to protect personnel from hot pipe burns and OSHA compliance. Please contact our technical support in order to calculate temperature drop profile in your application.

Also an excellent cold temperature sleeve with flexibility to -76°C for refrigeration and cryogenic applications.

This is a custom fabrication item – please allow 3 to 10 business days from date of order. Contact us to determine the specific production time for your order.

The long edge of the sleeve has some fray of the underlying fiberglass, which does not affect the performance of the sleeve, and is only an aesthetic consideration.

The standard hook and loop and also VELCRO® Brand closure is a nylon material. Nomex® and Stainless Steel is available. For Nomex® add \$7.00 per foot to listed price. For Stainless Steel add \$36.00 per foot to listed price. Sleeve with Nomex® or Stainless Steel closure will have 1" wide closure material. Delivery time for other than standard will be a few additional days. See our catalog page for Nomex® and Stainless Steel closure for temperature ratings and other specifications.

Sizes larger than 5 inches ID contain an overlap seam of the base material opposite the closure location.

InsulDynamic™ HiFlex Firesleeve with VELCRO® Brand Hook & Loop Closure
500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods
High Temperature, Heat, Flame, Fire, Weld Splatter and Molten Slag Resistant



500°F / 260°C continuous rating with weld splatter / molten metal splash protection.
Higher temperatures for short durations.

InsulDynamic™ HiFlex Firesleeve with VELCRO® Brand Hook / Loop Closure - Small Diameter				
Nominal ID inches / mm / Dash #			Part Number	Hook & loop Width, inches
1/2	13	-08	S-FS-VCL-M013-08	1/2
3/4	19	-12	S-FS-VCL-M019-12	1/2
1	25	-16	S-FS-VCL-M025-16	5/8
1 1/4	32	-20	S-FS-VCL-M032-20	5/8
1 1/2	38	-24	S-FS-VCL-M038-24	3/4
1 3/4	44	-28	S-FS-VCL-M044-28	3/4
2	51	-32	S-FS-VCL-M051-32	3/4
2 1/4	57	-36	S-FS-VCL-M057-36	3/4
2 1/2	64	-40	S-FS-VCL-M064-40	3/4
2 3/4	70	-44	S-FS-VCL-M070-44	3/4
3	76	-48	S-FS-VCL-M076-48	1
3 1/4	83	-52	S-FS-VCL-M083-52	1
3 1/2	89	-56	S-FS-VCL-M089-56	1
3 3/4	95	-60	S-FS-VCL-M095-60	1
4	102	-64	S-FS-VCL-M102-64	1
4 1/4	108	-68	S-FS-VCL-M108-68	1
4 1/2	114	-72	S-FS-VCL-M114-72	1
4 3/4	121	-76	S-FS-VCL-M121-76	1
5	127	-80	S-FS-VCL-M127-80	1

Available in continuous lengths up to 100 feet for up to 3.5" I.D.

Customer may specify a hook/loop width other than standard if desired (except for 1/2 and 3/4" sleeve).

Continued....

InsulDynamic™ HiFlex Firesleeve with VELCRO® Brand Hook & Loop Closure (Continued)

Large Diameter

Large Diameter Firesleeve with VELCRO® Brand Hook & Loop Closure in sizes larger than 5 inches ID contains an overlap seam of the material opposite the closure location.

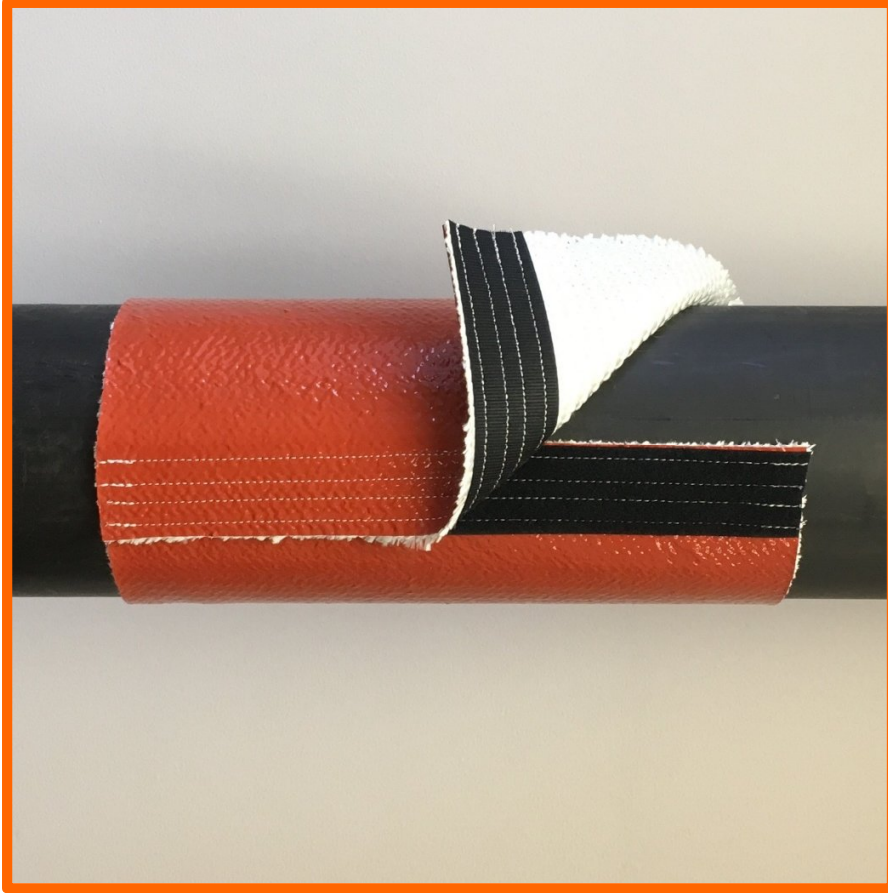
500°F / 260°C continuous rating with weld splatter / molten metal splash protection.
Higher temperatures for short durations.

InsulDynamic™ Firesleeve with VELCRO® Brand Hook & Loop Closure: Large Diameter				
Nominal ID inches / mm / Dash #			Part Number	Hook/Loop Width, inches
5 1/4	133	-84	S-FS-VCL-M133-84	1
5 1/2	140	-88	S-FS-VCL-M140-88	1
5 3/4	146	-92	S-FS-VCL-M146-92	1
6	152	-96	S-FS-VCL-M152-96	1.5
6 1/4	159	-100	S-FS-VCL-M159-100	1.5
6 1/2	165	-104	S-FS-VCL-M165-104	1.5
6 3/4	171	-108	S-FS-VCL-M171-108	1.5
7	178	-112	S-FS-VCL-M178-112	1.5
7 1/4	184	-116	S-FS-VCL-M184-116	1.5
7 1/2	191	-120	S-FS-VCL-M191-120	1.5
7 3/4	197	-124	S-FS-VCL-M197-124	1.5
8	203	-128	S-FS-VCL-M203-128	2
8 1/4	210	-132	S-FS-VCL-M210-132	2
8 1/2	216	-136	S-FS-VCL-M216-136	2
8 3/4	222	-140	S-FS-VCL-M222-140	2
9	229	-144	S-FS-VCL-M229-144	2
9 1/4	235	-148	S-FS-VCL-M235-148	2
9 1/2	241	-152	S-FS-VCL-M241-152	2
9 3/4	248	-156	S-FS-VCL-M248-156	2
10	254	-160	S-FS-VCL-M254-160	2
10 1/4	260	-164	S-FS-VCL-M260-164	2
10 1/2	267	-168	S-FS-VCL-M267-168	2
10 3/4	273	-172	S-FS-VCL-M273-172	2
11	279	-176	S-FS-VCL-M279-176	2
11 1/4	286	-180	S-FS-VCL-M286-180	2
11 1/2	292	-184	S-FS-VCL-M292-184	2
11 3/4	298	-188	S-FS-VCL-M298-188	2
12	305	-192	S-FS-VCL-M305-192	2

Available in continuous lengths up to 100 feet. Larger Diameters available by quote.

The standard closure is nylon. A wider 2" hook and loop closure is available, which provides a greater adjustment range. Nomex® and Stainless Steel is available. For Nomex® add \$7.00 per foot to listed price and for Stainless Steel add \$36.00 per foot to listed price for 1" wide closure. For Nomex® add \$14.00 per foot to listed price and for Stainless Steel add \$72.00 per foot to listed price for 2" wide closure (2" wide stainless steel closure is constructed by using 2 x 1" wide strips). Delivery time for other than standard will be a few additional days. See our catalog page for Nomex® and Stainless Steel closure for temperature ratings and other specifications.

SplashGard™ HD LoFlex Sleeve with VELCRO® Brand Hook & Loop Closure **500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods** **High Temperature, Heat, Flame, Fire, Weld Splatter and Molten Splash & Slag Resistant**



SplashGard™ HD sleeve is a high temperature sleeve with a flame retardant hook and loop or VELCRO® Brand hook and loop closure that is suitable to protect hoses and cables from molten splash.

It may be installed and removed without disconnecting the hose, cable or wire. The sleeve is fabricated from a heavy duty woven fabric which is then coated with a thick layer of self extinguishing silicone rubber elastomer.

Due to the woven base material and deep elastomer impregnation, this material is stiff and provides no elasticity compared to our InsulDynamic version. This sleeve should be slightly oversized if it will require flexing or installation on curved installations. It is designed for straight or slightly curved sections or runs of hose, pipe or cables, and is difficult to use in a tightly curved path or one requiring high flexibility. Visit our website for a you tube video which compares the HiFlex and LoFlex versions..

Typical applications include protection of Electric Arc Furnace cables, robotic welding cables, steel mill roll-stand hydraulic hoses, steel mill cooling water hoses, vehicle under-hood wiring, cable and hoses. The same material is also used to fabricate custom protection covers for enclosures and equipment protection where serviceability is required.

The closure remains inside of the sleeve and is protected by the fabric overlap. Thread used is a high temperature e-fiberglass. Flame retardant hook & loop is utilized meeting MIL-F-21840, AA-55126, NFPA 1971-1991, FMVSS 302, FAA 25.853a. Meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test).

This product may be suitable to protect personnel from hot pipe burns and OSHA compliance. Please contact our technical support in order to calculate temperature drop profile in your application.

Also an excellent cold temperature sleeve with flexibility to -76°C for refrigeration and cryogenic applications.

This is a custom fabrication item – please allow 3 to 10 business days from date of order. Contact us to determine the specific production time for your order.

The long edge of the sleeve has some fray of the underlying fiberglass, which does not affect the performance of the sleeve, and is only an aesthetic consideration.

The standard closure is nylon. Nomex® and Stainless Steel is available. For Nomex® add \$7.00 per foot to listed price. For Stainless Steel add \$36.00 per foot to listed price. Sleeve with Nomex® or Stainless Steel closure will have 1" wide closure material. Delivery time for other than standard will be a few additional days. See our catalog page for Nomex® and Stainless Steel closure for temperature ratings and other specifications.

SplashGard™ HD LoFlex Sleeve with VELCRO® Brand Hook & Loop Closure
500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods
High Temperature, Heat, Flame, Fire, Weld Splatter and Molten Slag Resistant



500°F / 260°C continuous rating with weld splatter / molten metal splash protection.
Higher temperatures for short durations.

SplashGard™ HD Sleeve with VELCRO® Brand Hook / Loop Closure: Small Diameter				
Nominal ID inches / mm / Dash #			Part Number	Hook & loop Width, inches
1 1/2	38	-24	S-FGSRHD-VCL-M038-24	3/4
1 3/4	44	-28	S-FGSRHD-VCL-M044-28	3/4
2	51	-32	S-FGSRHD-VCL-M051-32	3/4
2 1/4	57	-36	S-FGSRHD-VCL-M057-36	3/4
2 1/2	64	-40	S-FGSRHD-VCL-M064-40	3/4
2 3/4	70	-44	S-FGSRHD-VCL-M070-44	3/4
3	76	-48	S-FGSRHD-VCL-M076-48	1
3 1/4	83	-52	S-FGSRHD-VCL-M083-52	1
3 1/2	89	-56	S-FGSRHD-VCL-M089-56	1
3 3/4	95	-60	S-FGSRHD-VCL-M095-60	1
4	102	-64	S-FGSRHD-VCL-M102-64	1
4 1/4	108	-68	S-FGSRHD-VCL-M108-68	1
4 1/2	114	-72	S-FGSRHD-VCL-M114-72	1
4 3/4	121	-76	S-FGSRHD-VCL-M121-76	1
5	127	-80	S-FGSRHD-VCL-M127-80	1

Available in continuous lengths up to 100 feet for up to 3.5" I.D.

Customer may specify a hook/loop width other than standard if desired (except for 1/2 and 3/4" sleeve).

Continued...

SplashGard™ HD LoFlex Sleeve with VELCRO® Brand Hook & Loop Closure (Continued) Large Diameter

Large Diameter Firesleeve with VELCRO® Brand Hook & Loop Closure in sizes larger than 5 inches ID contains an overlap seam of the material opposite the closure.

500°F / 260°C continuous rating with weld splatter / molten metal splash protection.
Higher temperatures for short durations.

SplashGard™ HD Sleeve with VELCRO® Brand Hook & Loop Closure: Large Diameter				
Nominal ID inches / mm / Dash #			Part Number	Hook/Loop Width, inches
5 1/4	133	-84	S-FGSRHD-VCL-M133-84	1
5 1/2	140	-88	S-FGSRHD-VCL-M140-88	1
5 3/4	146	-92	S-FGSRHD-VCL-M146-92	1
6	152	-96	S-FGSRHD-VCL-M152-96	1
6 1/4	159	-100	S-FGSRHD-VCL-M159-100	2
6 1/2	165	-104	S-FGSRHD-VCL-M165-104	2
6 3/4	171	-108	S-FGSRHD-VCL-M171-108	2
7	178	-112	S-FGSRHD-VCL-M178-112	2
7 1/4	184	-116	S-FGSRHD-VCL-M184-116	2
7 1/2	191	-120	S-FGSRHD-VCL-M191-120	2
7 3/4	197	-124	S-FGSRHD-VCL-M197-124	2
8	203	-128	S-FGSRHD-VCL-M203-128	2
8 1/4	210	-132	S-FGSRHD-VCL-M210-132	2
8 1/2	216	-136	S-FGSRHD-VCL-M216-136	2
8 3/4	222	-140	S-FGSRHD-VCL-M222-140	2
9	229	-144	S-FGSRHD-VCL-M229-144	2
9 1/4	235	-148	S-FGSRHD-VCL-M235-148	2
9 1/2	241	-152	S-FGSRHD-VCL-M241-152	2
9 3/4	248	-156	S-FGSRHD-VCL-M248-156	2
10	254	-160	S-FGSRHD-VCL-M254-160	2
10 1/4	260	-164	S-FGSRHD-VCL-M260-164	2
10 1/2	267	-168	S-FGSRHD-VCL-M267-168	2
10 3/4	273	-172	S-FGSRHD-VCL-M273-172	2
11	279	-176	S-FGSRHD-VCL-M279-176	2
11 1/4	286	-180	S-FGSRHD-VCL-M286-180	2
11 1/2	292	-184	S-FGSRHD-VCL-M292-184	2
11 3/4	298	-188	S-FGSRHD-VCL-M298-188	2
12	305	-192	S-FGSRHD-VCL-M305-192	1.5

Available in continuous lengths up to 100 feet. Larger Diameters available by quote.

The standard closure is nylon. Nomex® and Stainless Steel is available. For Nomex® add \$7.00 per foot to listed price and for Stainless Steel add \$36.00 per foot to listed price for 1" wide closure. For Nomex® add \$14.00 per foot to listed price and for Stainless Steel add \$72.00 per foot to listed price for 2" wide closure (2" wide is constructed by using 2 x 1" wide). Delivery time for other than standard will be a few additional days. See our catalog page for Nomex® and Stainless Steel closure for temperature ratings and other specifications.

Aviation Firesleeve with Flame Retardant Hook & Loop Closure

500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods
High Temperature, Heat, Flame & Fire Resistant



ZeusGard™ Firesleeve is a high temperature sleeve with YKK brand flame retardant hook and loop or VELCRO® Brand closure. SAE AS1072 firesleeve is used for construction of this retrofit sleeve which can be installed without disconnecting hoses, cables or wiring.

Typical applications are to protect fluid carrying hoses, cables and wires that are exposed to high temperatures or for additional protection in the event of fire. No guarantee is made as to the fire exposure time that this sleeve provides as it is modified from the AS1072 specification. Critical system components should be protected with standard AS1072 firesleeve without hook & loop closure.

The closure remains protected inside of the sleeve and is protected by the fabric overlap. The thread used is a high temperature e-fiberglass. Other threads such as stainless steel are available. The standard nylon hook and loop closure is flame retardant and meets MIL-F-21840, AA-55126, NFPA 1971-1991, FMVSS 302, FAA 25.853a. Meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test).

To aid in keeping the firesleeve closed in the event of exposure to higher than rated temperatures or in the event of flame exposure, this sleeve should be further secured with metal band clamps spaced at regular intervals.

This is a custom fabrication item – please allow 2 to 5 business days from date of order. Contact us to determine the specific production time for your order.

The long edge of the sleeve has some fray of the underlying fiberglass, which does not affect the performance of the sleeve, and is only an aesthetic consideration.

The standard closure is nylon hook & loop. Nomex® and Stainless Steel is available. For Nomex® add \$7.00 per foot. For Stainless Steel add \$36.00 per foot. Sleeve with Nomex® or Stainless Steel closure will have 1" wide closure material. Delivery time for other than standard will be a few additional days. See our catalog page for Nomex® and Stainless Steel closures for temperature ratings and other specifications.

Aviation Firesleeve with Flame Retardant Hook & Loop Closure (Continued)
500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods
High Temperature, Heat, Flame & Fire Resistant



500°F / 260°C continuous rating.
Higher temperatures for short durations.

ZeusGard™ Aviation Firesleeve with Hook & Loop Closure				
Nominal ID inches / mm / Dash #			Part Number	Hook & loop Width, inches
1/2	13	-08	S-FS-VCL-AERO-M013-08-X	1/2
3/4	19	-12	S-FS-VCL-AERO-M019-12-X	1/2
1	25	-16	S-FS-VCL-AERO-M025-16-X	5/8
1 1/4	32	-20	S-FS-VCL-AERO-M032-20-X	5/8
1 1/2	38	-24	S-FS-VCL-AERO-M038-24-X	3/4
1 3/4	44	-28	S-FS-VCL-AERO-M044-28-X	3/4
2	51	-32	S-FS-VCL-AERO-M051-32-X	3/4
2 1/4	57	-36	S-FS-VCL-AERO-M057-36-X	3/4
2 1/2	64	-40	S-FS-VCL-AERO-M064-40-X	3/4
2 3/4	70	-44	S-FS-VCL-AERO-M070-44-X	3/4
3	76	-48	S-FS-VCL-AERO-M076-48-X	1
3 1/4	83	-52	S-FS-VCL-AERO-M083-52-X	1
3 1/2	89	-56	S-FS-VCL-AERO-M089-56-X	1
3 3/4	95	-60	S-FS-VCL-AERO-M095-60-X	1
4	102	-64	S-FS-VCL-AERO-M102-64-X	1
4 1/4	108	-68	S-FS-VCL-AERO-M108-68-X	1
4 1/2	114	-72	S-FS-VCL-AERO-M114-72-X	1
4 3/4	121	-76	S-FS-VCL-AERO-M121-76-X	1
5	127	-80	S-FS-VCL-AERO-M127-80-X	1
Other larger Sizes Produced with a Seam				

For the "x" value, use P for standard hook & loop. Use N for Nomex hook and loop. Use S for stainless hook and loop

Available in continuous lengths up to 100 feet.

Larger ID (Inside Diameter) Sizes Available - Please Ask

Firesleeve with Metal Snap Closure

500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods

High Temperature, Heat, Flame & Fire Resistant

Removable silicone rubber coated fiberglass sleeve with snap closure provides heavy duty weld splatter & molten splash protection



SnapSleeve™ Firesleeve is a heavy duty silicone rubber coated fiberglass sleeve with snap style closures protects industrial wire, cable and hose with the benefits of being installed & removed as required. Typical applications are as robotic welding cable protection, steel mill roll-stand hydraulic hose protection or as a cover in extreme environments where serviceability is required. This is a custom fabrication item – please allow 3 to 10 business days from date of order. Available in continuous lengths up to 100 feet for IDs up to 3 ½" and 75 feet for IDs larger than 3 ¾". Standard snap spacing is 3" but can be adjusted to the customer's preference.

Also an excellent cold temperature sleeve with flexibility to -76°C for refrigeration and cryogenic applications.

Meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test).

**500°F / 260°C continuous rating with weld splatter / molten metal splash protection.
Higher temperatures for short durations.**

SnapSleeve™ Firesleeve with Metal Snap Closure Heavy Duty Removable Molten Splash Protection Sleeve			
Nominal ID inches / mm / Dash #			Part Number
1	25	-16	S-FS-SNAP-M025-16
1 1/4	32	-20	S-FS-SNAP-M032-20
1 1/2	38	-24	S-FS-SNAP-M038-24
1 3/4	44	-28	S-FS-SNAP-M044-28
2	51	-32	S-FS-SNAP-M051-32
2 1/4	57	-36	S-FS-SNAP-M057-36
2 1/2	64	-40	S-FS-SNAP-M064-40
2 3/4	70	-44	S-FS-SNAP-M070-44
3	76	-48	S-FS-SNAP-M076-48
3 1/4	83	-52	S-FS-SNAP-M083-52
3 1/2	89	-56	S-FS-SNAP-M089-56

This Product is Available By-The-Foot / Metre. Larger IDs Available

Firesleeve with Metal Snap Closure (Continued)

Large Diameter



SnapSleeve™ Firesleeve with Metal Snap Closure Heavy Duty Removable Molten Splash Protection Sleeve			
Nominal ID inches / mm / Dash #			Part Number
3 3/4	95	-60	S-FS-SNAP-M095-60
4	102	-64	S-FS-SNAP-M102-64
4 1/4	108	-68	S-FS-SNAP-M108-68
4 1/2	114	-72	S-FS-SNAP-M114-72
4 3/4	121	-76	S-FS-SNAP-M121-76
5	127	-80	S-FS-SNAP-M127-80
5 1/4	133	-84	S-FS-SNAP-M133-84
5 1/2	140	-88	S-FS-SNAP-M140-88
5 3/4	146	-92	S-FS-SNAP-M146-92
6	152	-96	S-FS-SNAP-M152-96
6 1/4	159	-100	S-FS-SNAP-M159-100
6 1/2	165	-104	S-FS-SNAP-M165-104
6 3/4	171	-108	S-FS-SNAP-M171-108
7	178	-112	S-FS-SNAP-M178-112
7 1/4	184	-116	S-FS-SNAP-M184-116
7 1/2	191	-120	S-FS-SNAP-M191-120
7 3/4	197	-124	S-FS-SNAP-M197-124
8	203	-128	S-FS-SNAP-M203-128
8 1/4	210	-132	S-FS-SNAP-M210-132
8 1/2	216	-136	S-FS-SNAP-M216-136
8 3/4	222	-140	S-FS-SNAP-M222-140
9	229	-144	S-FS-SNAP-M229-144

This Product is Available By-The-Foot / Metre. Larger IDs Available

Firesleeve with Metallic Zipper Closure - ZipSleeve™

500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods

High Temperature, Heat, Flame & Fire Resistant Firesleeve

Removable silicone rubber coated fiberglass sleeve with metal zipper provides heavy duty weld splatter & molten splash protection that is removable and retrofit.



This heavy duty silicone rubber coated fibreglass sleeve with high temperature zipper closures protects industrial wire, cable and hose with the benefits of being installed & removed as required.

Typical applications are as robotic welding cable protection, steel mill roll-stand hydraulic hose protection or as a cover in extreme environments where serviceability is required.

The zipper is made from high temperature Nomex® fabric and metal teeth. This is a custom fabrication – please allow 3 to 10 business days from date of order.

The standard maximum length of a zipper is 50 feet / 15 metres. Longer zippers of up to 150 feet / 45 metres are possible, but will incur minimum order quantities. 500°F / 260°C continuous rating with weld splatter / molten metal splash protection.

Also an excellent cold temperature sleeve with flexibility to -76°C for refrigeration and cryogenic applications.

The sleeve has a special flap under the zipper to ensure the full protection of the cable or hose underneath.

Meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test).

For aviation and other critical applications, metal clamps secured at regular short intervals can be used to secure the sleeve in place in case of zipper failure due to a concentrated or prolonged heat or flame event.

Custom ZipSleeve™ can also be fabricated with a flap covering the zipper - sewn on one side and with a hook and loop closure on the other side of the flap.

**500°F / 260°C continuous rating with weld splatter / molten metal splash protection.
Higher temperatures for short durations.**

Firesleeve with Metallic Zipper Closure (Continued)

500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods

High Temperature, Heat, Flame & Fire Resistant Firesleeve



ZipSleeve™ Firesleeve			
Heavy Duty Removable Molten Splash Protection Sleeve			
Nominal ID inches / mm / Dash #			Part Number
1	25	-16	S-FS-ZC-M025-16
1 1/4	32	-20	S-FS-ZC-M032-20
1 1/2	38	-24	S-FS-ZC-M038-24
1 3/4	44	-28	S-FS-ZC-M044-28
2	51	-32	S-FS-ZC-M051-32
2 1/4	57	-36	S-FS-ZC-M057-36
2 1/2	64	-40	S-FS-ZC-M064-40
2 3/4	70	-44	S-FS-ZC-M070-44
3	76	-48	S-FS-ZC-M076-48
3 1/4	83	-52	S-FS-ZC-M083-52
3 1/2	89	-56	S-FS-ZC-M089-56
3 3/4	95	-60	S-FS-ZC-M095-60
4	102	-64	S-FS-ZC-M102-64
4 1/4	108	-68	S-FS-ZC-M108-68
4 1/2	114	-72	S-FS-ZC-M114-72
4 3/4	121	-76	S-FS-ZC-M121-76
5	127	-80	S-FS-ZC-M127-80
5 1/4	133	-84	S-FS-ZC-M133-84
5 1/2	140	-88	S-FS-ZC-M140-88
5 3/4	146	-92	S-FS-ZC-M146-92
6	152	-96	S-FS-ZC-M152-96
6 1/4	159	-100	S-FS-ZC-M159-100
6 1/2	165	-104	S-FS-ZC-M165-104
6 3/4	171	-108	S-FS-ZC-M171-108
7	178	-112	S-FS-ZC-M178-112
7 1/4	184	-116	S-FS-ZC-M184-116
7 1/2	191	-120	S-FS-ZC-M191-120
7 3/4	197	-124	S-FS-ZC-M197-124
8	203	-128	S-FS-ZC-M203-128
8 1/4	210	-132	S-FS-ZC-M210-132
8 1/2	216	-136	S-FS-ZC-M216-136
8 3/4	222	-140	S-FS-ZC-M222-140
9	229	-144	S-FS-ZC-M229-144

This Product is Available By-The-Foot / Metre

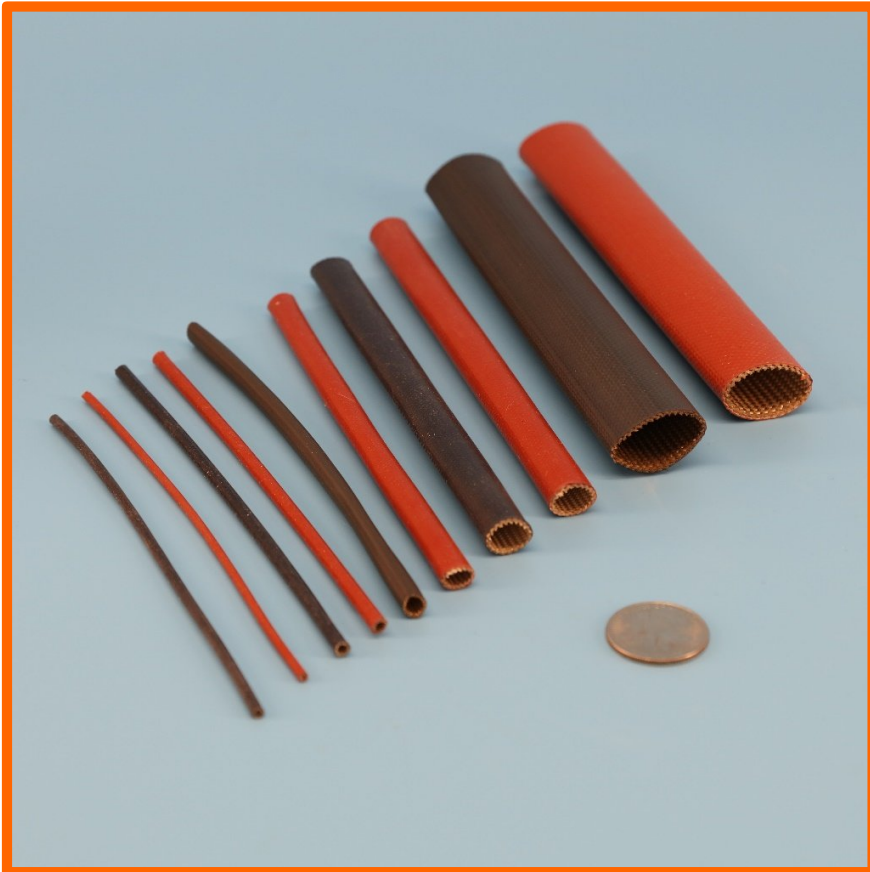
Small Diameter Firesleeve style sleeve for Wiring, Cable and Tubing Protection

Class 240 - Grade A-1 - 8000v Minimum Average / 6000v Minimum Individual - VW-1

464°F / 240°C Continuous Rating – Higher Temperature for Shorter Periods

High Temperature, Heat, Flame, Spark & Weld Splatter Resistant

Silicone Rubber Coated Fiberglass Sleeve with UL/CSA rating & NEMA TF-1



FlameShield™ small diameter firesleeve style sleeving is designed as a primary insulation sleeve for protecting small diameter wire, cable, lines, hose, and pipe from high temperature, flame, spark, splatter and environmental contamination.

The thin wall braid and thin coating make the sleeve ideal for protection in space limited installations, while still providing exceptional protection and performance.

Recognized by UL / CSA for 240°C, 600V service, and complies with VW-1 flammability requirements. Conforms to, and is listed on the QPL for MIL-I-3190/9 (Grade A-1).

Meets 14 CFR 25.869(a)(4); Appendix F, Part 1(b)(7) (60-degree flammability Test) for use as a wiring/cable protection sleeve.

Extremely flexible and easily installed. Used in electrical apparatus as a primary or secondary wiring insulation.

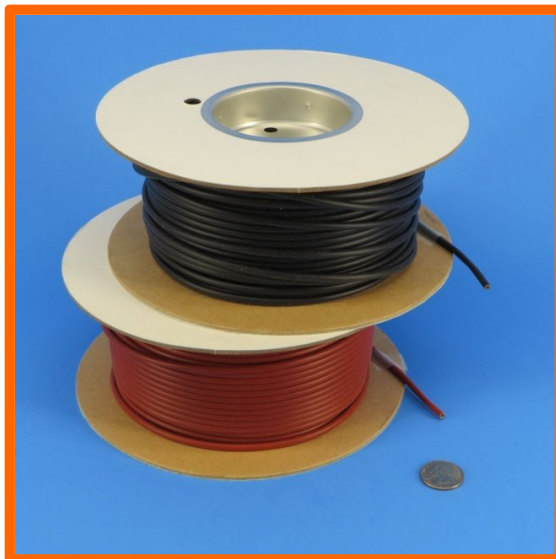
The inner braid is very fine and dense, and along with the precision silicone rubber coating, this is the most flexible sleeve we have available for wire, cable and hose protection.

Due to the tight weave of this sleeve and the coating, it has negligible radial elasticity.

The coating of this sleeve provides excellent contamination resistance against oil, liquid splash, dust, grime, etc.

Depending on the sleeve diameter, this product is supplied in 100, 150 or 250 foot lengths on spools.

Some larger sleeves are supplied in shorter lengths or 3 foot long "sticks".



Small Diameter Firesleeve style sleeve for Wiring, Cable and Tubing Protection (Continued)

464°F / 240°C Continuous Rating – Higher Temperature for Shorter Periods
High Temperature, Heat & Flame Resistant

Available in all standard AWG wire sizes (see end of section): Available Colors are Oxide-Red and Black

<u>Property</u>	<u>Procedure</u>	<u>Performance</u>
Physical		
Tensile Strength, Coating	ASTM-D412	1600 psi
Ultimate Elongation, Coating	ASTM-D412	800% @ 20°C
Hardness, Coating	ASTM-D2240	54 (Durometer, Shore A)
Flexibility & Toughness, Coating	UL 1441	Passes Penetration Test
Chemical		
Oil & Solvent Resistance	MIL-I-3190/9	Passes
Water Vapour Resistance	MIL-I-3190/9	Passes
Resistance to Acids and Alkalis	-	Excellent
Resistance to Weathering	-	Unaffected by sunlight and weather
Compatibility	UL 1446	Good. Compatible with most potting compounds and varnishes
Electrical		
Dielectric Strength:		
after 48/23/50, Grade A	NEMA TF-1	8000V min avg., 6000v min individual
after 96/23/96, Grade A	NEMA TF-1	80% of Original Value
Hydrostatic Stability after 336 hrs @ 70°C over Constant Water Reflex	MIL-I-3190/9	Passes 7660V min avg with no disintegration, reversion or cracks (spec 5000V)
Thermal		
Thermal Endurance	MIL-I-3190/9 & UL 1441	Class 240°C (S)
Brittleness Temperature	ASTM-D350	-80°C
Flame Resistance	UL 1441	Passes (VW-1)
	ASTM-D350, Method A	Passes
	NEMA TF-1	Passes
	MIL-I-3190/9, Method A	Passes
Pushback	MIL-I-3190/9	No cracks or ruptures, 6000V min avg breakdown strength

This product is not stock, it is made to order: Delivery is approximately 10 business days.

Small Diameter Firesleeve style sleeving (Continued)

High Temperature, Heat & Flame Resistant Small

Silicone Rubber Coated Fiberglass Sleeve

Primary Insulation Silicone Rubber Coated Fiberglass Sleeve for

Wire Protection, with UL/CSA approval rating and NEMA Grade TF-1 classified

High Temperature - Small Diameter – NEMA Wall Thickness Sleeve FlameShield™ Silicone Rubber Coated Fiberglass Sleeve with UL/CSA rating and NEMA Grade TF-1 Classification					
Part Number	Nominal ID AWG / Inches / mm / -dash				Feet per Spool
S-FS-SD-AWG24-X	24	0.022	0.56		500*
S-FS-SD-AWG22-X	22	0.027	0.69		500*
S-FS-SD-AWG20-X	20	0.034	0.86		500*
S-FS-SD-AWG19-X	19	0.038	0.96		500*
S-FS-SD-AWG18-X	18	0.042	1.07		500*
S-FS-SD-AWG17-X	17	0.047	1.19		500*
S-FS-SD-AWG16-X	16	0.053	1.35		500*
S-FS-SD-AWG15-X	15	0.059	1.50		500*
S-FS-SD-AWG14-X	14	0.066	1.68	-01	500*
S-FS-SD-AWG13-X	13	0.076	1.93		250*
S-FS-SD-AWG12-X	12	0.085	2.16		250*
S-FS-SD-AWG11-X	11	0.095	2.41		250*
S-FS-SD-AWG10-X	10	0.106	2.69		250*
S-FS-SD-AWG9-X	9	0.118	3.10		250*
S-FS-SD-AWG8-X	8	0.133	3.38	-02	250*
S-FS-SD-AWG7-X	7	0.148	3.76		250*
S-FS-SD-AWG6-X	6	0.166	4.22		150*
S-FS-SD-AWG5-X	5	0.186	4.72	-03	150*
S-FS-SD-AWG4-X	4	0.208	5.28		150*
S-FS-SD-AWG3-X	3	0.234	5.94		150*
S-FS-SD-AWG2-X	2	0.263	6.68	-04	150*
S-FS-SD-AWG1-X	1	0.294	7.47		150*
S-FS-SD-05-X	5/16	0.313	7.95	-05	150*
S-FS-SD-AWG0-X	0	0.330	8.38		150
S-FS-SD-06-X	3/8	0.375	9.52	-06	150
S-FS-SD-07-X	7/16	0.438	11.12	-07	100
S-FS-SD-08-X	1/2	0.500	12.70	-08	100
S-FS-SD-10-X	5/8	0.625	15.87	-10	100
S-FS-SD-12-X	3/4	0.750	19.05	-12	100
S-FS-SD-14-X	7/8	0.875	22.22	-14	100
S-FS-SD-16-X	1	1.000	25.40	-16	100
S-FS-SD-18-X	1 1/8	1.125	28.57	-18	100
S-FS-SD-20-X	1 1/4	1.250	31.75	-20	100
S-FS-SD-22-X	1 3/8	1.375	34.92	-22	100
S-FS-SD-23-X	1 7/16	1.437	36.49	-23	100
S-FS-SD-24-X	1 1/2	1.500	38.10	-24	3***
S-FS-SD-26-X	1 5/8	1.625	41.27	-26	3***
S-FS-SD-28-X	1 3/4	1.750	44.45	-28	3***
S-FS-SD-30-X	1 7/8	1.875	47.62	-30	3***
S-FS-SD-32-X	2	2.000	50.80	-32	3***

See Page 1-43 for a table of pre-coated dimensional specifications for this product

For the "X" value in the part number, specify "B" for Black or "OR" for Oxide-Red Color.

This product is available in full coils only.

This product is not stock, it is made to order: Delivery is approximately 10 business days.

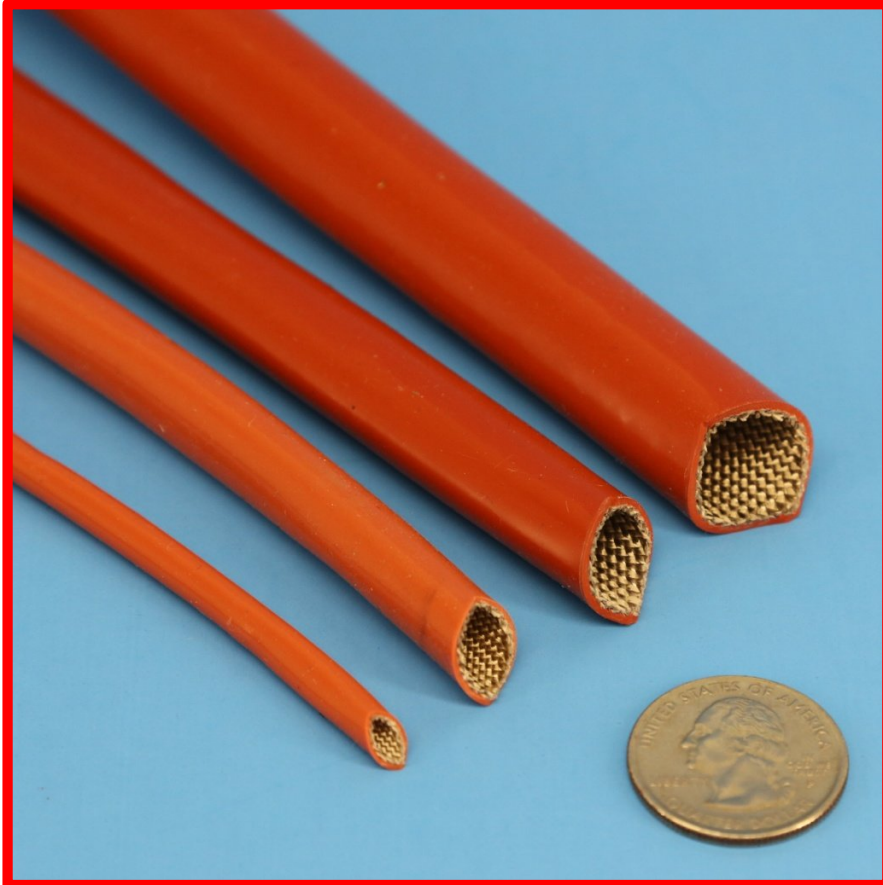
* Longer Spool Lengths Available. ** Minimum order 99 feet. *** Minimum order 60 feet.

Small Diameter HD Wall Thickness Firesleeve style sleeve for Wiring, Cable and Tubing Protection

-112 to +392°F / -80 to +200°C Operating Temperature –
Higher Temperature for Shorter Periods

High Temperature, Heat & Flame Resistant

*Heavy Wall Silicone Rubber Coated Fiberglass Sleeve with
UL/CSA approved & NEMA TF-1 grade A*



FlameShield™ small diameter firesleeve with Heavy Wall Silicone Rubber coating is designed as a primary insulation sleeve for protecting small diameter wire, cable, lines, hose, and pipe from high temperature, flame and environmental contamination. Recognized by UL / CSA for 240°C, 600V service, and meets VW-1 flammability requirements.

Extremely flexible and easily installed. Used in electrical apparatus as a primary or secondary wiring insulation.

The inner braid is very fine and dense, and along with the precision silicone rubber coating, this is the most flexible sleeve we have available for wire, cable and hose protection.

Due to the tight weave of this sleeve and thick silicone coating, it has negligible radial elasticity.

The coating of this sleeve provides excellent contamination resistance against oil, liquid splash, etc.

392°F / 200°C continuous rating with weld splatter / molten metal splash protection

Small Diameter HD Firesleeve style sleeve

High Temperature, Heat & Flame Resistant Small

Silicone Rubber Coated Fiberglass Sleeve

Primary Insulation Silicone Rubber Coated Fiberglass Sleeve for

Wire Protection, with UL/CSA approval rating and NEMA Grade TF-1 classified

High Temperature - Small Diameter – Heavy Wall Thickness Sleeve FlameShield™ Silicone Rubber Coated Fiberglass Sleeve with UL/CSA rating and NEMA Grade TF-1 Classification					
Part Number	Nominal ID NEMA AWG Size / Inches / mm / -dash				
S-FS-SD-HDW-AWG24-X	24	0.022	0.56		
S-FS-SD-HDW-AWG22-X	22	0.027	0.69		
S-FS-SD-HDW-AWG20-X	20	0.034	0.86		
S-FS-SD-HDW-AWG19-X	19	0.038	0.96		
S-FS-SD-HDW-AWG18-X	18	0.042	1.07		
S-FS-SD-HDW-AWG17-X	17	0.047	1.19		
S-FS-SD-HDW-AWG16-X	16	0.053	1.35		
S-FS-SD-HDW-AWG15-X	15	0.059	1.50		
S-FS-SD-HDW-AWG14-X	14	0.066	1.68	-01	
S-FS-SD-HDW-AWG13-X	13	0.076	1.93		
S-FS-SD-HDW-AWG12-X	12	0.085	2.16		
S-FS-SD-HDW-AWG11-X	11	0.095	2.41		
S-FS-SD-HDW-AWG10-X	10	0.106	2.69		
S-FS-SD-HDW-AWG9-X	9	0.118	3.10		
S-FS-SD-HDW-AWG8-X	8	0.133	3.38	-02	
S-FS-SD-HDW-AWG7-X	7	0.148	3.76		
S-FS-SD-HDW-AWG6-X	6	0.166	4.22		
S-FS-SD-HDW-AWG5-X	5	0.186	4.72	-03	
S-FS-SD-HDW-AWG4-X	4	0.208	5.28		
S-FS-SD-HDW-AWG3-X	3	0.234	5.94		
S-FS-SD-HDW-AWG2-X	2	0.263	6.68	-04	
S-FS-SD-HDW-AWG1-X	1	0.294	7.47		
S-FS-SD-HDW-05-X	5/16	0.313	7.95	-05	
S-FS-SD-HDW-AWG0-X	0	0.330	8.38		
S-FS-SD-HDW-06-X	3/8	0.375	9.52	-06	
S-FS-SD-HDW-07-X	7/16	0.438	11.12	-07	
S-FS-SD-HDW-08-X	1/2	0.500	12.70	-08	
S-FS-SD-HDW-10-X	5/8	0.625	15.87	-10	
S-FS-SD-HDW-12-X	3/4	0.750	19.05	-12	
S-FS-SD-HDW-14-X	7/8	0.875	22.22	-14	
S-FS-SD-HDW-16-X	1	1.000	25.40	-16	
S-FS-SD-HDW-18-X	1 1/8	1.125	28.57	-18	
S-FS-SD-HDW-20-X	1 1/4	1.250	31.75	-20	
S-FS-SD-HDW-24-X	1 1/2	1.500	38.10	-24	

See Page 1-43 for a table of pre-coated dimensional specifications for this product

For the "X" value in the part number, specify "B" for Black or "OR" for Oxide-Red Color.

This product is available in full coils only.

This product is not stock, it is made to order: Delivery is approximately 10 business days.

**Fiberglass Braided Hermetic Sleeve - AWG Wire Gauge Sized –
Small Diameter - E Glass with high crosslinked acrylic copolymer
266°F / 130°C: Continuous Rating – Higher Temperature for Shorter Periods
DeltaGlass™ Class B Thermal Rating – Grade B-1 and C-1 Dielectric rating**



This high temperature and heat resistant braided hermetic fiberglass (fibreglass / glassfibre) sleeve, fabricated from high quality E-Type fiberglass filaments that will not burn and has been saturated with a high-crosslinked modified acrylic copolymer.

It will withstand continuous exposure to temperatures of 266°F / 130°C. It provides excellent protection for wires and wiring in hermetically sealed refrigeration compressor units.

Resistant to hydrochlorofluorocarbon (HCFC) refrigerants (R-22 and R-123) along with new hydrofluorocarbon (HFC) refrigerants such as R-134a. Compatible with mineral-oil lubricants such as Suniso® 3-G, along with synthetic polyol-ester lubricants such as Icematic® SW100 and alkylbenzene oils such as ZEROL® 150. This sleeve performs well with solvents such as methylene chloride, toluene, xylene and 1,1,1 trichlorethane.

This sleeve has been designed specifically for hermetic electric motors as its extremely low extraction levels of soluble materials protects against contamination and clogging within the compressor.

Conforms to NEMA TF-1, Type 2 and ASTM-D372.

E-Glass Properties:

Specific Gravity g/cm ³ :	2.55 - 2.58
Elongation at break, %:	4.5 - 4.9
Tensile strength, psi @22°C:	500,000 - 550,000
Water absorbency @22°C, 65% R.H.:	None
Space Factor Insulation, volts:	1100 (Std Wall) 1500 (HD wall)
Volume Resistivity at 22°C and 500 volts DC, ohm-cm:	10 ¹⁵ – 10 ¹⁶
Dielectric Constant at 22°C, 60 Hz:	6.5 – 6.8
Dissipation Factor at 22°C, 1 MHz:	0.001 – 0.005

Common Properties:

Good resistance to most acids and alkalies
Unaffected by bleaches and solvents
Excellent resistance to sunlight and aging. Not attacked by Mildew.
Conforms to NEMA TF-1. Fibers conform to MIL-R-60346. Type IV, Class 1.

This product is made to order: Delivery is approximately 5 to 15 business days.

Suniso® is a registered trademark of Compton Corporation

Icematic® is a registered trademark of Castrol, Inc.

ZEROL® is a registered trademark of Shrieve Chemical Products Company

Braided Fiberglass Hermetic Sleeve
E-Glass Precision Small Diameter / Standard Wall Thickness
with high-crosslinked acrylic copolymer

Part Number	Nominal Size AWG / inch / mm / -dash				Feet per Coil
S-FG-AHE-AWG24-X	24	0.022	0.56	NA	500'
S-FG-AHE-AWG22-X	22	0.027	0.69	NA	500'
S-FG-AHE-AWG20-X	20	0.034	0.86	NA	500'
S-FG-AHE-AWG19-X	19	0.038	0.96	NA	500'
S-FG-AHE-AWG18-X	18	0.042	1.07	NA	500'
S-FG-AHE-AWG17-X	17	0.047	1.19	NA	500'
S-FG-AHE-AWG16-X	16	0.053	1.35	NA	500'
S-FG-AHE-AWG15-X	15	0.059	1.50	NA	500'
S-FG-AHE-AWG14-X	14	0.066	1.68	-01	500'
S-FG-AHE-AWG13-X	13	0.076	1.93	NA	250'
S-FG-AHE-AWG12-X	12	0.085	2.16	NA	250'
S-FG-AHE-AWG11-X	11	0.095	2.41	NA	250'
S-FG-AHE-AWG10-X	10	0.106	2.69	NA	250'
S-FG-AHE-AWG9-X	9	0.118	3.10	NA	250'
S-FG-AHE-AWG8-X	8	0.133	3.38	-02	250'
S-FG-AHE-AWG7-X	7	0.148	3.76	NA	250'
S-FG-AHE-AWG6-X	6	0.166	4.22	NA	150'
S-FG-AHE-AWG5-X	5	0.186	4.72	-03	150'
S-FG-AHE-AWG4-X	4	0.208	5.28	NA	150'
S-FG-AHE-AWG3-X	3	0.234	5.94	NA	150'
S-FG-AHE-AWG2-X	2	0.263	6.68	-04	150'
S-FG-AHE-AWG1-X	1	0.294	7.47	NA	150'
S-FG-AHE-05-X	5/16	0.313	7.95	-05	150'
S-FG-AHE-AWG0-X	0	0.330	8.38	NA	150'
S-FG-AHE-06-X	3/8	0.375	9.52	-06	150'
S-FG-AHE-07-X	7/16	0.438	11.12	-07	100'
S-FG-AHE-08-X	1/2	0.500	12.70	-08	100'
S-FG-AHE-10-X	5/8	0.625	15.87	-10	100'
S-FG-AHE-12-X	3/4	0.750	19.05	-12	100'
S-FG-AHE-14-X	7/8	0.875	22.22	-14	100'
S-FG-AHE-16-X	1	1.000	25.40	-16	100'

For the "X" value, specify "B1" or "C1"

See Size Table at the end of this catalog section for dimensional specifications

This product is not stock, it is made to order: Delivery is approximately 5 to15 business days.

Fiberglass Braided Sleeve - AWG Wire Gauge Sized – Small Diameter With Silicone Resin Binder

392°F / 200°C: Continuous Rating – Higher Temperature for Shorter Periods

**DeltaGlass™ Very High Temperature & Heat Resistant Insulation with 650 volts
space factor rating and NEMA TF-2 Section 6.3 flame resistance**



This is a high-strength, high-temperature fibreglass sleeve produced from E-Glass.

The braiding is tight and dense, providing excellent coverage over small wires, cables, hoses, tubes and pipes.

This product conforms to NEMA TF-2 and is made from fibers conforming to MIL-Y-1140 (latest version), Class C, Form 1 (continuous filament yarns). Meets VW-1 flammability requirements.

E-Glass Properties:

Specific Gravity g/cm ³ :	2.55 - 2.58
Elongation at break, %:	4.5 - 4.9
Tensile strength, psi @22°C:	500,000 - 550,000
Water absorbency @22°C, 65% R.H.:	None
Space Factor Insulation, volts:	1100 (Std Wall) 1500 (HD wall)
Volume Resistivity at 22°C and 500 volts DC, ohm-cm:	10 ¹⁵ – 10 ¹⁶
Dielectric Constant at 22°C, 60 Hz:	6.5 – 6.8
Dissipation Factor at 22°C, 1 MHz:	0.001 – 0.005

Common Properties:

Good resistance to most acids and alkalies
Unaffected by bleaches and solvents
Excellent resistance to sunlight and aging. Not attacked by Mildew.
Conforms to NEMA TF-2. Fibers conform to MIL-R-60346. Type IV, Class 1.

This product is made to order: Delivery is approximately 5 to 15 business days.

**Very High Temperature & Heat Resistant Fiberglass Braided Sleeve
with Silicone Resin Binder
with NEMA classification & Meets MIL-Y-1140 Class C Form 1
Meets UL 1441 VW-1 Flame Resistance**

Part Number	Nominal Size AWG / inch / mm / -dash				Feet per Spool
S-FG-SB-AWG24	24	0.022	0.56	NA	500'
S-FG-SB-AWG22	22	0.027	0.69	NA	500'
S-FG-SB-AWG20	20	0.034	0.86	NA	500'
S-FG-SB-AWG19	19	0.038	0.96	NA	500'
S-FG-SB-AWG18	18	0.042	1.07	NA	500'
S-FG-SB-AWG17	17	0.047	1.19	NA	500'
S-FG-SB-AWG16	16	0.053	1.35	NA	500'
S-FG-SB-AWG15	15	0.059	1.50	NA	500'
S-FG-SB-AWG14	14	0.066	1.68	-01	500'
S-FG-SB-AWG13	13	0.076	1.93	NA	250'
S-FG-SB-AWG12	12	0.085	2.16	NA	250'
S-FG-SB-AWG11	11	0.095	2.41	NA	250'
S-FG-SB-AWG10	10	0.106	2.69	NA	250'
S-FG-SB-AWG9	9	0.118	3.10	NA	250'
S-FG-SB-AWG8	8	0.133	3.38	-02	250'
S-FG-SB-AWG7	7	0.148	3.76	NA	250'
S-FG-SB-AWG6	6	0.166	4.22	NA	150'
S-FG-SB-AWG5	5	0.186	4.72	-03	150'
S-FG-SB-AWG4	4	0.208	5.28	NA	150'
S-FG-SB-AWG3	3	0.234	5.94	NA	150'
S-FG-SB-AWG2	2	0.263	6.68	-04	150'
S-FG-SB-AWG1	1	0.294	7.47	NA	150'
S-FG-SB-05	5/16	0.313	7.95	-05	150'
S-FG-SB-AWG0	0	0.330	8.38	NA	150'
S-FG-SB-06	3/8	0.375	9.52	-06	150'
S-FG-SB-07	7/16	0.438	11.12	-07	100'
S-FG-SB-08	1/2	0.500	12.70	-08	100'
S-FG-SB-10	5/8	0.625	15.87	-10	100'
S-FG-SB-12	3/4	0.750	19.05	-12	100'
S-FG-SB-14	7/8	0.875	22.22	-14	100'
S-FG-SB-16	1	1.000	25.40	-16	100'

Larger Sizes up to 2" ID Available

See Size Table at the end of this catalog section for dimensional specifications

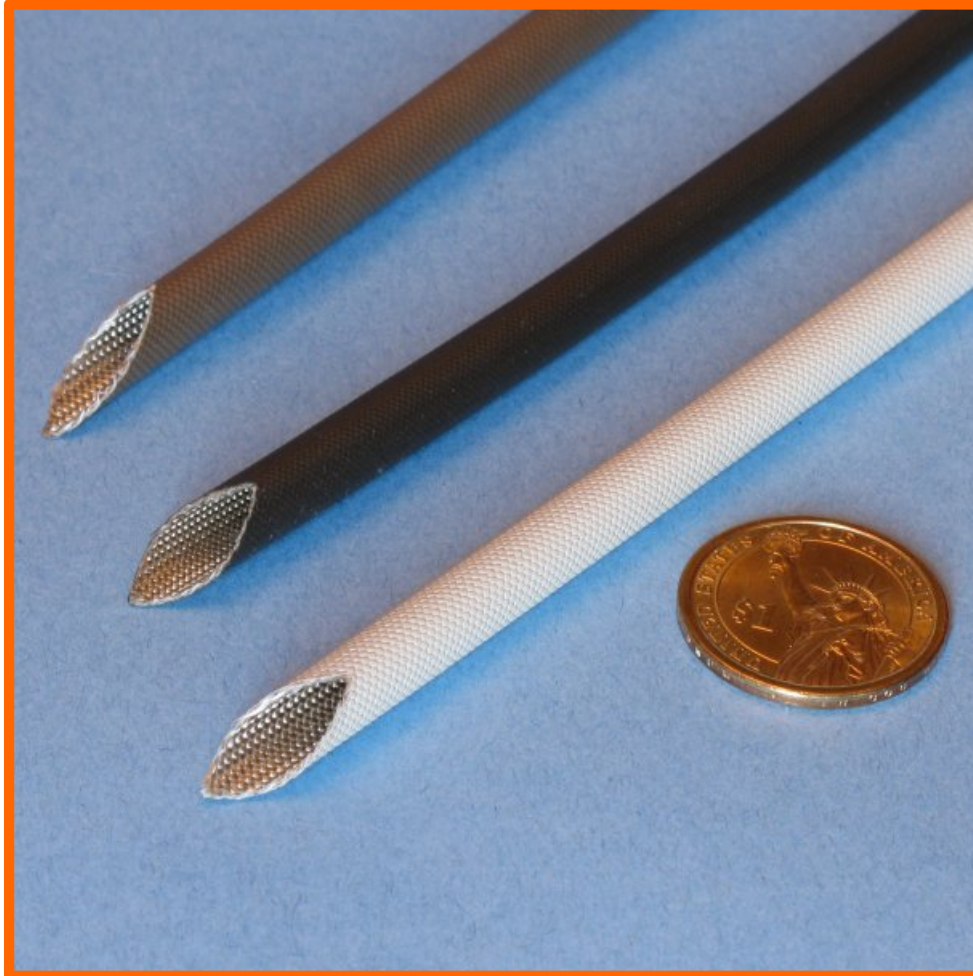
This product is not a stock item, it is made to order: Delivery is approximately 5 to 15 business days.

Viton® 231 Coated Fiberglass Sleeve: AWG Wire Sized High Temperature, Heat & Flame Resistant

428°F / 220°C: Continuous Rating – Higher Temperature for Shorter Periods

Cut, Puncture & Abrasion / Wear Resistance

Available meeting NEMA Grade A-1, B-1 & C-1



FlameShield™ Tuff-Flex™ Viton® coated sleeve is designed as a primary insulation sleeve for protecting small diameter wire, cable, lines, hose, and pipe from high temperature, flame and environmental contamination. Recognized by UL / CSA for 220°C, 7000V service, and complies with VW-1 flammability requirements. Conforms to, and is listed on the QPL for MIL-I-3190/9. Available in 3 grades: NEMA Grade A-1, B-1 and C-1.

Extremely flexible and easily installed. Used in electrical apparatus as a primary or secondary wiring insulation. Suitable for use in silicone free requirement environments. Resistance to solvents, both aromatic and aliphatic; fuels, including JP-5; and oils, including Skydrol.

The inner fiberglass braid is very fine and dense, and along with the precision Viton® 231 coating, this is the toughest cut and abrasion resistant flexible sleeve we have available for wire, cable and hose protection.

**428°F / 220°C: Continuous Rating – Higher Temperature for Shorter Periods
Cut, Puncture & Abrasion / Wear Resistance**

Viton® 231 Coated Fiberglass Sleeve: AWG Wire Sized
High Temperature, Heat & Flame Resistant (Continued)
428°F / 220°C: Continuous Rating – Higher Temperature for Shorter Periods
Cut, Puncture & Abrasion / Wear Resistance

Available in all standard AWG wire sizes (see end of this section): Available Colors are White, Black and Dark Tan (Natural).

<u>Property</u>	<u>Procedure</u>	<u>Performance</u>
Physical		
Tensile Strength, Coating	ASTM-D412	2000 psi @ 24°C; 600 psa @ 149°C
Ultimate Elongation, Coating	ASTM-D412	150% @ 24°C; 75% @ 149°C
Hardness, Coating	ASTM-D2240	80 (Durometer, Shore A)
Flexibility & Toughness, Coating	UL 1441	Passes Penetration Test
Chemical		
Oil & Solvent* Resistance	MIL-I-3190/9	Passes (excellent)
Water Vapour Resistance	MIL-I-3190/9	Passes (excellent)
Resistance to Acids and Alkalies	-	Excellent
Resistance to Weathering	-	Unaffected by sunlight and weather
Compatibility	UL 1446	Good. Compatible with most potting compounds and varnishes
Electrical		
Dielectric Strength:		
after 48/23/50, Grade A	NEMA TF-1	7000V min avg., 5000v min individual
after 96/23/96, Grade A	NEMA TF-1	80% of Original Value
Hydrostatic Stability after 336 hrs @ 70°C over Constant Water Reflex	MIL-I-3190/9	Passes 6000V min avg with no disintegration, reversion or cracks (spec 5000V)
Thermal		
Thermal Endurance	MIL-I-3190/9 & UL 1441	Class 220°C (R)
Brittleness Temperature	ASTM-D350	-70°C
Flame Resistance	UL 1441	Passes (VW-1)
	ASTM-D350, Method A	Passes
	NEMA TF-1	Passes
	MIL-I-3190/9, Method A	Passes
Pushback	MIL-I-3190/9	No cracks or ruptures, 6000V min avg breakdown strength

This product is not stock, it is made to order: Delivery is approximately 10 business days.

* Do not use Ketone type solvents as a cleaning agent; use V.M. & P. Naphtha.

Viton® 231 Coated Fiberglass Sleeve: AWG Wire Sized (Continued)

428°F / 220°C: High Temperature, Heat & Flame Resistant

Primary Insulation Viton® 231 Coated Fiberglass Sleeve for

Wire Protection, with UL/CSA approval rating and NEMA Grade A-1/B-1/C-1 classified

FlameShield™ High Temperature - Small Diameter – Viton® 231 Coated Fiberglass Sleeve with UL/CSA rating and NEMA Grade A-1 / B-1 / C-1 Classification. High Cut & Abrasion Resistance					
Part Number	Nominal ID AWG / Inches / mm / -dash				Feet per Spool
S-FG-VI-AWG24-X-Y	24	0.022	0.56		500*
S-FG-VI-AWG22-X-Y	22	0.027	0.69		500*
S-FG-VI-AWG20-X-Y	20	0.034	0.86		500*
S-FG-VI-AWG19-X-Y	19	0.038	0.96		500*
S-FG-VI-AWG18-X-Y	18	0.042	1.07		500*
S-FG-VI-AWG17-X-Y	17	0.047	1.19		500*
S-FG-VI-AWG16-X-Y	16	0.053	1.35		500*
S-FG-VI-AWG15-X-Y	15	0.059	1.50		500*
S-FG-VI-AWG14-X-Y	14	0.066	1.68	-01	500*
S-FG-VI-AWG13-X-Y	13	0.076	1.93		250*
S-FG-VI-AWG12-X-Y	12	0.085	2.16		250*
S-FG-VI-AWG11-X-Y	11	0.095	2.41		250*
S-FG-VI-AWG10-X-Y	10	0.106	2.69		250*
S-FG-VI-AWG9-X-Y	9	0.118	3.10		250*
S-FG-VI-AWG8-X-Y	8	0.133	3.38	-02	250*
S-FG-VI-AWG7-X-Y	7	0.148	3.76		250*
S-FG-VI-AWG6-X-Y	6	0.166	4.22		150*
S-FG-VI-AWG5-X-Y	5	0.186	4.72	-03	150*
S-FG-VI-AWG4-X-Y	4	0.208	5.28		150*
S-FG-VI-AWG3-X-Y	3	0.234	5.94		150*
S-FG-VI-AWG2-X-Y	2	0.263	6.68	-04	150*
S-FG-VI-AWG1-X-Y	1	0.294	7.47		150*
S-FG-VI-05-X-Y	5/16	0.313	7.95	-05	150*
S-FG-VI-AWG0-X-Y	0	0.330	8.38		150
S-FG-VI-06-X-Y	3/8	0.375	9.52	-06	150
S-FG-VI-07-X-Y	7/16	0.438	11.12	-07	100
S-FG-VI-08-X-Y	1/2	0.500	12.70	-08	100
S-FG-VI-10-X-Y	5/8	0.625	15.87	-10	100
S-FG-VI-12-X-Y	3/4	0.750	19.05	-12	100
S-FG-VI-14-X-Y	7/8	0.875	22.22	-14	100
S-FG-VI-16-X-Y	1	1.000	25.40	-16	100
S-FG-VI-18-X-Y	1 1/8	1.125	28.57	-18	100
S-FG-VI-20-X-Y	1 1/4	1.250	31.75	-20	100
S-FG-VI-22-X-Y	1 3/8	1.375	34.92	-22	3**
S-FG-VI-23-X-Y	1 7/16	1.437	36.49	-23	3**
S-FG-VI-24-X-Y	1 1/2	1.500	38.10	-24	3**
S-FG-VI-26-X-Y	1 5/8	1.625	41.27	-26	3**
S-FG-VI-28-X-Y	1 3/4	1.750	44.45	-28	3**
S-FG-VI-30-X-Y	1 7/8	1.875	47.62	-30	3**
S-FG-VI-32-X-Y	2	2.000	50.80	-32	3**

Quantity Pricing: For 1000 to 4999 feet -10% / For 5000 feet or more -17%
See end of section 1 for a table of pre-coated dimensional specifications for this product

For the "X" value, specify "A1", "B1" or "C1"
For the "Y" value in the part number, specify "B" for Black or "W" for White or "N" for Natural (Dark Tan)

This product is available in full coils only.
This product is not generally stock: Delivery is approximately 15 business days.

* Longer Spool Lengths Available. ** Minimum order 30 pieces

High Elasticity Firesleeve

392°F / 200°C: Continuous Rating – Higher Temperature for Shorter Periods

StretchSleeve™ High Temperature, Heat & Flame Resistant Super Stretch

Expandable Sleeve:

Silicone Rubber Coated Expandable Fiberglass Sleeve

with UL/CSA rating & NEMA Grade A



This specially designed sleeve is recommended for sleeving applications, which require a snug fit over irregular shapes.

This sleeve proves a “heat shrink” like fit while still providing flexibility, abrasion resistance, moisture resistance, uv, ozone and chemical resistance.

This sleeve can expand to twice its relaxed diameter.

Electrically rated to +200°C, but can provide higher temperature performance if the electrical properties are not required.

Provides dielectric grade A, NEMA TF-1, Type 5;
Mil-I-3190/6 (Grade A).

VW-1 flame retardant

StretchSleeve™ High Temperature, Heat & Flame Resistant Expandable Silicone Rubber Coated Fiberglass Sleeve

Part Number	Size		I.D. in inches		Spool Size feet
	AWG	Range	Relaxed	Expanded	
S-FS-HiElas-13-X	#13	#13 - #7	0.076	0.144	250
S-FS-HiElas-9-X	#9	#9 - #3	0.118	0.229	250
S-FS-HiElas-6-X	#6	#6 - #1	0.166	0.289	250
S-FS-HiElas-3-X	#3	#3 - .437"	0.234	0.437	250
S-FS-HiElas-0-X	#0	#0 - .625"	0.330	0.625	100
S-FS-HiElas-375-X	.375"	.375" - .750"	0.375	0.750	100
S-FS-HiElas-500-X	.500"	.500" – 1.00"	0.500	1.000	100
S-FS-HiElas-625-X	.625"	.625" – 1.25"	0.625	1.250	100

For X: use “WH” for White. Use “BK” for Black

High Elasticity Firesleeve (Continued)

392°F / 200°C: Continuous Rating – Higher Temperature for Shorter Periods

StretchSleeve™ High Temperature, Heat & Flame Resistant Super Stretch Expandable Sleeve:

Silicone Rubber Coated Expandable Fiberglass Sleeve with UL/CSA rating & NEMA Grade A



Coating: 30 durometer, shore A; tensile strength >1000 psi; Elongation > 600%; Tear strength 150 ppi; Available in Black or White.

Electrical

Dielectric Strength:

after 48/23/50, Grade A

after 96/23/96, Grade A

Hydrostatic Stability after 336 hrs

@ 70°C over Constant Water Reflex

NEMA TF-1

NEMA TF-1

MIL-I-3190/9

8000V min avg., 6000v min individual

80% of Original Value

Passes 7660V min avg with no
disintegration, reversion or cracks
(spec 5000V)

Flame Resistance

NEMA TF-1

VW-1

MIL-I-3190/9, Method A

MIL-I-3190/9

Passes

Passes

Passes

Pushback

No cracks or ruptures, 6000V min avg
breakdown strength

PTFE Soft Saturaded Fiberglass Braided Sleeve

550°F / 287°C: Continuous Rating – Higher Temperature for Shorter Periods

DeltaGlass™ High Temperature, Heat & Chemical Resistant Sleeve



- Available in 1/16" – 1.59mm & 1/8" - 3.18mm wall thickness.
- Soft saturated PTFE.

Excellent resistance to almost all solvents, caustics and acids.

The base yarn is rated to 1200°F / 648°C.

The PTFE coating melting point is 620°F / 327°C.

550°F / 287°C continuous rating, high insulation value & excellent personnel protection

This sleeve is an excellent choice for applications requiring a PTFE seal at high temperatures, as the sleeve's fiberglass base material supports the PTFE and reduces creep of the PTFE at high temperatures.

Although this is a sleeve, it can be used flattened as a tape for gasket and sealing applications.

PTFE Soft Saturated Fiberglass Braided Sleeve (Continued)
550°F / 287°C: Continuous Rating – Higher Temperature for Shorter Periods
DeltaGlass™ High Temperature, Heat & Chemical Resistant Sleeve



PTFE Soft Saturated Fiberglass Braided Sleeve High-Temperature, Heat & Chemical Resistance				
Part Number	Size in / mm / -dash#			Feet per Spool Thin Wall / Thick Wall
S-FG-BRAID-PTFE-0.250-M006-04-X	.250	6	-04	1400 / 700
S-FG-BRAID-PTFE-0.375-M010-06-X	.375	10	-06	1400 / 600
S-FG-BRAID-PTFE-0.500-M013-08-X	.500	13	-08	1000 / 330
S-FG-BRAID-PTFE-0.625-M016-10-X	.625	16	-10	900 / 315
S-FG-BRAID-PTFE-0.750-M019-12-X	.750	19	-12	750 / 300
S-FG-BRAID-PTFE-0.875-M022-14-X	.875	22	-14	650 / 300
S-FG-BRAID-PTFE-1.000-M025-16-X	1.000	25	-16	500 / 290
S-FG-BRAID-PTFE-1.250-M032-20-X	1.250	32	-20	450 / 280
S-FG-BRAID-PTFE-1.500-M038-24-X	1.500	38	-24	350 / 225
S-FG-BRAID-PTFE-1.625-M041-26-X	1.625	41	-26	300 / 208
S-FG-BRAID-PTFE-1.750-M044-28-X	1.750	44	-28	300 / 208
S-FG-BRAID-PTFE-2.000-M051-32-X	2.000	51	-32	250 / 190
S-FG-BRAID-PTFE-2.250-M057-36-X	2.250	57	-36	250 / 190
S-FG-BRAID-PTFE-2.500-M064-40-X	2.500	64	-40	225 / 180
S-FG-BRAID-PTFE-2.750-M070-44-X	2.750	70	-44	225 / 180
S-FG-BRAID-PTFE-3.000-M076-48-X	3.000	76	-48	200 / 175
S-FG-BRAID-PTFE-3.250-M083-52-X	3.250	83	-52	200 / 175
S-FG-BRAID-PTFE-3.500-M089-56-X	3.500	89	-56	190 / 170
S-FG-BRAID-PTFE-3.750-M095-60-X	3.750	95	-60	190 / 170
S-FG-BRAID-PTFE-4.000-M102-64-X	4.000	102	-64	175 / 140
S-FG-BRAID-PTFE-4.500-M114-72-X	4.500	114	-72	175 / 140
S-FG-BRAID-PTFE-5.000-M127-80-X	5.000	127	-80	120 / 100

For the “X” value, use “1” to specify Thin Wall; use “2” to specify Thick Wall

Thin Wall = 1/16” / 1.59mm • Thick Wall = 1/8” / 3.18mm / This Product is Available By-The-Foot

The PTFE is applied to the sleeve through a proprietary sinterization process. The result is a PTFE coating on the sleeve which is soft, robust and flexible; however, it can be abrasively removed from the sleeve with aggressive fingernail scraping, resulting in a thinner and thinner layer of PTFE remaining with each pass. The PTFE also causes the yarns to be sealed and the small gaps between the yarns filled, resulting in an almost air-tight / liquid-tight sleeve wall.

Fiberglass Fabric with PTFE Resin Coating Sleeve with VELCRO® Brand Hook & Loop Closure

550°F / 287°C: Continuous Rating – Higher Temperature for Shorter Periods

Scuff-Sleeve™ VC



- Specialty protection for hoses, wire and cables.
- Sleeve with Velcro for easy retrofit.
- Sleeve is made from fiberglass base fabric impregnated with a PTFE resin coating. Excellent chemical resistance. Temperature range - 60°F to +550°F. Excellent UV protection. Not for use near open flame or welding.
- Used for food processing robot cables, lines and hoses.
- Washdown resistant
- Removeable for machine cleaning

Fiberglass Fabric with PTFE Resin Coating Sleeve with VELCRO® Brand Closure (Continued)

550°F / 287°C: Continuous Rating – Higher Temperature for Shorter Periods

Scuff-Sleeve™ VC



Sold in 50 foot increments up to 150 feet continuous rolls. Available in standard sizes; larger or custom sizes can be easily fabricated if required. Helps to organize and bundle hoses and cables.

Scuff-Sleeve™ VC: PTFE Impregnated Fiberglass Fabric Specialty Protection Sleeve with VELCRO® Brand Hook & Loop Closure			
Part Number	Size inch / mm / -dash		
S-FG-PTFE-VCL-M025-16 *	1.00	25	-16
S-FG-PTFE-VCL-M051-32	2.00	51	-32
S-FG-PTFE-VCL-M064-40	2.50	64	-40
S-FG-PTFE-VCL-M070-44	2.75	70	-44
S-FG-PTFE-VCL-M076-48	3.00	76	-48
S-FG-PTFE-VCL-M083-52	3.25	83	-52
S-FG-PTFE-VCL-M089-56	3.50	89	-56
S-FG-PTFE-VCL-M102-64	4.00	102	-64
S-FG-PTFE-VCL-M127-80	5.00	127	-80
S-FG-PTFE-VCL-M152-96	6.00	152	-96
S-FG-PTFE-VCL-M178-112	7.00	165	-104
S-FG-PTFE-VCL-M203-128	8.00	203	-128

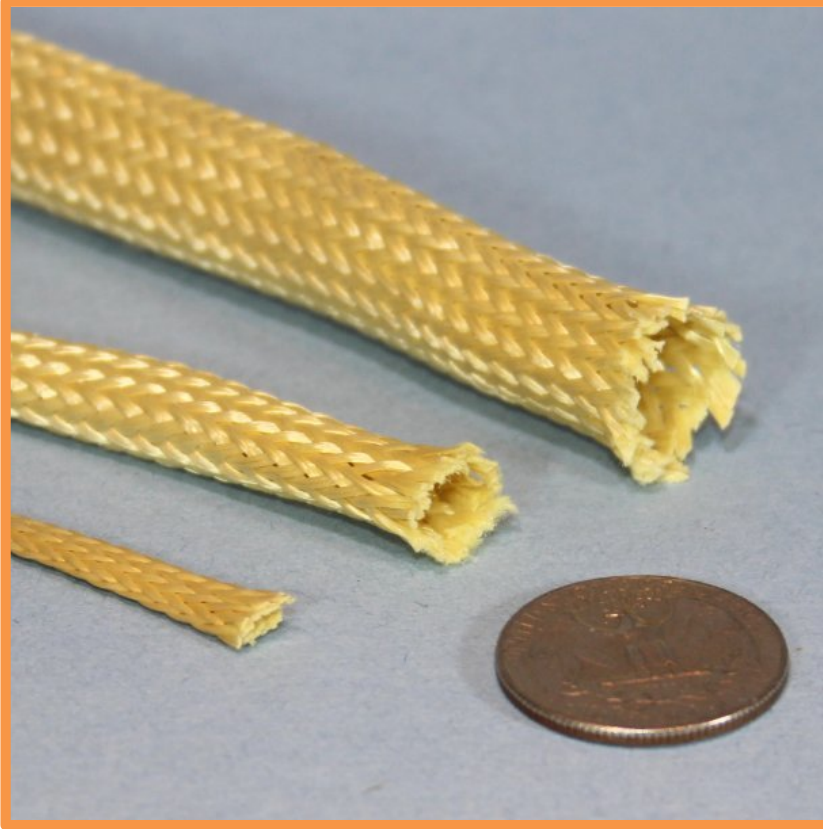
Custom sizes available

Width of the Velcro is 1.5" except part numbers indicated with (*) which is .75".

Kevlar® Braided Aramid Sleeve

320°F / 160°C: Continuous Rating – Higher Temperature for Shorter Periods

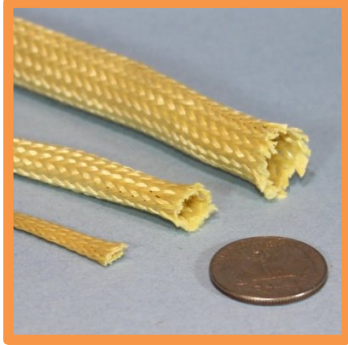
FlameShield™ High Temperature, Heat Resistant High Strength & Cut Resistant Expandable Sleeve - Premium Grade



- Kevlar sleeve is soft, pliable, and highly flexible.
- Halogen & asbestos free.
- Fibers are 20 times stronger than steel for the same diameter..
- Highly cut resistant.
- Braid angle allows this sleeve to expand slightly to accommodate irregular surfaces and turns, splices and in-line connectors. Expansion does cause surface coverage to reduce.
- Available in natural (yellow) color.

**320°F / 160°C maximum continuous rating with high insulation value
& excellent personnel protection. Short term exposure to 572°F / 300°C**

Kevlar® Braided Aramid Sleeve - (Continued)
320°F / 160°C: Continuous Rating – Higher Temperature for Shorter Periods
FlameShield™ High Temperature, Heat Resistant High Strength &
Cut Resistant Expandable Sleeve - Premium Grade



FlameShield™ High Temperature & Heat Resistant Braided Kevlar® Aramid Sleeve - Premium			
Part Number	Nominal ID	Size Range	Spool Length in feet Bulk / Small
S-K-M006-04-X	1/4" / 6 mm	1/8" to 5/16"	500 / 50
S-K-M013-08-X	1/2" / 13 mm	5/16" to 5/8"	250 / 50
S-K-M019-12-X	3/4" / 19 mm	9/16" to 1"	250 / 50
S-K-M025-16-X	1" / 25 mm	3/4" to 1 1/8"	200 / 25
S-K-M032-20-X	1 1/4" / 32 mm	1" to 1 1/2"	125 / 25
S-K-M038-24-X	1 1/2" / 38 mm	1 1/4" to 1 3/4"	100 / 25
S-K-M051-32-X	2" / 51 mm	1 1/2" to 2 1/8"	100 / 25
S-K-M064-40	2 1/2" / 64mm	NA	100
S-K-M076-48	3" / 76mm	NA	100
S-K-M089-56	3 1/2" / 89mm	NA	100
S-K-M102-64	4" / 102mm	NA	100

For the "X" value: "F" for By-The-Foot followed by length in feet (example: F66 = 66 feet)
use "B" for Bulk Spool size, use "S" for Small Spool size

This Product is available in spools and for some sizes also By-The-Foot



Kevlar products are difficult to cut due to their strength. Regular or heavy duty scissors can sometimes cut these materials, but often fail quickly as the Kevlar quickly dulls the cutting edge.

Kevlar Shears are specifically designed to cut Kevlar, and feature a serrated blade (or dual serrated blades) so that the fibers don't slip while cutting, holding the fiber in position and allowing for a greater shear force to be applied by the opposing blade.

These shears are Extra Heavy Duty, and can be used for other materials such as cutting steel wires and steel tie wraps. Part number TL-S-KEV-HD. Priced from \$52.00 to \$79.00 depending on blade length.

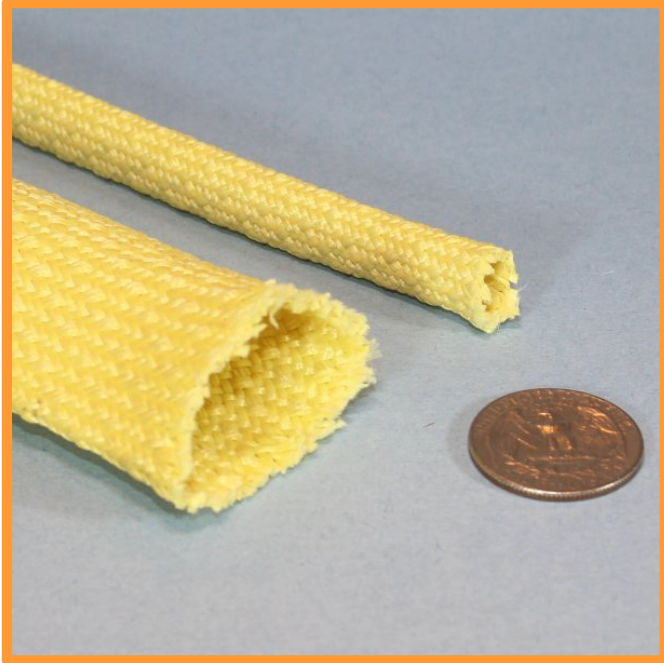
Kevlar® is a registered trademark of E. I. Du Pont de Nemours and Company

Kevlar® Braided Aramid Sleeve - Heavy Wall

320°F / 160°C: Continuous Rating – Higher Temperature for Shorter Periods

FlameShield™ High Temperature, Heat Resistant, High Strength & Cut Resistant

Expandable Sleeve - Premium Grade – Heavy Wall Thickness



- Soft and pliable, highly flexible.
- Halogen & asbestos free.
- 20 times stronger than steel.
- Highly cut resistant.
- Braid angle allows this sleeve to expand to accommodate irregular surfaces and turns, splices and in-line connectors.
- Available in natural (yellow) color.
- .056" / 1.42 mm wall thickness.
- Short term exposure to 572°F / 300°C

FlameShield™ High Temperature & Heat Resistant Braided Kevlar® Aramid Sleeve – Premium Heavy Wall

Part Number	Nominal ID	Size Range	Spool Length in feet
			Bulk / Small
S-K-HD-M003-02-X	1/8" / 3 mm	1/8" to 1/4"	500 / 100
S-K-HD-M006-04-X	1/4" / 6 mm	1/4" to 3/8"	500 / 50
S-K-HD-M013-08-X	1/2" / 13 mm	1/2" to 1"	250 / 50
S-K-HD-M025-16-X	1" / 25 mm	1" to 1 3/4"	200 / 25
S-K-HD-M032-20-X	1 1/4" / 32 mm	1 1/4" to 2"	125 / 25

For the "X" value: use "F" for By-The-Foot followed by length in feet (example: F66 = 66 feet)
use "B" for Bulk Spool size, use "S" for Small Spool size

This Product is available in By-The-Foot lengths and spools



Kevlar products are difficult to cut due to their strength. Regular or heavy duty scissors can sometimes cut these materials, but often fail quickly as the Kevlar quickly dulls the cutting edge.

Kevlar Shears are specifically designed to cut Kevlar, and feature a serrated blade (or dual serrated blades) so that the fibers don't slip while cutting, holding the fiber in position and allowing for a greater shear force to be applied by the opposing blade.

These shears are Extra Heavy Duty, and can be used for other materials such as cutting steel wires and steel tie wraps. Part number TL-S-KEV-HD. Priced from \$52.00 to \$79.00 depending on blade length.

Kevlar® is a registered trademark of E. I. Du Pont de Nemours and Company

Kevlar® Braided Aramid Sleeve – Colored - Medium Wall Thickness

320°F / 160°C: Continuous Rating – Higher Temperature for Shorter Periods

FlameShield™ High Temperature, Heat Resistant High Strength & Cut Resistant Expandable Sleeve - Premium Grade



- Kevlar® sleeve is soft and pliable, highly flexible.
- Halogen & asbestos free.
- Fibers are 20 times stronger than steel for the same diameter. Highly cut resistant.
- Braid angle allows this sleeve to expand/contract slightly to accommodate irregular surfaces and turns, splices and in-line connectors. Expansion does cause surface coverage to reduce slightly.
- Available in 5 colors (plus natural yellow). The colored sleeve is made by adding a saturant which make the sleeve stiffer than non colored sleeve.
- .045" / 1.14 mm wall thickness.
- This product is made from genuine Kevlar® aramid yarns. Kevlar® is a registered trademark of DuPont.

**320°F / 160°C maximum continuous rating with high insulation value
& excellent personnel protection. Short term exposure to 572°F / 300°C**

Kevlar® Braided Aramid Sleeve – Colored - Medium Wall Thickness (Continued)
320°F / 160°C: Continuous Rating – Higher Temperature for Shorter Periods
FlameShield™ High Temperature, Heat Resistant High Strength &
Cut Resistant Expandable Sleeve - Premium Grade



FlameShield™ High Temperature & Heat Resistant Braided Kevlar® Aramid Colored Sleeve – Premium Grade	
Part Number	Nominal ID
S-K-C-0.25-M006-04-X-Y	1/4" / 6 mm
S-K-C-0.50-M013-08-X-Y	1/2" / 13 mm
S-K-C-0.75-M019-12-X-Y	3/4" / 19 mm
S-K-C-1.00-M025-16-X-Y	1" / 25 mm
S-K-C-1.25-M032-20-X-Y	1 1/4" / 32 mm
S-K-C-1.50-M038-24-X-Y	1 1/2" / 38 mm
S-K-C-1.75-M044-28-X-Y	1 3/4" / 44 mm
S-K-C-2.00-M051-32-X-Y	2" / 51 mm
S-K-C-2.50-M064-40-X-Y	2 1/2" / 64 mm
S-K-C-3.00-M076-48-X-Y	3" / 76 mm
S-K-C-3.50-M089-56-X-Y	3 1/2" / 89 mm
S-K-C-4.00-M102-64-X-Y	4" / 102 mm

For the "X" value use OG - Orange, BK - Black, BL - Blue, RD - Red and GN - Green

For the "X" value use "50" for 50 feet and use "100" for 100 feet

This Product is available only in 50' and 100' Lengths
(shorter lengths of some sizes may be available - please inquire)



Kevlar products are difficult to cut due to their strength. Regular or heavy duty scissors can sometimes cut these materials, but often fail quickly as the Kevlar quickly dulls the cutting edge.

Kevlar Shears are specifically designed to cut Kevlar, and feature a serrated blade (or dual serrated blades) so that the fibers don't slip while cutting, holding the fiber in position and allowing for a greater shear force to be applied by the opposing blade.

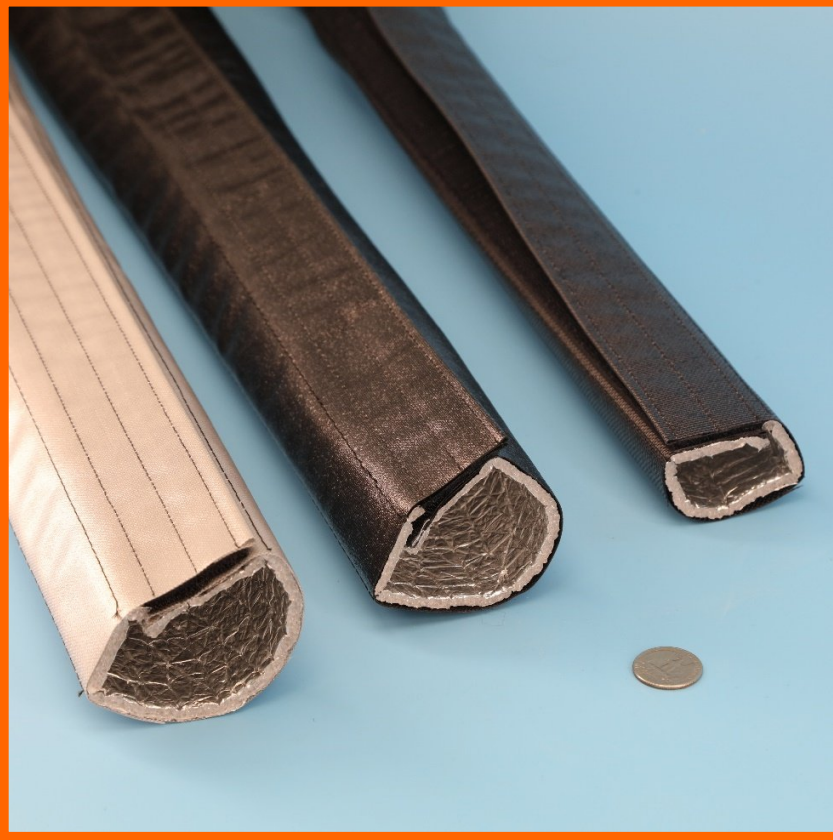
These shears are Extra Heavy Duty, and can be used for other materials such as cutting steel wires and steel tie wraps. Part number TL-S-KEV-HD.

Kevlar® is a registered trademark of E. I. Du Pont de Nemours and Company

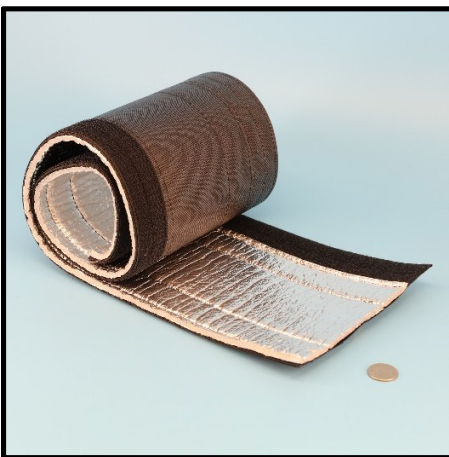
InsulSleeve™ Thermal Insulating Heat Loss & Freeze Protection Sleeves with Hook & Loop Closure

200°F / 93°C: Continuous Rating – Higher Temperature for Shorter Periods

High Insulation Value for Hoses Tubing & Pipes



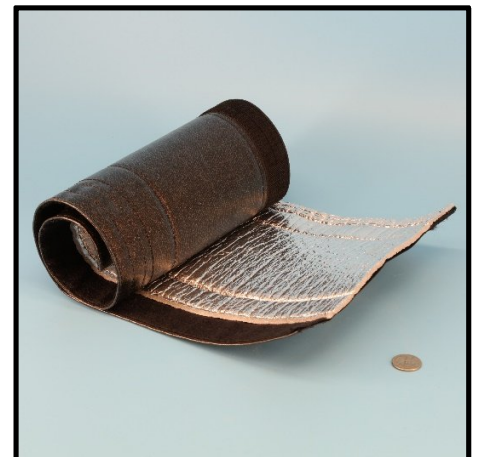
- Outer abrasion resistance with inner thermal insulation/freeze protection.
- Aluminized PET film on both sides of a closed cell poly layer of 0.15" thickness insulation layer.
- May be installed longitudinally or spiral wrapped along hoses and lines/pipes.
- Provides equipment protection, energy efficiency and personnel protection.
- Allows spray foam and pressure wash operations in below freezing environments.
- May be oversleeved or undersleeved with other thermal or abrasion protection sleeves.
- BN10 and BN15 are available in 50 and 150 foot coils. PPVC is available in 150 foot coils.



Polyester with PVC



BN10 Nylon with Urethane

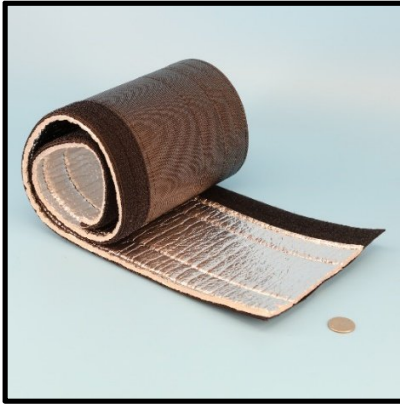


BN15 Nylon with Urethane

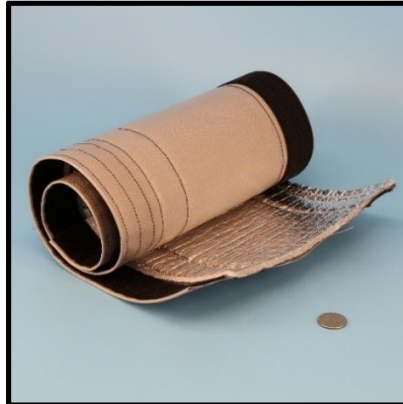
InsulSleeve™ Thermal Insulating Heat Loss & Freeze Protection Sleeves with Hook & Loop Closure

200°F / 93°C: Continuous Rating – Higher Temperature for Shorter Periods

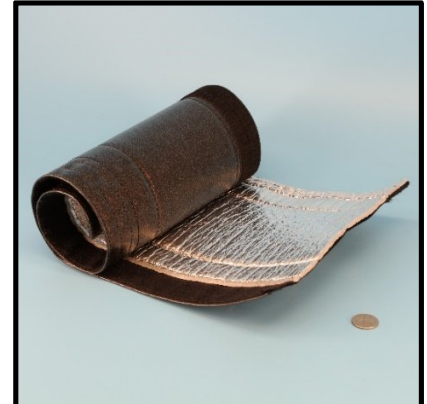
High Insulation Value for Hoses Tubing & Pipes



Polyester with PVC



BN10 Nylon with Urethane



BN15 Nylon with Urethane

InsulSleeve™ Thermal Insulating Heat Loss & Freeze Protection Sleeve with Abrasion Resistant Cover and Hook and Loop Closure			
Part Number	Size inch / mm / -dash		
S-APS-HLFP-VCL-M038-24-X	1.50	38	-24
S-APS-HLFP-VCL-M051-32-X	2.00	51	-32
S-APS-HLFP-VCL-M064-40-X	2.50	64	-40
S-APS-HLFP-VCL-M076-48-X	3.00	76	-48
S-APS-HLFP-VCL-M089-56-X	3.50	89	-56
S-APS-HLFP-VCL-M114-72-X	4.50	114	-72
S-APS-HLFP-VCL-M127-80-X	5.50	140	-80
S-APS-HLFP-VCL-M152-96-X	6.50	165	-96
S-APS-HLFP-VCL-M178-112-X	7.50	190	-104

For the "X" value, replace with:
 BN10 for 1000 denier nylon with 4 oz urethane coating
 BN15 for 1050 denier nylon with .002" urethane coating
 PPVC for 600 denier with PVC coating

Custom sizes available – please enquire

Sections may be combined to cover larger diameter piping

Silicone Foam Sleeve High Temperature, Heat Resistant

460°F / 237°C: Continuous Rating – Higher Temperature for Shorter Periods
High Insulation Value for Hoses Tubing & Pipes



Silicone Closed Cell Foam sleeve is designed as a high thermal insulation sleeve for hoses and pipes to preserve the temperature of flowing liquids and gases.

May be covered with other sleeving such as nylon for abrasion protection.

Available in Oxide-red. Other colors may be available by custom run and may require minimums.

Density is 0.55 g/cm³. 0.32 oz/in³.

Standard carton is 18" x 18" x 20" and weight is 40 pounds.

FlameShield™ Silicone Closed Cell Sponge Sleeve High Temperature & Heat Resistant – High Thermal Insulation Value			
Part Number	Nominal ID	Wall Thickness	Length per Carton
S-SR-SF-M013ID-M039OD-X	1/2"	1/2"	72'
S-SR-SF-M019ID-M045OD-X	3/4"	1/2"	59'
S-SR-SF-M025ID-M051OD-X	1"	1/2"	49'
S-SR-SF-M032ID-M070OD-X	1 1/4"	3/4"	26'
S-SR-SF-M038ID-M076OD-X	1 1/2"	3/4"	23'
S-SR-SF-M044ID-M082OD-X	1 3/4"	3/4"	19'

For the "X" value, use "OR" oxide-red, use "GR" for grey

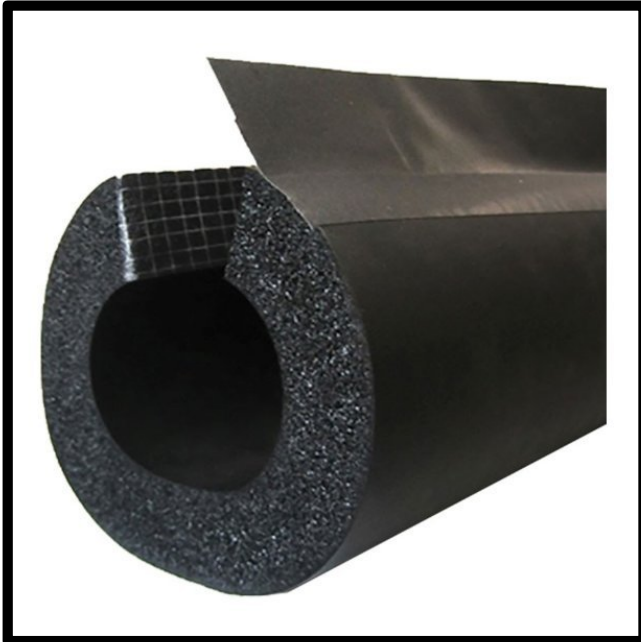
This product may available in By-The-Foot lengths – please inquire

Other IDs, wall thickness, lengths and colors are available

Closed Cell Foam Insulation Sleeve

220°F / 104°C: Continuous Rating – Higher Temperature for Shorter Periods

High Insulation Value for Hoses Tubing & Pipes



- R-3 insulation value.
- Condensation prevention solution for water and refrigeration lines.
- Split sleeve with seam adhesive plus adhesive flap.
- 6 foot / 1.82 metre lengths.
- Mold and Mildew resistant.
- Compatible with heating cables and tapes for freeze protection.
- 0.5" / 13mm wall thickness.
- Highly flexible and conformable.
- ID of sleeve is designed to accommodate pipe plus heating cable/tape when used in size combination recommended in table below.

FlameShield™ Closed Cell Foam Sleeve High Thermal Insulation Value - Pipe Heat Retention & Freeze Protection		
Part Number	Nominal Pipe OD	Actual Sleeve ID
S-INSULPIPE-0875	½" to 5/8"	7/8"
S-INSULPIPE-1125	¾" to 7/8"	1 1/8"
S-INSULPIPE-1375	1"	1 3/8"
S-INSULPIPE-1625	1 1/8"	1 5/8"
S-INSULPIPE-2000	1 3/8"	2"
S-INSULPIPE-2125	1 5/8"	2 1/8"
S-INSULPIPE-2375	2"	2 3/8"
S-INSULPIPE-2625	2 1/8"	2 5/8"
S-INSULPIPE-2875	2 3/8"	2 7/8"
S-INSULPIPE-3125	2 5/8"	3 1/8"
S-INSULPIPE-3500	2 7/8"	3 1/2"
S-INSULPIPE-3625	3 1/8"	3 5/8"
S-INSULPIPE-4125	3 1/2"	4 1/8"
S-INSULPIPE-4500	4"	4 1/2"

Nomex® Braided Sleeve

450°F / 232°C: Continuous Rating – Higher Temperature for Shorter Periods

FlameShield™ High Temperature, Heat & Flame Resistant Expandable Sleeve – Premium Grade



- Genuine Dupont Nomex®
- Soft and pliable.
- Halogen & asbestos free.
- 90,000 psi tensile strength.
- Cuts easily to length with scissors. Braid angle allows this sleeve to expand slightly to accommodate irregular surfaces and turns, splices and in-line connectors.
- Available in natural and green color.
- .016" wall thickness.
- 662°F / 350°C melting/deterioration temperature.

450°F / 232°C continuous rating, high insulation value & excellent personnel protection

FlameShield™ Braided Nomex® Sleeve High Temperature & Heat Resistant – Premium Grade		
Part Number	Nominal ID	Size Range
S-NMX-0.125-M003-02-X-Y	1/8"	1/16" to 1/4"
S-NMX-0.250-M006-04-X-Y	1/4"	1/8" to 5/16"
S-NMX-0.312-M008-05-X-Y	5/16"	7/32" to 7/16"
S-NMX-0.375-M010-06-X-Y	3/8"	1/4" to 1/2"
S-NMX-0.500-M013-08-X-Y	1/2"	5/16" to 5/8"
S-NMX-0.625-M016-10-X-Y	5/8"	7/16" to 7/8"
S-NMX-0.750-M019-12-X-Y	3/4"	9/16" to 1"
S-NMX-1.000-M025-16-X-Y	1"	3/4" to 1 1/8"
S-NMX-1.250-M032-20-X-Y	1 1/4"	1" to 1 1/2"
S-NMX-1.500-M038-24-X-Y	1 1/2"	1 1/4" to 1 3/4"
S-NMX-1.750-M044-28-X-Y	1 3/4"	1 1/2" to 2"

For the "X" value, use "100" for 100 foot spool, use "25" for 25 foot spool

For the "Y" value, use "NT" natural color, use "GN" for green color

Please call for additional discount pricing when ordering multiple spools.

This Product is NOT Available By-The-Foot – Spools Only

Nomex® Split Sleeve Wrap

450°F / 232°C: Continuous Rating – Higher Temperature for Shorter Periods

FlameShield™ High Temperature, Heat & Flame Resistant Expandable Sleeve – Premium Grade



- Genuine Dupont Nomex® with a pre-stressed PET filament which provides the natural closed wrap form
- Soft and pliable.
- Fire retardant.
- Halogen & asbestos free.
- Cuts easily to length with scissors.
- Green color only.
- .027" wall thickness.
- 392°F / 200°C operating temperature.
- 662°F / 350°C melting/deterioration temperature.
- Includes a tracer line that shows the maximum operating diameter so the sleeve is not overfilled.

450°F / 232°C continuous rating, high insulation value & excellent personnel protection

FlameShield™ Nomex® Split Sleeve Wrap High Temperature & Heat Resistant – Premium Grade		
Part Number	Nominal ID	Quantity per Box Bulk / Shop / Mini in feet
S-NMX-SP-0.1875-M0047-03-X	3/16"	1200 / 600 / 200
S-NMX-SP-0.312-M0079-05-X	5/16"	650 / 325 / 125
S-NMX-SP-0.500-M013-08-X	1/2"	300 / 150 / 75
S-NMX-SP-0.625-M016-10-X	5/8"	250 / 125 / 75
S-NMX-SP-0.750-M019-12-X	3/4"	150 / 100 / 50
S-NMX-SP-1.000-M025-16-X	1"	100 / 75 / 50
S-NMX-SP-1.250-M032-20-X	1 1/4"	100 / 50 / 25
S-NMX-SP-1.500-M038-24-X	1 1/2"	50 / 25 / NA

For the "X" value, use "B" for Bulk Box or "S" for Shop Box or "M" for Mini Box

Please call for additional discount pricing when ordering multiple spools.

This Product is NOT Available By-The-Foot

Braided Carbon Fiber Sleeve

1000°F / 537°C: Continuous Rating – Higher Temperature for Shorter Periods

High Temperature & Heat Resistant



Available in 0.013", 0.020" and 0.030" wall thickness.

Used to fabricate tubular structures that are lightweight and strong.

The cut ends will fray – standard anti-fray techniques can be used such as metal wire or clamps.

Braided Carbon Fiber Sleeve (Continued)

1000°F / 537°C: Continuous Rating – Higher Temperature for Shorter Periods

High Temperature & Heat Resistant

FlameShield™ High Temperature & Heat Resistant Carbon Fiber Sleeve			
Part Number	Nominal ID	Size Range	Spool Length in feet Bulk / Small
Light Wall 0.013" replace "X" in part number with "LW"			
S-CF-M006-04-X	1/4" / 6 mm	1/8" to 5/16"	500 / 100
S-CF-M013-08-X	1/2" / 13 mm	1/4" to 5/8"	250 / 50
S-CF-M019-12-X	3/4" / 19 mm	5/16" to 7/8"	250 / 50
S-CF-M025-16-X	1" / 25 mm	3/8" to 1 1/16"	200 / 50
S-CF-M032-20-X	1 1/4" / 32 mm	1/2" to 1 1/2"	125 / 25
S-CF-M038-24-X	1 1/2" / 38 mm	5/8" to 1 3/4"	100 / 25
S-CF-M051-32-X	2" / 51 mm	3/4" to 2 3/16"	100 / 25
Medium Wall 0.020" replace "X" in part number with "MW"			
S-CF-M013-08-X	1/2" / 13 mm	1/4" to 5/8"	250 / 50
S-CF-M019-12-X	3/4" / 19 mm	5/16" to 7/8"	250 / 50
S-CF-M025-16-X	1" / 25 mm	7/16" to 1 1/16"	200 / 50
S-CF-M032-20-X	1 1/4" / 32 mm	9/16" to 1 1/2"	125 / 25
S-CF-M038-24-X	1 1/2" / 38 mm	3/4" to 1 3/4"	100 / 25
S-CF-M051-32-X	2" / 51 mm	7/8" to 2 3/16"	100 / 25
S-CF-M064-40-X	2 1/2" / 64 mm	1 1/16" to 3"	100 / 25
Heavy Wall 0.030" replace "X" in part number with "HW"			
S-CF-M019-12-X	3/4" / 19 mm	3/8" to 7/8"	250 / 50
S-CF-M025-16-X	1" / 25 mm	1/2" to 1 1/16"	200 / 50
S-CF-M032-20-X	1 1/4" / 32 mm	11/16" to 1 1/2"	125 / 25
S-CF-M038-24-X	1 1/2" / 38 mm	13/16" to 1 3/4"	100 / 25
S-CF-M051-32-X	2" / 51 mm	1" to 2 3/16"	100 / 25
S-CF-M064-40-X	2 1/2" / 64 mm	1 1/4" to 3"	100 / 25
S-CF-M076-48-X	3" / 76 mm	1 1/2" to 3 1/2"	50 / 25

For the "X" value:
use "B" for Bulk Spool size, use "S" for Small Spool size

Braided Fiberglass Sleeve with Graphite Impregnation

1200°F / 648°C: Continuous Rating – Higher Temperature for Shorter Periods
DeltaGlass™: High Temperature & Heat Resistant



- 1/16" and 1/8" wall thickness
- Graphite Impregnation

Graphite adds lubrication to result in a very slippery sleeve but does not add electrical conductivity.

Resists molten splash and weld splatter as it cannot stick to the graphite.

1200°F / 648°C continuous rating, high insulation value & excellent personnel protection

Very High-Temperature Braided Sleeve with Graphite Coating

Part Number	Size in / mm / -dash			Feet per Spool
				Thin wall / Thick wall
S-FG-GC-M006-04-X	.250	6	-04	1400 / 700
S-FG-GC-M010-06-X	.375	10	-06	1400 / 600
S-FG-GC-M013-08-X	.500	13	-08	1000 / 330
S-FG-GC-M016-10-X	.625	16	-10	900 / 315
S-FG-GC-M019-12-X	.750	19	-12	750 / 300
S-FG-GC-M022-14-X	.875	22	-14	650 / 300
S-FG-GC-M025-16-X	1.000	25	-16	500 / 290
S-FG-GC-M032-20-X	1.250	32	-20	450 / 280
S-FG-GC-M038-24-X	1.500	38	-24	350 / 225
S-FG-GC-M041-26-X	1.625	41	-26	300 / 208
S-FG-GC-M044-28-X	1.750	44	-28	300 / 208
S-FG-GC-M051-32-X	2.000	51	-32	250 / 190
S-FG-GC-M057-36-X	2.250	57	-36	250 / 190
S-FG-GC-M064-40-X	2.500	64	-40	225 / 180
S-FG-GC-M070-44-X	2.750	70	-44	225 / 180
S-FG-GC-M076-48-X	3.000	76	-48	200 / 175
S-FG-GC-M083-52-X	3.250	83	-52	200 / 175
S-FG-GC-M089-56-X	3.500	89	-56	190 / 170
S-FG-GC-M095-60-X	3.750	95	-60	190 / 170
S-FG-GC-M102-64-X	4.000	102	-64	175 / 140
S-FG-GC-M114-72-X	4.500	114	-72	175 / 140
S-FG-GC-M127-80-X	5.000	127	-80	120 / 100

For the "X" value, use "A" to specify Thin Wall; use "B" to specify Thick Wall

Thin Wall = 1/16" / 1.59mm • Thick Wall = 1/8" / 3.18mm

This Product is Available By The Foot

Fiberglass Knitted Sleeve: Premium Grade

1200°F / 648°C: Continuous Rating – Higher Temperature for Shorter Periods

DeltaGlass™ Very High Temperature & Heat Resistant Knitted Sleeve for Wire, Cable, Hose & Pipe / Tube protection and Personnel Burn Protection



This Knitted fiberglass sleeve is fabricated from high quality type E fiberglass that will not burn and will withstand continuous exposure to temperatures of 1200°F / 648°C.

This material resists most acids and alkalis and is unaffected by most bleaches and solvents. It is highly flexible and conformable.

The base fiber is manufactured to the specifications of ASTM D-578, ASTM committee D13, and subcommittee D13.18.

Knitted or Braided Fiberglass Sleeve is typically used to protect pipes, hoses, cables and wires from high temperatures up to 1200°F / 648°C continuous use.

1200°F / 648°C continuous rating, high insulation value & excellent personnel burn protection.

Knitted sleeve has an advantage over braided sleeve, as it is dimensionally stable and only minimally expandable compared to braided sleeve – it conforms well to the object over which it is placed without clamping to hold it onto the object.

This sleeve is commonly used to protect wire, cables and hoses from heat exposure. The construction of the sleeve provides a high bulk, ensuring a high insulation value. It can also be used in multiple layers to increase the total insulation value. Conversely, this sleeve can protect personnel from contact burns due to hot process hoses, tubing or lines.

The total sleeve thickness necessary to drop the surface temperature to the 140°F hot surface incidental contact temperature (OSHA generally accepted value) varies with the temperature of the hose or tube, the fluid flow rate, and ambient temperature; but as a general rule, a pipe or tube at 1000°F will require a 1" thickness of fiberglass insulation.

DeltaGlass™ Very High Temperature & Heat Resistant Knitted Fiberglass Sleeve – Premium Grade							
ID Size inch / mm / dash#			Part Number	ID Size inch / mm / dash#			Part Number
1/2"	13	-08	S-FG-KNIT-M013-08	2 1/4"	57	-36	S-FG-KNIT-M057-36
5/8"	16	-10	S-FG-KNIT-M016-10	2 1/2"	64	-40	S-FG-KNIT-M064-40
3/4"	19	-12	S-FG-KNIT-M019-12	2 3/4"	70	-44	S-FG-KNIT-M070-44
7/8"	22	-14	S-FG-KNIT-M022-14	3"	76	-48	S-FG-KNIT-M076-48
1"	25	-16	S-FG-KNIT-M025-16	3 1/4"	83	-52	S-FG-KNIT-M083-52
1 1/4"	32	-20	S-FG-KNIT-M032-20	3 1/2"	89	-56	S-FG-KNIT-M089-56
1 3/8"	35	-22	S-FG-KNIT-M035-22	3 3/4"	95	-60	S-FG-KNIT-M095-60
1 1/2"	38	-24	S-FG-KNIT-M038-24	4"	102	-64	S-FG-KNIT-M102-64
1 3/4"	44	-28	S-FG-KNIT-M044-28	4 1/2"	114	-72	S-FG-KNIT-M114-72
1 7/8"	48	-30	S-FG-KNIT-M048-30	5"	127	-80	S-FG-KNIT-M127-80
2"	51	-32	S-FG-KNIT-M051-32	6"	152	-96	S-FG-KNIT-M152-96

Minimum order is 25 feet

DeltaGlass™ Knitted or Braided Fiberglass Sleeving is typically used to protect hoses, cables and wires from high temperatures up to 1200°F / 648°C continuous use.

Fiber Type: E Glass
Breaking Tenacity: 1.71 gf/TEX. Std. 1.71 gf/TEX Wet
Breaking Elongation: 4.81% Std. 4.81% Wet
Average Stiffness: 2824.3 cn/TEX

Specific Gravity: 2.54-2.69
Tensile Strength: 450,000-500,000 psi.
Elastic Recovery: 100%

Effect of Heat: Will not burn; Retains 75% tensile at 343°C; Softens at 732-877°C; Melts at 1121-1182°C

Effect of Acids and Alkalis; Resistance to acids is fair. Good resistance to most alkalis.

Effect of Bleaches and Solvents: Unaffected

Fiberglass Braided Sleeve: Premium Grade

1200°F / 648°C: Continuous Rating – Higher Temperature for Shorter Periods

DeltaGlass™ Very High Temperature Heat Resistant Braided Sleeve for Wire, Cable, Hose & Pipe / Tube protection and Personnel Burn Protection



This Braided fiberglass sleeve is fabricated from high quality type E fiberglass that will not burn and will withstand continuous exposure to temperatures of 1200°F / 648°C.

This material resists most acids and alkalis and is unaffected by most bleaches and solvents. It is highly flexible and conformable.

The base fiber is manufactured to the specifications of ASTM D-578, ASTM committee D13, and subcommittee D13.18.

1200°F / 648°C continuous rating, high insulation value & excellent personnel protection

Both a Heat Treated and Heat Treated with Acrylic Saturant version of this product is available – please enquire.

Braided sleeve has the ability to expand and contract a nominal amount, if expanded then the coverage of the braid is lower than if the sleeve is contracted.

This sleeve is commonly used to protect wire, cables and hoses from heat exposure. The construction of the sleeve provides a high bulk, ensuring a high insulation value. It can also be used in multiple layers to increase the total insulation value. Conversely, this sleeve can protect personnel from contact burns due to hot process hoses, tubing or lines.

The total sleeve thickness necessary to drop the surface temperature to the 140°F hot surface incidental contact temperature (OSHA generally accepted value) varies with the temperature of the hose or tube, the fluid flow rate, and ambient temperature; but as a general guide, a pipe or tube at 1000°F will require a 1" thickness of fiberglass insulation.

DeltaGlass™ Very High Temperature & Heat Resistant Braided Fiberglass Sleeve - Premium Grade							
ID Size inch / mm / dash#			Part Number	ID Size inch / mm / dash#			Part Number
3/8	10	-06	S-FG-BRAID-M010-06	1 7/8"	48	-30	S-FG-BRAID-M048-30
1/2"	13	-08	S-FG-BRAID-M013-08	2"	51	-32	S-FG-BRAID-M051-32
5/8"	16	-10	S-FG-BRAID-M016-10	2 1/4"	57	-36	S-FG-BRAID-M057-36
3/4"	19	-12	S-FG-BRAID-M019-12	2 1/2"	64	-40	S-FG-BRAID-M064-40
7/8"	22	-14	S-FG-BRAID-M022-14	2 3/4"	70	-44	S-FG-BRAID-M070-44
1"	25	-16	S-FG-BRAID-M025-16	3"	76	-48	S-FG-BRAID-M076-48
1 1/4"	32	-20	S-FG-BRAID-M032-20	3 1/4"	83	-52	S-FG-BRAID-M083-52
1 3/8"	35	-22	S-FG-BRAID-M035-22	3 1/2"	89	-56	S-FG-BRAID-M089-56
1 1/2"	38	-24	S-FG-BRAID-M038-24	3 3/4"	95	-60	S-FG-BRAID-M095-60
1 3/4"	44	-28	S-FG-BRAID-M044-28	4"	102	-64	S-FG-BRAID-M102-64

DeltaGlass™ Knitted or Braided Fiberglass sleeve is typically used to protect hoses, cables and wires from high temperatures up to 1200°F / 648°C continuous use.

Fiber Type: E Glass
Breaking Tenacity: 1.71 gf/TEX. Std. 1.71 gf/TEX Wet
Breaking Elongation: 4.81% Std. 4.81% Wet
Average Stiffness: 2824.3 cn/TEX

Specific Gravity: 2.54-2.69
Tensile Strength: 450,000-500,000 psi.
Elastic Recovery: 100%

Effect of Heat: Will not burn; Retains 75% tensile at 343°C; Softens at 732-877°C; Melts at 1121-1182°C
Effect of Acids and Alkalis: Resistance to acids is fair. Good resistance to most alkalis.
Effect of Bleaches and Solvents: Unaffected

Fiberglass Braided Sleeve: Industrial Grade

1200°F / 648°C: Continuous Rating – Higher Temperature for Shorter Periods

DeltaGlass™ Very High Temperature & Heat Resistant



- DeltaGlass™ Braided Industrial sleeve
- Available in Thin Wall (1/16") and Thick Wall (1/8").

This braided sleeve is fabricated from high quality type E fiberglass that will not burn and will withstand continuous exposure to temperatures of 1200°F / 648°C.

This material resists most acids and alkalis and is unaffected by most bleaches and solvents. It is highly flexible and conformable. The base fiber is manufactured to the specifications of ASTM D-578, ASTM committee D13, and subcommittee D13.18.

A Heat Treated version of this product is available – please enquire

1200°F / 648°C continuous rating, high insulation value & excellent personnel protection

DeltaGlass™ Very High Temperature & Heat Resistant Fiberglass Braided Sleeve - Industrial Grade					
Part Number	Size inch / mm / -dash			Thin Wall	Thick Wall
				Feet / Metres per spool	Feet / Metres per spool
S-FG-BI-M006-04-X	.250	6	-4	1400 / 426	700 / 213
S-FG-BI-M010-06-X	.375	10	-6	1400 / 426	600 / 182
S-FG-BI-M013-08-X	.500	13	-8	1000 / 304	330 / 100
S-FG-BI-M016-10-X	.625	16	-10	900 / 274	315 / 96
S-FG-BI-M019-12-X	.750	19	-12	750 / 228	300 / 91
S-FG-BI-M022-14-X	.875	22	-14	650 / 198	300 / 91
S-FG-BI-M025-16-X	1.000	25	-16	500 / 152	290 / 88
S-FG-BI-M032-20-X	1.250	32	-20	450 / 137	280 / 85
S-FG-BI-M038-24-X	1.500	38	-24	350 / 106	225 / 68
S-FG-BI-M044-28-X	1.750	44	-28	300 / 91	208 / 63
S-FG-BI-M051-32-X	2.000	51	-32	250 / 76	190 / 57
S-FG-BI-M064-40-X	2.500	64	-40	225 / 68	180 / 54
S-FG-BI-M076-48-X	3.000	76	-48	200 / 60	175 / 53
S-FG-BI-M089-56-X	3.500	89	-56	190 / 57	170 / 51
S-FG-BI-M102-64-X	4.000	102	-64	175 / 53	140 / 42
S-FG-BI-M127-80-X	5.000	127	-80	120 / 36	100 / 30

For the "X" value in the part number:
use "1" to specify Thin Wall; use "2" to specify Thick Wall

Thin Wall = 1/16" / 1.59mm • Thick Wall = 1/8" / 3.18mm

This Product is Available By-The-Foot

Fiberglass Braided Heat Treated Sleeve: *Premium Grade*
1200°F / 648°C: Continuous Rating – Higher Temperature for Shorter Periods
DeltaGlass™ Very High Temperature & Heat Resistant – *Passes UL VW-1 Flame Test*



This Braided fiberglass sleeve is fabricated from high quality type E fiberglass that will not burn and will withstand continuous exposure to temperatures of 1200°F / 648°C.

Heat Treating removes organics and impurities from the sleeve, and makes the product dimensionally stable to the high-end of its continuous exposure temperature (providing minimal shrinkage). The sleeve is exceptionally smooth and has extremely few loose filament ends protruding from the braid – making it extremely clean to use in a variety of applications including aerospace wiring protection and bundling and clean room applications.

This material resists most acids and alkalis and is unaffected by most bleaches and solvents. It is highly flexible and conformable.

The braiding is fine and dense, providing excellent protective coverage. Common applications for heat treated sleeve is for the protection of wiring, cables and hoses in consumer, industrial and commercial appliances and equipment such as ovens, kilns, toasters and heaters. The base fiber is manufactured to the specifications of ASTM D-578, ASTM committee D13, and subcommittee D13.18.

1200°F / 648°C continuous rating, high insulation value & excellent personnel protection

Very High Temperature & Heat Resistant Fiberglass Braided Heat Treated Sleeve – Premium Grade UL 1441 (VW-1) / Dielectric C-3 / UL Thermal Class S & C		
Part Number	ID Size in / mm / dash #	Feet / Metres per Spool
S-FG-BHT-M006-04	0.250 / 6 / -4	500 / 152
S-FG-BHT-M010-06	0.375 / 10 / -6	500 / 152
S-FG-BHT-M013-08	0.500 / 13 / -8	400 / 121
S-FG-BHT-M016-10	0.625 / 16 / -10	500 / 152
S-FG-BHT-M019-12	0.750 / 19 / -12	400 / 121
S-FG-BHT-M025-16	1.000 / 25 / -16	250 / 76
S-FG-BHT-M038-24	1.500 / 38 / -24	200 / 60

Please call for additional discount pricing when ordering more than 5 spools.

This Product is available By-The-Foot and by Spool Length

Braided Fiberglass Sleeve – Texturized - High Bulk

1200°F / 648°C: Continuous Rating – Higher Temperature for Shorter Periods

MaxSleeve™ Temperature & Heat Resistant Fiberglass Braided High Bulk Texturized Sleeve:
Premium Grade



- DeltaGlass™ Braided High Bulk Texturized Premium Sleeve.
- Highest Insulation Value Sleeve Available.
- Available in Thin Wall (1/16") and Thick Wall (1/8").
- Texturization provides high bulk & high thermal insulation value

This braided sleeve is fabricated from high quality type E fiberglass that will not burn and will withstand continuous exposure to temperatures of 1200°F / 648°C.

This material resists most acids and alkalis and is unaffected by most bleaches and solvents. It is highly flexible and conformable. The base fiber is manufactured to the specifications of ASTM D-578, ASTM committee D13, and subcommittee D13.18.

Available Plain and Vermiculite Coated.

1200°F / 648°C continuous rating, high insulation value & excellent personnel protection

DeltaGlass™ High Bulk Texturized Braided Fiberglass Sleeve Premium Grade					
Part Number	Size inch / mm / -dash			Thin Wall	Thick Wall
				Feet / Metres per spool	Feet / Metres per spool
S-FG-TEX-M010-06-X	.375	10	-6	N/A	250 / 76
S-FG-TEX-M013-08-X	.500	13	-8	500 / 152	250 / 76
S-FG-TEX-M016-10-X	.625	16	-10	N/A	100 / 30
S-FG-TEX-M019-12-X	.750	19	-12	250 / 76	100 / 30
S-FG-TEX-M025-16-X	1.000	25	-16	250 / 76	100 / 30
S-FG-TEX-M032-20-X	1.250	32	-20	N/A	100 / 30
S-FG-TEX-M038-24-X	1.500	38	-24	250 / 76	100 / 30
S-FG-TEX-M051-32-X	2.000	51	-32	N/A	100 / 30

For the "X" value in the part number:
use "1" to specify Thin Wall; use "2" to specify Thick Wall

Thin Wall = 1/16" / 1.59mm • Thick Wall = 1/8" / 3.18mm

Fiberglass Braided Anti-Fray Expandable Heat Treated & Acrylic Saturated Sleeve - Premium Grade

1200°F / 648°C: Continuous Rating – Higher Temperature for Shorter Periods

DeltaGlass™ Very High Temperature & Heat Resistant Expandable Sleeve



- This Braided fiberglass sleeve is fabricated from high quality type E fiberglass that will not burn and will withstand continuous exposure to temperatures of 1200°F / 648°C. The sleeve is heat treated before being saturated.
- This material resists most acids and alkalis and is unaffected by most bleaches and solvents. It is highly flexible and conformable.
- The base fiber is manufactured to the specifications of ASTM D-578, ASTM committee D13, and subcommittee D13.18.
- The braid angle of this sleeve allows for the sleeve to easily adjust to a range of sizes around its nominal ID – so it can accommodate passing over splices and in-line connectors.
- The saturant provides reduced fray when cutting this sleeve, as can be seen by the clean ends of the sleeve in this photo. As well, the sleeve becomes stiffer (notice the sleeve remains tubular and does not collapse under its own weight as it would unsaturated). The sleeve remains highly conformable and flexible even with the saturant; it flexes, bends with the same radius as unsaturated sleeve and curves easily and will not prevent or restrict wiring and cable routing.
- Available with colored saturant. The saturant will smoke off at temperatures above 425°F.



Fiberglass Braided Anti-Fray Expandable Heat Treated & Saturated Sleeve - Premium Grade (Continued)

1200°F / 648°C continuous rating, high insulation value & excellent personnel protection

Very High Temperature & Heat Resistant Braided Heat Treated Fiberglass with Acrylic Saturated Sleeve Premium Grade			
Part Number		Size Range	Feet / Metres per Spool
S-FG-B-HT-SAT-M006/010-04/06	¼" / 6mm	1/4" to 3/8"	600 / 182
S-FG-B-HT-SAT-M010/013-06/08	3/8" / 10mm	3/8" to 1/2"	400 / 121
S-FG-B-HT-SAT-M013/019-08/12	½" / 13mm	1/2" to 3/4"	300 / 91
S-FG-B-HT-SAT-M016/025-10/16	5/8" / 16mm	5/8" to 1"	250 / 76
S-FG-B-HT-SAT-M019/032-12/20	¾" / 19mm	3/4" to 1 1/4"	250 / 76
S-FG-B-HT-SAT-M025/044-16/28	1" / 25mm	1" to 1 3/4"	200 / 60
S-FG-B-HT-SAT-M038/057-24/36	1 ½" / 38mm	1 1/2" to 2 1/4"	150 / 45
S-FG-B-HT-SAT-M064/102-40/64	2 ½" / 64mm	2 1/2" to 4"	75 / 22

The addition of an acrylic saturant adds rigidity and abrasive resistance to the sleeve, reducing the likelihood of end fray and results in a sleeve that is easy to apply over long lengths of hose or cable.

The base material temperature rating is 1200°F / 648°C, however the saturant will smoke off at temperatures above 425F / 218°C.

The large braid angle allows for significant expansion of the sleeve resulting in ease of installation, for example, in situations where a hose may have an in-line coupling or adapter to a larger size hose; or similarly where cables may have a splice.

Please contact us for colored versions.

This Product is NOT Available By-The-Foot – Full Spool Only

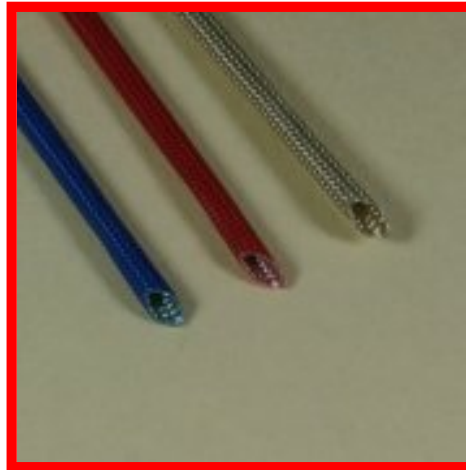
Fiberglass Braided Sleeve - AWG Wire Gauge Sized – Small Diameter E Glass

1200°F / 648°C: Continuous Rating – Higher Temperature for Shorter Periods
DeltaGlass™ Very High Temperature & Heat Resistant Insulation with 1375 volts
space factor rating and NEMA TF-2 Section 6.3 flame resistance

E-Glass Precision Small Diameter / Standard Wall Thickness:
Heat Treated or Heat Treated with Binders



Above Left: Standard Wall Thickness
Above Right: 1/32" Heavy Wall Thickness



Standard Wall Thickness
Heat Treated with Binders

Plain & Heat Treated sleeve is 1200°F / 648°C continuous, 1742°F / 950°C intermittent.

Sleeve with binders is rated to 600°F / 316°C continuous, 1140°F / 616°C intermittent.

This is a high-strength, high-temperature fiberglass sleeve produced from E-Glass. Available heat treated; with Acrylic resin or Oleoresinous binder. Both heat treated and with binders reduces fray and makes cutting easier.

The braiding is tight and dense, providing excellent coverage over small wires, cables, hoses, tubes and pipes.

This product conforms to NEMA TF-2 and is made from fibers conforming to MIL-Y-1140 (latest version), Class C, Form 1 (continuous filament yarns). Meets VW-1 flammability requirements.

E-Glass Properties:

Specific Gravity g/cm ³ :	2.55 - 2.58
Elongation at break, %:	4.5 - 4.9
Tensile strength, psi @22°C:	500,000 - 550,000
Water absorbency @22°C, 65% R.H.:	None
Space Factor Insulation, volts:	1100 (Std Wall) 1500 (HD wall)
Volume Resistivity at 22°C and 500 volts DC, ohm-cm:	10 ¹⁵ – 10 ¹⁶
Dielectric Constant at 22°C, 60 Hz:	6.5 – 6.8
Dissipation Factor at 22°C, 1 MHz:	0.001 – 0.005

Common Properties:

Good resistance to most acids and alkalies
Unaffected by bleaches and solvents
Excellent resistance to sunlight and aging. Not attacked by Mildew.
Conforms to NEMA TF-2. Fibers conform to MIL-R-60346. Type IV, Class 1.

This product is made to order: Delivery is approximately 5 to 15 business days.

Very High Temperature & Heat Resistant Fiberglass Braided Sleeve
E-Glass Precision Small Diameter / Standard Wall Thickness
Heat Treated or Heat Treated with Binders
with NEMA classification & Meets MIL-Y-1140 Class C Form 1
Meets UL 1441 VW-1 Flame Resistance – Will Not Burn

Part Number	Nominal Size AWG / inch / mm / -dash				Feet per Coil
S-FG-E-AWG24-X	24	0.022	0.56	NA	500'
S-FG-E-AWG22-X	22	0.027	0.69	NA	500'
S-FG-E-AWG20-X	20	0.034	0.86	NA	500'
S-FG-E-AWG19-X	19	0.038	0.96	NA	500'
S-FG-E-AWG18-X	18	0.042	1.07	NA	500'
S-FG-E-AWG17-X	17	0.047	1.19	NA	500'
S-FG-E-AWG16-X	16	0.053	1.35	NA	500'
S-FG-E-AWG15-X	15	0.059	1.50	NA	500'
S-FG-E-AWG14-X	14	0.066	1.68	-01	500'
S-FG-E-AWG13-X	13	0.076	1.93	NA	250'
S-FG-E-AWG12-X	12	0.085	2.16	NA	250'
S-FG-E-AWG11-X	11	0.095	2.41	NA	250'
S-FG-E-AWG10-X	10	0.106	2.69	NA	250'
S-FG-E-AWG9-X	9	0.118	3.10	NA	250'
S-FG-E-AWG8-X	8	0.133	3.38	-02	250'
S-FG-E-AWG7-X	7	0.148	3.76	NA	250'
S-FG-E-AWG6-X	6	0.166	4.22	NA	150'
S-FG-E-AWG5-X	5	0.186	4.72	-03	150'
S-FG-E-AWG4-X	4	0.208	5.28	NA	150'
S-FG-E-AWG3-X	3	0.234	5.94	NA	150'
S-FG-E-AWG2-X	2	0.263	6.68	-04	150'
S-FG-E-AWG1-X	1	0.294	7.47	NA	150'
S-FG-E-05-X	5/16	0.313	7.95	-05	150'
S-FG-E-AWG0-X	0	0.330	8.38	NA	150'
S-FG-E-06-X	3/8	0.375	9.52	-06	150'
S-FG-E-07-X	7/16	0.438	11.12	-07	100'
S-FG-E-08-X	1/2	0.500	12.70	-08	100'
S-FG-E-10-X	5/8	0.625	15.87	-10	100'
S-FG-E-12-X	3/4	0.750	19.05	-12	100'
S-FG-E-14-X	7/8	0.875	22.22	-14	100'
S-FG-E-16-X	1	1.000	25.40	-16	100'

For the "X" value in the part number:

use "HT" to specify Heat Treated

use "HTA" to specify Heat Treated plus Acrylic Resin Binder,

use "HTAF" to specify Heat Treated plus Acrylic Resin Flexible Binder

- Resin treated available in white, red, green, brown, yellow, black, blue.

use "HTO" to specify Heat Treated with Oleoresinous Varnish Binder

Plain & Heat Treated sleeve is 1200°F / 648°C continuous, 1742°F / 950°C intermittent

Sleeve with binders is rated to 600°F / 316°C continuous, 1140°F / 616°C intermittent

See Size Table at the end of this catalog section for dimensional specifications

Sold in full coils – some sizes available in by-the-foot lengths.

This product is not stock, it is made to order: Delivery is approximately 10 to 15 business days.

S-Fiberglass Braided Sleeve - AWG Wire Gauge Sized – Small Diameter
1200°F / 648°C: Continuous Rating – Higher Temperature for Shorter Periods
DeltaGlass™ Very High Temperature & Heat Resistant Insulation with 1375 volts
space factor rating and NEMA TF-2 Section 6.3 flame resistance

S-Glass Precision Small Diameter / NEMA Wall Thickness:
Plain or Heat Treated, Heat Treated with Binders



S-Fiberglass Sleeve: Plain & Heat Treated



Heat Treated Sleeve with Binders

Plain & heat treated sleeve is 1200°F / 648°C continuous, 1742°F / 950°C intermittent.

Sleeve with binders is rated to 600°F / 316°C continuous, 1140°F / 616°C intermittent.

This is a high-strength, high-temperature fiberglass sleeve produced from S-Glass. S-Glass, which in addition to enhanced dielectric and mechanical properties over e-glass, provides thermal protection beyond the limits of conventional E-glass fibers. S-Glass is free of boron and will not decompose to form gaseous products with nuclear radiation exposure. Also available heat treated; with Acrylic resin or Oleoresinous binder. Both heat treated and with binders reduces fray and makes cutting easier.

The braiding is tight and dense, providing excellent coverage over small wires, cables, hoses, tubes and pipes.

S-Glass Properties:

Specific Gravity g/cm ³ :	2.48 – 2.49
Elongation at break, %:	5.3 – 5.7
Tensile strength, psi @22°C:	650,000 – 700,000
Water absorbency @22°C, 65% R.H.:	None
Space Factor Insulation, volts:	1375

Common Properties:

Good resistance to most acids and alkalies
Unaffected by bleaches and solvents
Excellent resistance to sunlight and aging. Not attacked by Mildew.
Conforms to NEMA TF-2. Fibers conform to MIL-R-60346. Type IV, Class 1.

This product is made to order: Delivery is approximately 5 to 15 business days.

Very High Temperature & Heat Resistant Fiberglass Braided Sleeve S-Glass Precision Small Diameter / NEMA Wall Thickness: Plain or Heat Treated with 1375 volts space factor insulation and NEMA TF-2 section 6.3 flame rating					
Part Number	Nominal Size AWG / inch / mm / -dash				Feet per Spool
S-FG-S-AWG24-X	24	0.022	0.56	NA	500'
S-FG-S-AWG22-X	22	0.027	0.69	NA	500'
S-FG-S-AWG20-X	20	0.034	0.86	NA	500'
S-FG-S-AWG19-X	19	0.038	0.96	NA	500'
S-FG-S-AWG18-X	18	0.042	1.07	NA	500'
S-FG-S-AWG17-X	17	0.047	1.19	NA	500'
S-FG-S-AWG16-X	16	0.053	1.35	NA	500'
S-FG-S-AWG15-X	15	0.059	1.50	NA	500'
S-FG-S-AWG14-X	14	0.066	1.68	-01	500'
S-FG-S-AWG13-X	13	0.076	1.93	NA	250'
S-FG-S-AWG12-X	12	0.085	2.16	NA	250'
S-FG-S-AWG11-X	11	0.095	2.41	NA	250'
S-FG-S-AWG10-X	10	0.106	2.69	NA	250'
S-FG-S-AWG9-X	9	0.118	3.10	NA	250'
S-FG-S-AWG8-X	8	0.133	3.38	-02	250'
S-FG-S-AWG7-X	7	0.148	3.76	NA	250'
S-FG-S-AWG6-X	6	0.166	4.22	NA	150'
S-FG-S-AWG5-X	5	0.186	4.72	-03	150'
S-FG-S-AWG4-X	4	0.208	5.28	NA	150'
S-FG-S-AWG3-X	3	0.234	5.94	NA	150'
S-FG-S-AWG2-X	2	0.263	6.68	-04	150'
S-FG-S-AWG1-X	1	0.294	7.47	NA	150'
S-FG-S-05-X	5/16	0.313	7.95	-05	150'
S-FG-S-AWG0-X	0	0.330	8.38	NA	150'
S-FG-S-06-X	3/8	0.375	9.52	-06	150'
S-FG-S-07-X	7/16	0.438	11.12	-07	100'
S-FG-S-08-X	1/2	0.500	12.70	-08	100'
S-FG-S-10-X	5/8	0.625	15.87	-10	100'
S-FG-S-12-X	3/4	0.750	19.05	-12	100'
S-FG-S-14-X	7/8	0.875	22.22	-14	100'
S-FG-S-16-X	1	1.000	25.40	-16	100'

For the "X" value in the part number:

use "P" to specify Plain

use "HT" to specify Heat Treated

use "HTA" to specify Heat Treated plus Acrylic Resin Binder

use "HTO" to specify Heat Treated with Oleoresinous Varnish Binder

- Resin treated available in white, red, green, brown, yellow, black, blue.

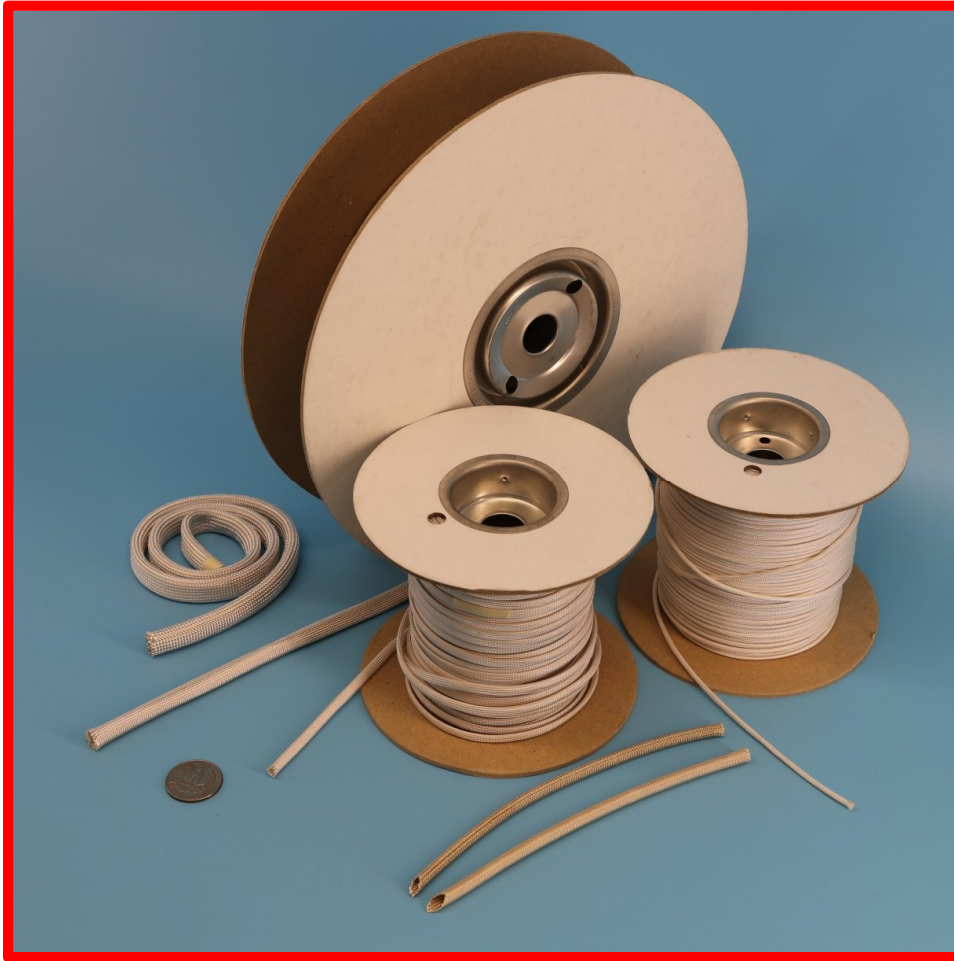
- See table at end of section for dimensional specifications for this product.
- Plain & Heat Treated sleeve is 1200°F / 648°C continuous, 1742°F / 950°C intermittent.
- Sleeve with binders is rated to 600°F / 316°C continuous, 1140°F / 616°C intermittent
- This product is available in full coils except as listed below.
- This product is not stock, it is made to order: Delivery is approximately 10 business days.

E-Fiberglass Braided Sleeve - AWG Wire Gauge Sized Precision Small Diameter - Thick Wall - Heavy Duty



1200°F / 648°C: Continuous Rating – Higher Temperature for Shorter Periods
DeltaGlass™ Very High Temperature & Heat Resistant Insulation with 1375 volts
space factor rating and NEMA TF-2 Section 6.3 flame resistance

E-Glass Precision Small Diameter / Heavy Wall Thickness:
Heat Treated or Heat Treated with Binders



- Plain sleeve is 1200°F / 648°C continuous, 1742°F / 950°C intermittent.
- Sleeve with binders is rated to 600°F / 316°C continuous, 1140°F / 616°C intermittent.
- This product is available in full spools only.
- Resin binder treated available in white, red, green, brown, yellow, black, blue.
- This is not a stock item: approximately 10 business days to manufacture to order.

Very High Temperature & Heat Resistant Fiberglass Braided Sleeve
E-Glass Precision Small Diameter / Heavy Wall (1/32" - .031")
Heat Treated or Heat Treated with Binders
with NEMA classification & Meets MIL-Y-1140 Class C Form 1
Meets UL 1441 VW-1 Flame Resistance – Will Not Burn

Part Number	Nominal Size				Feet per Coil
	AWG / inch / mm / -dash				
S-FG-E-HD-AWG24-X	24	0.022	0.56	NA	500'
S-FG-E-HD-AWG22-X	22	0.027	0.69	NA	500'
S-FG-E-HD-AWG20-X	20	0.034	0.86	NA	500'
S-FG-E-HD-AWG19-X	19	0.038	0.96	NA	500'
S-FG-E-HD-AWG18-X	18	0.042	1.07	NA	500'
S-FG-E-HD-AWG17-X	17	0.047	1.19	NA	500'
S-FG-E-HD-AWG16-X	16	0.053	1.35	NA	500'
S-FG-E-HD-AWG15-X	15	0.059	1.50	NA	500'
S-FG-E-HD-AWG14-X	14	0.066	1.68	-01	500'
S-FG-E-HD-AWG13-X	13	0.076	1.93	NA	250'
S-FG-E-HD-AWG12-X	12	0.085	2.16	NA	250'
S-FG-E-HD-AWG11-X	11	0.095	2.41	NA	250'
S-FG-E-HD-AWG10-X	10	0.106	2.69	NA	250'
S-FG-E-HD-AWG9-X	9	0.118	3.10	NA	250'
S-FG-E-HD-AWG8-X	8	0.133	3.38	-02	250'
S-FG-E-HD-AWG7-X	7	0.148	3.76	NA	250'
S-FG-E-HD-AWG6-X	6	0.166	4.22	NA	150'
S-FG-E-HD-AWG5-X	5	0.186	4.72	-03	150'
S-FG-E-HD-AWG4-X	4	0.208	5.28	NA	150'
S-FG-E-HD-AWG3-X	3	0.234	5.94	NA	150'
S-FG-E-HD-AWG2-X	2	0.263	6.68	-04	150'
S-FG-E-HD-AWG1-X	1	0.294	7.47	NA	150'
S-FG-E-HD-05-X	5/16	0.313	7.95	-05	150'
S-FG-E-HD-AWG0-X	0	0.330	8.38	NA	150'
S-FG-E-HD-06-X	3/8	0.375	9.52	-06	150'
S-FG-E-HD-07-X	7/16	0.438	11.12	-07	100'
S-FG-E-HD-08-X	1/2	0.500	12.70	-08	100'
S-FG-E-HD-10-X	5/8	0.625	15.87	-10	100'
S-FG-E-HD-12-X	3/4	0.750	19.05	-12	100'
S-FG-E-HD-14-X	7/8	0.875	22.22	-14	100'
S-FG-E-HD-16-X	1	1.000	25.40	-16	100'

For the "X" value in the part number:

use "HT" to specify Heat Treated

use "HTA" to specify Heat Treated plus Acrylic Resin Binder,

use "HTAF" to specify Heat Treated plus Acrylic Resin Flexible Binder

- Resin treated available in white, red, green, brown, yellow, black, blue.

use "HTO" to specify Heat Treated with Oleoresinous Varnish Binder

Plain & heat treated sleeve is 1200°F / 648°C continuous, 1742°F / 950°C intermittent.

Sleeve with binders is rated to 600°F / 316°C continuous, 1140°F / 616°C intermittent

See Size Table at the end of this catalog section for a dimensional specifications

This Product must be purchased in full coils.

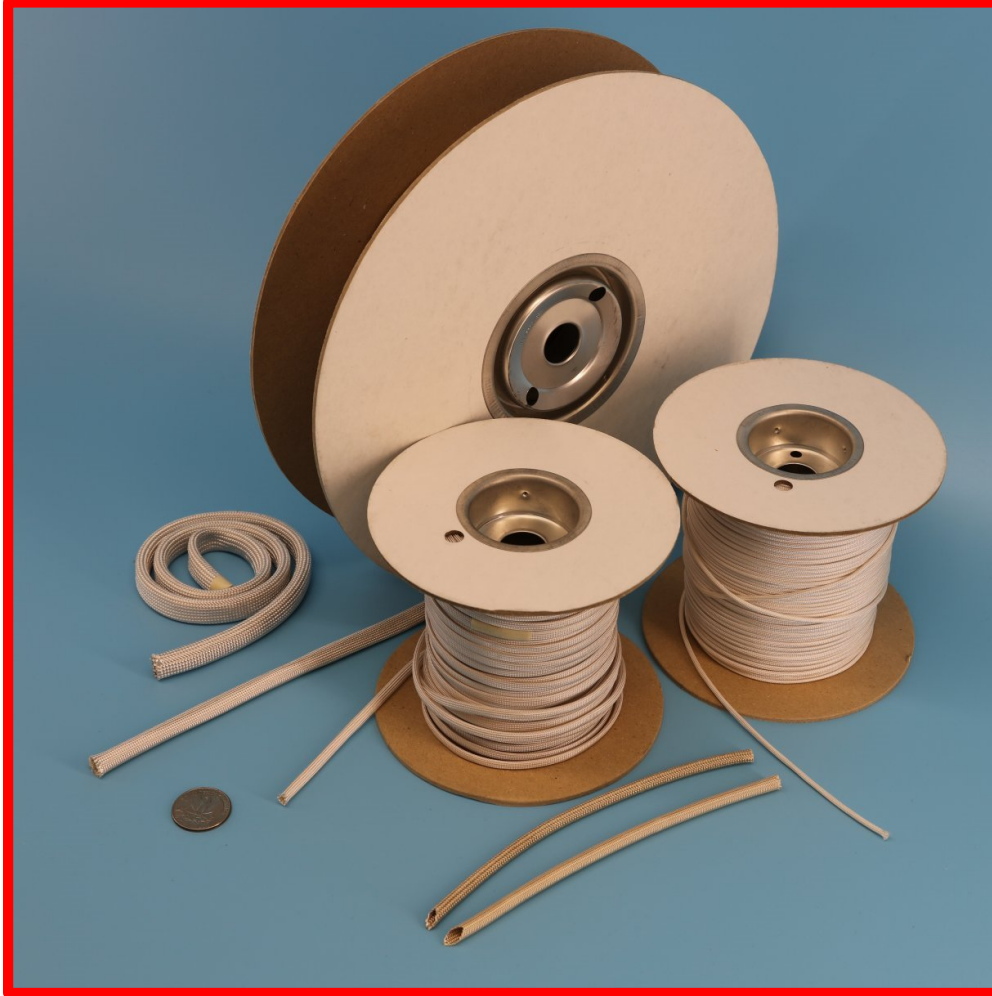
This product is not stock, it is made to order: Delivery is approximately 10 business days.

E-Fiberglass Braided Sleeve - Special Thin Wall .006" & .008".

Plain, Heat Treated or Heat Treated and with Binders

1200°F / 648°C: Continuous Rating – Higher Temperature for Shorter Periods

DeltaGlass™ Very High Temperature & Heat Resistant



- Plain e-fiberglass sleeve is 1200°F / 648°C continuous, 1742°F / 950°C intermittent.
- Sleeve with binders is rated to 600°F / 316°C continuous, 1140°F / 616°C intermittent.
- This product is available in full spools only.
- Resin binder treated available in white, red, green, brown, yellow, black, blue.
- This is not a stock item: approximately 10 business days to manufacture to order.

Very High Temperature & Heat Resistant E-Fiberglass Braided Sleeve Special Thin Wall Thickness: Plain available all sizes; or with Resin Binder up to 1/2" / 12.7mm ID						
Part Number	ID Nominal Size inch / mm / -dash			Available		Feet per Spool
				.006 wall	.008 wall	
S-FG-E-TW-M0016-01-X-Y	1/16 / 0.063	1.68	-01	Yes	Yes	1200'
S-FG-E-TW-M003-02-X-Y	1/8 / 0.125	3.17	-02	Yes	Yes	1200'
S-FG-E-TW-M005-03-X-Y	3/16 / 0.188	4.76	-03	Yes	Yes	1200'
S-FG-E-TW-M006-04-X-Y	1/4 / 0.250	6.35	-04	Yes	Yes	1200'
S-FG-E-TW-M008-05-X-Y	5/16 / 0.313	7.93	-05	Yes	Yes	600'
S-FG-E-TW-M010-06-X-Y	3/8 / 0.375	9.52	-06	Yes	Yes	600'
S-FG-E-TW-M011-07-X-Y	7/16 / 0.438	11.11	-07	Yes	Yes	600'
S-FG-E-TW-M013-08-X-Y	1/2 / 0.500	12.7	-08	Yes	Yes	600'
Sizes Below Not Available in .006" wall or with Resin Binder						
S-FG-E-TW-M016-10-8	5/8 / 0.625	15.87	-10	N/A	Yes	300'
S-FG-E-TW-M019-12-8	3/4 / 0.750	19.05	-12	N/A	Yes	300'
S-FG-E-TW-M022-14-8	7/8 / 0.875	22.22	-14	N/A	Yes	300'
S-FG-E-TW-M025-16-8	1 / 1.000	25.4	-16	N/A	Yes	300'
S-FG-E-TW-M032-20-8	1 1/4 / 1.250	31.75	-20	N/A	Yes	300'
S-FG-E TW-M038-24-8	1 1/2 / 1.500	38.1	-24	N/A	Yes	300'

For the "X" value in the part number:

use "8" to specify .008" wall
use "6" to specify .006" wall

For the "Y" value in the part number:

use "P" to specify Plain
Use "HT" to specify Heat Treated
use "B" to specify with Binder

Acrylic Coated Fiberglass Sleeve - Flexible - AWG Small Diameter

311°F / 155°C: High Temperature, Heat & Flame Resistant – UL & CSA Recognized

Available meeting NEMA Grade F-A-1, F-B-1, F-C-1, F-C-2 & F-C-3



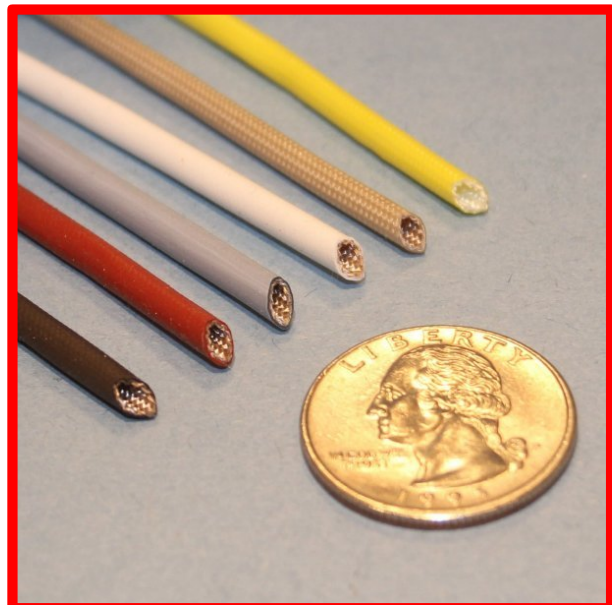
Designed as a primary insulation sleeve for protecting small diameter wire. Recognized by UL and CSA for 155°C, 600 volt service, and complies with VW-1 flammability requirements. Conforms to and is listed on the QPL for MIL-I-3190/9. Available in 3 grades: NEMA Grade A-1, B-1 and C-1.

Extremely flexible and easily installed. Used in electrical apparatus such as electric motors, transformers, generators, home appliances, lighting fixtures, instrument circuits and controls, switchgear, breaker panels, welding equipment.

The inner braid is very fine and tightly woven, and along with the acrylic coating, this is a tough and flexible sleeve for wire protection.

Available in all standard AWG wire sizes (see end of this section for dimensions and tolerances).

Available in 10 standard colors: Natural, Black, White, Green, Red, Yellow, Blue, Brown, Orange, Gray. Also available in 4 fluorescent colors: Orange, Pink, Green, Yellow.



Acrylic Coated Fiberglass Sleeve - Flexible - AWG Small Diameter
311°F / 155°C: High Temperature, Heat & Flame Resistant – UL & CSA Recognized
Available meeting NEMA Grade F-A-1, F-B-1, F-C-1, F-C-2 & F-C-3
(Continued)

<u>Property</u>	<u>Procedure</u>	<u>Performance</u>
Physical		
Tensile Strength, Coating	ASTM-D412	850 psi
Ultimate Elongation, Coating	ASTM-D412	150% @ 20°C
Tear Strength, Coating	ASTM-D624	60 psi
Flexibility & Toughness, Coating	UL 1441	Passes Penetration Test
Chemical		
Oil & Solvent* Resistance	MIL-I-3190/9	Passes (good)
Resistance to Acids and Alkalis	-	Good
Corrosion Resistance	-	Good. Contains no chlorine or other materials contributing to electrolyte formation
Compatibility	UL 1446	Good. Compatible with modified polyester, acrylic, epoxy, phenolic and formvar wire enamels.
Electrical		
Dielectric Strength: after 48/23/50		
Grade A	NEMA TF-1	7000V min avg., 5000v min individual
Grade B	NEMA TF-1	4000v min. Avg., 2500v min. Indiv.
Grade C-1	NEMA TF-1	2500v min. Avg., 1500v min.indiv.
Grade C-2	NEMA TF-1	1500v min. Avg., 800v min.indiv.
Grade C-3	NEMA TF-1	no voltage guarantee
after 96/23/96, Grade A	NEMA TF-1	50% of Original Value
Hydrolytic Stability after 336 hrs @ 70°C over Constant Water Reflex	MIL-I-3190/9	1500 volts min. avg
Thermal		
Thermal Endurance	MIL-I-3190/9 & UL 1441	Class 155°C (F)
Brittleness Temperature	ASTM-D350	-25°C
Flame Resistance	UL 1441	Passes (VW-1), Grade C3 only
	ASTM-D350, Method B	Passes
	NEMA TF-1	Passes
	MIL-I-3190/9, Method B	Passes
Pushback	MIL-I-3190/9	No cracks or ruptures, 6000V min avg breakdown strength
Resistance to potting temperature	MIL-I-3190/3	No blisters, flow or cracks visible after 15 min @ 225C

This product is not usually stock, it is made to order: Delivery is approximately 10 business days.

Acrylic Coated Fiberglass Sleeve - Flexible - AWG Small Diameter
311°F / 155°C: High Temperature, Heat & Flame Resistant – UL & CSA Recognized
Available meeting NEMA Grade F-A-1, F-B-1, F-C-1, F-C-2 & F-C-3
Primary Insulation Coated Fiberglass Sleeve for
Wire Protection, NEMA Grade A-1/B-1/C-1/C-2/C-3 classified

High Temperature - Small Diameter – Acrylic Coated Fiberglass Sleeve with UL/CSA rating and NEMA Grade F-A-1 / F-B-1 / F-C-1 – F-C-2 – F-C-3 Classification					
Part Number	Nominal ID				Feet per Spool
	AWG	Inches	mm	-dash	
S-FG-ACR-AWG24-X-Y-Z	24	0.022	0.56		500*
S-FG-ACR-AWG22-X-Y-Z	22	0.027	0.69		500*
S-FG-ACR-AWG20-X-Y-Z	20	0.034	0.86		500*
S-FG-ACR-AWG19-X-Y-Z	19	0.038	0.96		500*
S-FG-ACR-AWG18-X-Y-Z	18	0.042	1.07		500*
S-FG-ACR-AWG17-X-Y-Z	17	0.047	1.19		500*
S-FG-ACR-AWG16-X-Y-Z	16	0.053	1.35		500*
S-FG-ACR-AWG15-X-Y-Z	15	0.059	1.50		500*
S-FG-ACR-AWG14-X-Y-Z	14	0.066	1.68	-01	500*
S-FG-ACR-AWG13-X-Y-Z	13	0.076	1.93		250*
S-FG-ACR-AWG12-X-Y-Z	12	0.085	2.16		250*
S-FG-ACR-AWG11-X-Y-Z	11	0.095	2.41		250*
S-FG-ACR-AWG10-X-Y-Z	10	0.106	2.69		250*
S-FG-ACR-AWG9-X-Y-Z	9	0.118	3.10		250*
S-FG-ACR-AWG8-X-Y-Z	8	0.133	3.38	-02	250*
S-FG-ACR-AWG7-X-Y-Z	7	0.148	3.76		250*
S-FG-ACR-AWG6-X-Y-Z	6	0.166	4.22		150*
S-FG-ACR-AWG5-X-Y-Z	5	0.186	4.72	-03	150*
S-FG-ACR-AWG4-X-Y-Z	4	0.208	5.28		150*
S-FG-ACR-AWG3-X-Y-Z	3	0.234	5.94		150*
S-FG-ACR-AWG2-X-Y-Z	2	0.263	6.68	-04	150*
S-FG-ACR-AWG1-X-Y-Z	1	0.294	7.47		150*
S-FG-ACR-05-X-Y-Z	5/16	0.313	7.95	-05	150*
S-FG-ACR-AWG0-X-Y-Z	0	0.330	8.38		150
S-FG-ACR-06-X-Y-Z	3/8	0.375	9.52	-06	150
S-FG-ACR-07-X-Y-Z	7/16	0.438	11.12	-07	100
S-FG-ACR-08-X-Y-Z	1/2	0.500	12.70	-08	100
S-FG-ACR-10-X-Y-Z	5/8	0.625	15.87	-10	100
S-FG-ACR-12-X-Y-Z	3/4	0.750	19.05	-12	100
S-FG-ACR-14-X-Y-Z	7/8	0.875	22.22	-14	100
S-FG-ACR-16-X-Y-Z	1	1.000	25.40	-16	100
S-FG-ACR-18-X-Y-Z	1 1/8	1.125	28.57	-18	100
S-FG-ACR-20-X-Y-Z	1 1/4	1.250	31.75	-20	100
S-FG-ACR-22-X-Y-Z	1 3/8	1.375	34.92	-22	3**
S-FG-ACR-23-X-Y-Z	1 7/16	1.437	36.49	-23	3**
S-FG-ACR-24-X-Y-Z	1 1/2	1.500	38.10	-24	3**
S-FG-ACR-26-X-Y-Z	1 5/8	1.625	41.27	-26	3**
S-FG-ACR-28-X-Y-Z	1 3/4	1.750	44.45	-28	3**
S-FG-ACR-30-X-Y-Z	1 7/8	1.875	47.62	-30	3**
S-FG-ACR-32-X-Y-Z	2	2.000	50.80	-32	3**

For 1000 to 4999 feet -10% / For 5000 feet or more -17%

See end of section 1 for a table of pre-coated dimensional specifications for this product

For the "X" value in the part number, specify "S" for standard flexibility or "F" for enhanced flexibility.

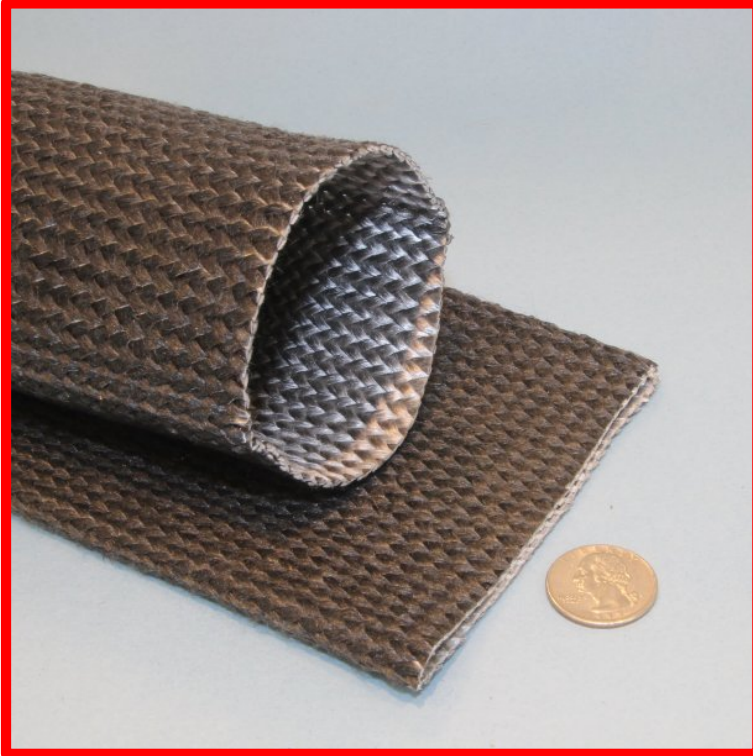
For the "Y" value in the part number, specify color. For "Z" specify grade

This product is available in full coils only.

This product is not stock, it is made to order: Delivery is approximately 15 business days.

* Longer Spool Lengths Available. ** Minimum order 30 pieces

Braided Fiberglass Vehicle Truck Engine Exhaust Pipe Sleeve
1200°F / 648°C: Continuous Rating – Higher Temperature for Shorter Periods
BlackMax™ High Temperature & Heat Resistant



- 1/16" wall thickness
- Acrylic saturant added for enhanced ease of handling and anti-fray

Designed as a protection sleeve for truck & generator engine exhaust piping.

Easy to cut and maintains its end shape for ease of installation. Easily secured with stainless clamps.

Black color hides dirt and grime contamination.

Protects Personnel from incidental contact burns.

Helps prevent fires due to spray from ruptured hydraulic or fuel supply lines contacting hot exhaust metal directly.

1200°F / 648°C continuous rating, high insulation value & excellent personnel protection

Part Number	Size		
	in / mm / -dash		
S-FG-BM-EX-M102-64	4.000	102	-64
S-FG-BM-EX-M114-72	4.500	114	-72
S-FG-BM-EX-M127-80	5.000	127	-80

This Product is Available By The Foot

Basalt Fiber Knitted Conformable Engine Exhaust Pipe Insulation Sleeve 1382°F / 750°C: ExhaustSock™

High Temperature & Heat Resistant Sleeve



- Helps maintain exhaust gas temperatures in order to meet regulatory requirements.
- Knitted design allows for high conformability.
- Can be fabricated with apertures to accommodate brackets and mounting pads.
- Available in pre-cut or continuous lengths.
- Expandable and durable – provides ease of installation.
- Conforms to bends, elbows, flex sections and flanges.
- Suitable for Fixed Generators, Marine Engines and Generators, Automotive, Truck, Bus, Construction and Mining equipment.
- Thermal conductivity: 0.031-0.038 W/mK

Parameter

Flammability
Flammability
Flammability with Oil Contamination
Fluid Resistance list below)

Test Method

SAE J369 /
D45133 Type A
BH 100-524 (ref. SAE J369)
BH100-003F

Result

No ignition
No ignition
Self-extinguishing
No degradation or loss of flexibility

50/50 Antifreeze/Distilled Water ; 5% NaCl; Transmission Fluid; Diesel Fluid LSRD-4; ASTM Reference Fuel C; SAE 5W30; Brake Fluid SAE RM-66;
Power Steering Fluid; Windshield Washer Fluid; Salt Spray ASTM G85

Thermal Containment Test per BH100-509 on ExhaustSock™ Sleeve

3.5" (89mm) Exhaust Pipe Parameters

Inlet Gas	828°C	Thermal Containment	251°C
Inlet Pipe Surface	534°C	Temperature at 20mm from sleeve (ambient)	121°C
Pipe	552°C	Temperature at 30mm from sleeve (ambient)	100°C
Sleeve	301°C	Temperature at 100mm from sleeve (ambient)	81°C

Very High-Temperature Knitted Rock Fiber Sleeve For Exhaust Pipe Protection

Part Number	ID Size in / mm / -dash			Feet per Box
S-BRF-KNIT-1.00-M025-16	1.00	25	-16	500
S-BRF-KNIT-1.50-M038-24	1.50	38	-24	300
S-BRF-KNIT-2.00-M051-32	2.00	51	-32	250
S-BRF-KNIT-2.50-M064-40	2.50	64	-40	225
S-BRF-KNIT-3.00-M076-48	3.00	76	-48	200
S-BRF-KNIT-3.50-M089-56	3.50	89	-56	175
S-BRF-KNIT-4.00-M102-64	4.00	102	-64	164
S-BRF-KNIT-5.00-M127-80	5.00	127	-80	125

Braided Fiberglass Sleeve with Vermiculite Coating: Premium Grade.
1500°F / 815°C: Continuous Rating – Higher Temperature for Shorter Periods
FlameShield™ 1500 Very High Temperature & Heat Resistant Sleeve



Effective thermal protection for wires, cables and hoses.

FlameShield™ braided fiberglass sleeve with specialty coating of Vermiculite.

- Available in thin wall (1/16 in. / 1.6mm.) and thick wall (1/8 in. / 3.18mm.).
- 1500°F / 815°C continuous exposure with excursion to 2000°F / 1093°C.
- Vermiculite adds Fire resistance, Anti-Fray and improved abrasion resistance.
- Certified to meet the requirements of ASTM E 162, ASTM E 662 & SMP 800-C.

Braided Fiberglass Sleeve with Vermiculite Coating: Premium Grade. (Continued)
1500°F / 815°C: Continuous Rating – Higher Temperature for Shorter Periods
FlameShield™ 1500 Very High Temperature & Heat Resistant Sleeve



1500°F / 815°C continuous rating, high insulation value & excellent personnel protection

The Vermiculite coating adds abrasion resistance and higher temperature capabilities which makes this sleeve a good insulator for hose, cable and copper or aluminum tubing. Meets Federal Railroad Administration requirements for surface flammability and rate of smoke generation.

FlameShield™ Very High Temperature & Heat Resistant Braided Vermiculite Coated Fiberglass Sleeve: Premium Grade				
Part Number	Size in / mm / -dash			Feet – Metres per Spool Thin wall / Thick wall
S-FG-VC-M006-04-X	.250	6	-04	1400 - 426 / 700 - 213
S-FG-VC-M010-06-X	.375	10	-06	1400 - 426 / 600 - 182
S-FG-VC-M013-08-X	.500	13	-08	1000 - 304 / 330 - 100
S-FG-VC-M016-10-X	.625	16	-10	900 - 274 / 315 - 96
S-FG-VC-M019-12-X	.750	19	-12	750 - 228 / 300 - 91
S-FG-VC-M022-14-X	.875	22	-14	650 - 198 / 300 - 91
S-FG-VC-M025-16-X	1.000	25	-16	500 - 152 / 290 - 88
S-FG-VC-M032-20-X	1.250	32	-20	450 - 137 / 280 - 85
S-FG-VC-M038-24-X	1.500	38	-24	350 - 106 / 225 - 68
S-FG-VC-M041-26-X	1.625	41	-26	300 - 91 / 208 - 63
S-FG-VC-M044-28-X	1.750	44	-28	300 - 91 / 208 - 63
S-FG-VC-M051-32-X	2.000	51	-32	250 - 76 / 190 - 57
S-FG-VC-M057-36-X	2.250	57	-36	250 - 76 / 190 - 57
S-FG-VC-M064-40-X	2.500	64	-40	225 - 68 / 180 - 54
S-FG-VC-M070-44-X	2.750	70	-44	225 - 68 / 180 - 54
S-FG-VC-M076-48-X	3.000	76	-48	200 - 60 / 175 - 53
S-FG-VC-M083-52-X	3.250	83	-52	200 - 60 / 175 - 53
S-FG-VC-M089-56-X	3.500	89	-56	190 - 57 / 170 - 51
S-FG-VC-M095-60-X	3.750	95	-60	190 - 57 / 170 - 51
S-FG-VC-M102-64-X	4.000	102	-64	175 - 53 / 140 - 42
S-FG-VC-M114-72-X	4.500	114	-72	175 - 53 / 140 - 42
S-FG-VC-M127-80-X	5.000	127	-80	120 - 36 / 100 - 30

For the “X” value in the p/n: use “1” to specify Thin Wall; use “2” to specify Thick Wall

This Product is Available By-The-Foot.

Minimum Order for less than 1” ID is 20 feet. Minimum order for 1” ID and larger is 10 feet.

Braided Fiberglass High Bulk Texturized Sleeve with Vermiculite Coating: Premium Grade

1500°F / 815°C: Continuous Rating – Higher Temperature for Shorter Periods

FlameShield™ 1500 TEX High Temperature & Heat Resistant



- FlameShield™ Braided High Bulk Texturized Premium Sleeve.
- Highest Insulation Value Sleeve Available.
- Available in Thin Wall (1/16") and Thick Wall (1/8").
- Texturization provides high bulk & high thermal insulation value.
- Certified to meet the requirements of ASTM E 162, ASTM E 662 & SMP 800-C.
- Vermiculite adds fire resistance, anti-fray and improved abrasion resistance.

This braided sleeve is fabricated from high quality type E fiberglass that will not burn and will withstand continuous exposure to temperatures of 1200°F / 648°C.

This material resists most acids and alkalis and is unaffected by most bleaches and solvents. It is highly flexible and conformable. The base fiber is manufactured to the specifications of ASTM D-578, ASTM committee D13, and subcommittee D13.18.

Available Plain and Vermiculite Coated.

1500°F / 815°C continuous rating, high insulation value & excellent personnel protection

MaxSleeve™ High Bulk Texturized Braided Fiberglass Sleeve With Vermiculite Coating - Premium Grade					
Part Number	Size inch / mm / -dash			Thin Wall	Thick Wall
				Feet / Metres per spool	Feet / Metres per spool
S-FG-TEXVC-M010-06-X	.375	10	-6	N/A	250 / 76
S-FG-TEXVC-M013-08-X	.500	13	-8	500 / 152	250 / 76
S-FG-TEXVC-M016-10-X	.625	16	-10	N/A	100 / 30
S-FG-TEXVC-M019-12-X	.750	19	-12	250 / 76	100 / 30
S-FG-TEXVC-M025-16-X	1.000	25	-16	250 / 76	100 / 30
S-FG-TEXVC-M032-20-X	1.250	32	-20	N/A	100 / 30
S-FG-TEXVC-M038-24-X	1.500	38	-24	250 / 76	100 / 30
S-FG-TEXVC-M051-32-X	2.000	51	-32	N/A	100 / 30

**For the "X" value in the part number:
use "1" to specify Thin Wall; use "2" to specify Thick Wall**

Thin Wall = 1/16" / 1.59mm • Thick Wall = 1/8" / 3.18mm

Weld Splatter Protection Sleeve with Velcro® Hook & Loop Closure Scuff-Sleeve™ VC Weld Shield



- Specialty protection for hoses, wire and cables.
- Sleeve with Velcro for easy retrofit.

FG/WeldShield sleeve is fiberglass base material with a neoprene rubber coating. Temperature range -60°F to +500°F with weld splatter protection. Very good UV protection.

FG/Carbon Fiber sleeve is fabricated with a fiberglass core and carbon fiber felt. Excellent for weld protection, hot tar, foundry and turbo exhaust. Temperature range -60°F to +1800°F. Metal thread and fastener construction. Excellent UV protection.

Sold in 25 foot increments up to 150 feet continuous rolls, except FG/CarbonFiber which has a 50 foot maximum roll length. Available in standard sizes; larger or custom sizes can be easily fabricated if required. Helps to organize and bundle hoses and cables.

Scuff-Sleeve™ VC: Weld Splatter Specialty Protection Sleeve					
Part Number	Size inch / mm / -dash			Available	
				FG/WeldShield A	FG/CarbonFiber B
*S-WPS-VCL-M025-16-X	1.00	25	-16	Yes	Yes
*S-WPS-VCL-M038-24-X	1.50	38	-24	Yes	N/A
S-WPS-VCL-M051-32-X	2.00	51	-32	Yes	Yes
S-WPS-VCL-M060-38-X	2.38	60	-38	Yes	N/A
S-WPS-VCL-M064-40-X	2.50	64	-40	N/A	N/A
S-WPS-VCL-M070-44-X	2.75	70	-44	Yes	N/A
S-WPS-VCL-M076-48-X	3.00	76	-48	Yes	Yes
S-WPS-VCL-M083-52-X	3.25	83	-52	Yes	N/A
S-WPS-VCL-M089-56-X	3.50	89	-56	Yes	N/A
S-WPS-VCL-M102-64-X	4.00	102	-64	Yes	Yes
S-WPS-VCL-M114-72-X	4.50	114	-72	Yes	Yes
S-WPS-VCL-M127-80-X	5.00	127	-80	Yes	Yes
S-WPS-VCL-M152-96-X	6.00	152	-96	Yes	Yes
S-WPS-VCL-M178-112-X	7.00	165	-104	Yes	Yes
S-WPS-VCL-M203-128-X	8.00	203	-128	Yes	Yes
S-WPS-VCL-M305-192-X	12.00	305	-192	Yes	N/A

For the "X" value in the part number:
specify "A" for FG/WeldShield and "B" for FG/CarbonFiber

Width of the Velcro is 1.5" except part numbers indicated with (*) which is .75".

Small Diameter Precision Braided InSilMax™ Silica Sleeve Hose, Cable, Wire, Pipe & Tube Protection

1800°F / 982°C: Continuous Rating – Higher Temperature for Shorter Periods

InSilMax™ Extreme High Temperature; Heat, Flame, Molten Metal & Weld Splatter Resistant



- An alternative to asbestos and ceramic based textiles.
- Highly flexible and minimal shrinkage.
- High abrasion resistance and tensile strength.
- Melts above 3000°F / 1648°C.
- Produced from an extremely pure base fiber (SiO₂) and can be used at 1800°F / 982°C continuously with short excursions to 3000°F / 1650°C.
- Silica based materials provide burn-through protection from molten metal, weld splatter and grinding sparks.

1800°F / 982°C continuous rating, high insulation value & excellent personnel protection

Very High Temperature & Heat Resistant Small Diameter Precision Braided InSilMax Sleeve			
Part Number	Nominal ID Size frac / inch / mm	Wall Thickness inch / mm	Feet / Metres per Spool
S-S-SD-0.016-M.396	1/64 / 0.0156 / 0.396 mm	0.008 / 0.203	100 / 30
S-S-SD-0.031-M.792	1/32 / 0.0312 / 0.792 mm	0.008 / 0.203	100 / 30
S-S-SD-0.062-M1.6-01	1/16 / 0.0625 / 1.587 mm	0.015 / 0.381	100 / 30
S-S-SD-0.125-M3.2-02	1/8 / 0.1250 / 3.175 mm	0.015 / 0.381	100 / 30
S-S-SD-0.187-M4.8-03	3/16 / 0.1875 / 4.762 mm	0.020 / 0.508	100 / 30
S-S-SD-0.250-M6.4-04	¼ / 0.2500 / 6.350 mm	0.020 / 0.508	100 / 30
S-S-SD-0.312-M7.9-05	5/16 / 0.3125 / 7.937 mm	0.025 / 0.635	100 / 30
S-S-SD-0.375-M9.5-06	3/8 / 0.375 / 9.525 mm	0.035 / 0.889	100 / 30
S-S-SD-0.500-M12.7-08	½ / 0.500 / 12.700 mm	0.035 / 0.889	50 / 15

Braided Silica Sleeve - Hose, Cable, Wire, Pipe & Tube Protection
1800°F / 982°C: Continuous Rating – Higher Temperature for Shorter Periods
InSilMax™ Extreme High Temperature; Heat, Flame, Molten Metal & Weld Splatter Resistant



- An alternative to asbestos and ceramic based textiles.
- Highly flexible and minimal shrinkage.
- High abrasion resistance and tensile strength.
- Melts above 3000°F / 1648°C.
- Produced from an extremely pure base fiber (SiO₂) and can be used at 1800°F / 982°C continuously with short excursions to 3000°F / 1650°C.
- 1/16" (.0625") / 1.6mm nominal wall thickness (sizes below 3/4" ID have an approximate .04"/1mm nominal wall thickness).
- Silica based materials provide burn-through protection from molten metal, weld splatter and grinding sparks.

1800°F / 982°C continuous rating, high insulation value & excellent personnel protection

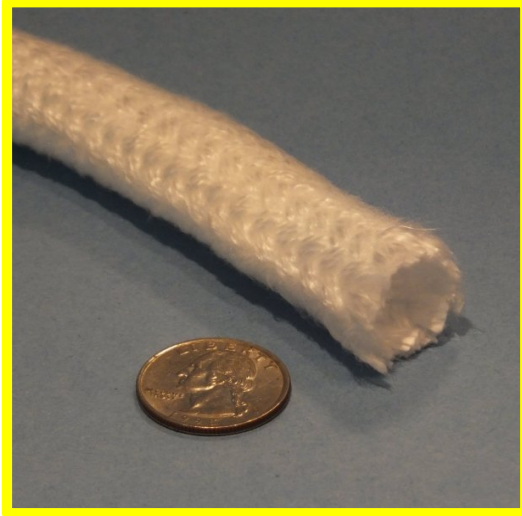
InSilMax™ Extreme Temperature Heat & Flame Resistant Braided Silica Sleeve				
Part Number	ID Size in / mm / -dash			Standard Lengths feet / metre
S-S-M006-04-X	.250	6	-04	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-M010-06-X	.375	10	-06	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-M013-08-X	.500	13	-08	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-M016-10-X	.625	16	-10	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-M019-12-X	.750	19	-12	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-M022-14-X	.875	22	-14	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-M025-16-X	1.000	25	-16	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-M032-20-X	1.250	32	-20	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-M038-24-X	1.500	38	-24	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-M044-28-X	1.750	44	-28	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-M051-32-X	2.000	51	-32	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-M064-40-X	2.500	64	-40	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-M070-44-X	2.750	70	-44	10 - 25 - 50 ft / 3 - 7.6 - 15 m
S-S-M076-48-X	3.000	76	-48	10 - 25 - 50 ft / 3 - 7.6 - 15 m
S-S-M083-52-X	3.250	83	-52	10 - 25 - 50 ft / 3 - 7.6 - 15 m
S-S-M089-56-X	3.500	89	-56	10 - 25 - 50 ft / 3 - 7.6 - 15 m
S-S-M095-60-X	3.750	95	-60	10 - 25 - 50 ft / 3 - 7.6 - 15 m
S-S-M102-64-X	4.000	102	-64	10 - 25 - 50 ft / 3 - 7.6 - 15 m
S-S-M114-72-X	4.500	114	-72	10 - 25 - 50 ft / 3 - 7.6 - 15 m

For the "X" value, insert length in feet

Other shorter or longer lengths may be available - please enquire

For sizes smaller than 1"/25mm ID – long lengths up to 300 feet may be available

Braided Silica Sleeve – Heavy Wall - Hose, Cable & Wire Protection
1800°F / 982°C: Continuous Rating – Higher Temperature for Shorter Periods
InSilMax™ +PL Extreme High Temperature; Heat, Flame, Molten Metal & Weld Splatter Resistant



- Superior Insulation and Flame Resistance due to heavy wall construction.
- An alternative to asbestos and ceramic based textiles.
- Highly flexible and minimal shrinkage.
- High abrasion resistance and tensile strength.
- Melts above 3000°F / 1648°C.
- Produced from an extremely pure base fiber (SiO₂) and can be used at 1800°F / 982°C continuously with short excursions to 3000°F / 1650°C.
- 3mm (.118") / wall thickness. Heaviest wall thickness available in this product line.
- Silica based materials provide burn-through protection from molten metal, weld splatter and grinding sparks.

1800°F / 982°C continuous rating, high insulation value & excellent personnel protection

InSilMax™ +PL Extreme Temperature Heat & Flame Resistant Silica Sleeve – Heavy Wall			
Part Number	ID Size in / mm / -dash		
S-S-HD-M006-04-X	.250	6	-04
S-S-HD-M010-06-X	.375	10	-06
S-S-HD-M013-08-X	.500	13	-08
S-S-HD-M016-10-X	.625	16	-10
S-S-HD-M019-12-X	.750	19	-12
S-S-HD-M022-14-X	.875	22	-14
S-S-HD-M025-16-X	1.000	25	-16
S-S-HD-M032-20-X	1.250	32	-20
S-S-HD-M038-24-X	1.500	38	-24
S-S-HD-M044-28-X	1.750	44	-28
S-S-HD-M051-32-X	2.000	51	-32
S-S-HD-M064-40-X	2.500	64	-40
S-S-HD-M070-44-X	2.750	70	-44
S-S-HD-M076-48-X	3.000	76	-48
S-S-HD-M083-52-X	3.250	83	-52
S-S-HD-M089-56-X	3.500	89	-56
S-S-HD-M095-60-X	3.750	95	-60
S-S-HD-M102-64-X	4.000	102	-64
S-S-HD-M114-72-X	4.500	114	-72

For the "X" value, use "S" for Full Spool, use "F" for By-The-Foot
This Product is available By-The-Foot – minimums may apply

Braided Silica Sleeve - XT/HD - Hose, Cable, Wire, Pipe & Tube Protection 2000°F / 1093°C: InSiMax™ XT



Extreme High Temperature; Heat, Flame, Molten Metal & Weld Splatter Resistant



- An alternative to asbestos and ceramic based textiles.
- Highly flexible and virtually no shrinkage.
- High abrasion resistance and tensile strength.
- Melts above 3000°F / 1648°C.
- Produced from an extremely pure base fiber (SiO₂) and can be used at 2000°F / 1093°C continuously with short excursions to 3000°F / 1650°C.
- 1/16" (.0625") / 1.6mm wall thickness (sizes below 3/4" ID have an approximate .04"/1mm nominal wall thickness).
- Silica based materials provide burn-through protection from molten metal, weld splatter, grinding sparks and direct flame exposure.

2000°F / 1093°C continuous rating, high insulation value & excellent personnel protection

InSiMax™ XT Extreme Temperature Heat & Flame Resistant Silica Sleeve				
Part Number	Size in / mm / -dash			Standard Lengths feet / metre
S-S-XT-M006-04-X	.250	6	-04	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-XT-M010-06-X	.375	10	-06	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-XT-M013-08-X	.500	13	-08	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-XT-M016-10-X	.625	16	-10	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-XT-M019-12-X	.750	19	-12	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-XT-M022-14-X	.875	22	-14	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-XT-M025-16-X	1.000	25	-16	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-XT-M032-20-X	1.250	32	-20	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-XT-M038-24-X	1.500	38	-24	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-XT-M044-28-X	1.750	44	-28	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-XT-M051-32-X	2.000	51	-32	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-XT-M064-40-X	2.500	64	-40	25 - 50 - 100 ft / 7.6 - 15 - 30 m
S-S-XT-M070-44-X	2.750	70	-44	10 - 25 - 50 ft / 3 - 7.6 - 15 m
S-S-XT-M076-48-X	3.000	76	-48	10 - 25 - 50 ft / 3 - 7.6 - 15 m
S-S-XT-M083-52-X	3.250	83	-52	10 - 25 - 50 ft / 3 - 7.6 - 15 m
S-S-XT-M089-56-X	3.500	89	-56	10 - 25 - 50 ft / 3 - 7.6 - 15 m
S-S-XT-M095-60-X	3.750	95	-60	10 - 25 - 50 ft / 3 - 7.6 - 15 m
S-S-XT-M102-64-X	4.000	102	-64	10 - 25 - 50 ft / 3 - 7.6 - 15 m
S-S-XT-M114-72-X	4.500	114	-72	10 - 25 - 50 ft / 3 - 7.6 - 15 m

For the "X" value, insert length in feet

Other shorter or longer lengths may be available - please enquire

Ceramic Fiber Braided Sleeve - Premium Grade

2000°F / 1093°C: CerMax™ High Temperature & Heat Resistant Sleeve



- Soft and pliable.
- Asbestos free.
- Cuts easily to length with scissors. This sleeve does not expand.

2000°F / 1093°C continuous rating, high insulation value

CerMax™ High Temperature & Heat Resistant Braided Ceramic Fiber Sleeve - Premium		
Part Number	Nominal ID	Spool Length Ft
S-C-B-M003-02	1/8"	200
S-C-B-M006-04	1/4"	200
S-C-B-M010-06	3/8"	200
S-C-B-M013-08	1/2"	100
S-C-B-M019-12	3/4"	100

This Product is NOT Available By-The-Foot – Spools Only

High Alumina Content Braided Ceramic Sleeve

2190°F / 1199°C: AluMax™ High Temperature & Heat Resistant Sleeve



- Soft and pliable. Asbestos free.
- Cuts easily to length with scissors.
- This is a braided sleeve and has a small amount of expandability.
- Highest temperature rated sleeve available.
- Fabricated from continuous filament fibers.
- Boron free.
- Wall Thickness: 1/64" sleeve: 0.008"; 1/32" sleeve: 0.010"; 1/16" sleeve: 0.028"; 1/8" through 3" ID: 0.035"
- May contain 2 lengths per spool. Add 15% for continuous length.
- Heat Cleaned / Heat Treated version available – add 15%.
- Other spool lengths available – please enquire.
- Dimension is nominal – may vary +/-5%.

2190°F / 1199°C continuous rating, high insulation value

AluMax™ High Temperature & Heat Resistant Braided Alumina Sleeve - Premium		
Part Number	Nominal ID inch / mm	Spool Length Ft / m
S-ALUMINA-0.015-M00039	1/64 / 0.39	100 / 30
S-ALUMINA-0.031-M00079	1/32" / 0.79	100 / 30
S-ALUMINA-0.062-M00158	1/16 / 1.58	100 / 30
S-ALUMINA-0.125-M00317	1/8" / 3.17	100 / 30
S-ALUMINA-0.187-M00476	3/16" / 4.76	100 / 30
S-ALUMINA-0.250-M00635	1/4" / 6.35	50 / 15
S-ALUMINA-0.312-M00793	5/16" / 7.93	50 / 15
S-ALUMINA-0.375-M00952	3/8" / 9.52	50 / 15
S-ALUMINA-0.500-M0127	1/2" / 12.7	50 / 15
S-ALUMINA-0.625-M0158	5/8" / 15.8	50 / 15
S-ALUMINA-0.750-M0190	3/4" / 19.0	50 / 15
S-ALUMINA-1.000-M0254	1" / 25.4	25 / 7.5
S-ALUMINA-1.500-M0381	1 1/2" / 38.1	25 / 7.5
S-ALUMINA-2.000-M051	2" / 51	25 / 7.5
S-ALUMINA-2.500-M064	2 1/2" / 64	25 / 7.5
S-ALUMINA-3.000-M076	3" / 76	25 / 7.5

This product is made to order - please allow 4 to 6 business days for production

High Alumina Content Braided Ceramic Sleeve – Thick Wall

2190°F / 1199°C: AluMax™ High Temperature & Heat Resistant Sleeve



- Soft and pliable. Asbestos free.
- Cuts easily to length with scissors.
- This is a braided sleeve and has a small amount of expandability.
- Highest temperature rated sleeve available.
- Fabricated from continuous filament fibers.
- Boron free.
- Wall Thickness of 0.125":
- Heat Cleaned / Heat Treated version available – add 15%.
- Other spool lengths available – please enquire.
- Dimension is nominal – may vary +/-5%.

2190°F / 1199°C continuous rating, high insulation value

AluMax™ High Temperature & Heat Resistant Braided Alumina Sleeve - Premium		
Part Number	Nominal ID inch / mm	Spool Length Ft / m
S-ALUMINA-HDW-0.500-M0127	1/2" / 12.7	50 / 15
S-ALUMINA-HDW-0.750-M0190	3/4" / 19.0	50 / 15
S-ALUMINA-HDW-1.000-M0254	1" / 25.4	25 / 7.5
S-ALUMINA-HDW-1.500-M0381	1 1/2" / 38.1	25 / 7.5

This product is made to order - please allow 4 to 6 business days for production

High Alumina Content Braided Ceramic Sleeve – XT (extended temperature) 2370°F / 1298°C: AluMax™ High Temperature & Heat Resistant Sleeve



- Soft and pliable. Asbestos free.
- Cuts easily to length with scissors.
- This is a braided sleeve and has a small amount of expandability.
- Highest temperature rated sleeve available.
- Fabricated from continuous filament fibers.
- Boron free.
- Wall Thickness: 1/64" sleeve: 0.008"; 1/32" sleeve: 0.010"; 1/16" sleeve: 0.028"; 1/8" through 3" ID: 0.035"
- May contain 2 lengths per spool. Add 15% for continuous length.
- Heat Cleaned / Heat Treated version available – add 15%.
- Other spool lengths available – please enquire.
- Dimension is nominal – may vary +/-5%.

2370°F / 1298°C continuous rating, high insulation value

AluMax™ Extended High Temperature & Heat Resistant Braided Alumina Sleeve - Premium		
Part Number	Nominal ID inch / mm	Spool Length Ft / m
S-ALUMINA-XT-0.015-M00039	1/64 / 0.39	100 / 30
S-ALUMINA-XT-0.031-M00079	1/32" / 0.79	100 / 30
S-ALUMINA-XT-0.062-M00158	1/16 / 1.58	100 / 30
S-ALUMINA-XT-0.125-M00317	1/8" / 3.17	100 / 30
S-ALUMINA-XT-0.187-M00476	3/16" / 4.76	100 / 30
S-ALUMINA-XT-0.250-M00635	1/4" / 6.35	50 / 15
S-ALUMINA-XT-0.312-M00793	5/16" / 7.93	50 / 15
S-ALUMINA-XT-0.375-M00952	3/8" / 9.52	50 / 15
S-ALUMINA-XT-0.500-M0127	1/2" / 12.7	50 / 15
S-ALUMINA-XT-0.625-M0158	5/8" / 15.8	50 / 15
S-ALUMINA-XT-0.750-M0190	3/4" / 19.0	50 / 15
S-ALUMINA-XT-1.000-M0254	1" / 25.4	25 / 7.5
S-ALUMINA-XT-1.500-M0381	1 1/2" / 38.1	25 / 7.5
S-ALUMINA-XT-2.000-M051	2" / 51	25 / 7.5
S-ALUMINA-XT-2.500-M064	2 1/2" / 64	25 / 7.5
S-ALUMINA-XT-3.000-M076	3" / 76	25 / 7.5

This product is made to order - please allow 4 to 6 business days for production

High Alumina Content Braided Ceramic Sleeve – Thick Wall – XT (extended temperature)

2370°F / 1298°C: AluMax™ High Temperature & Heat Resistant Sleeve



- Soft and pliable. Asbestos free.
- Cuts easily to length with scissors.
- This is a braided sleeve and has a small amount of expandability.
- Highest temperature rated sleeve available.
- Fabricated from continuous filament fibers.
- Boron free.
- Wall Thickness of 0.125":
- Heat Cleaned / Heat Treated version available – add 15%.
- Other spool lengths available – please enquire.
- Dimension is nominal – may vary +/-5%.

2370°F / 1298°C continuous rating, high insulation value

AluMax™ Extended High Temperature & Heat Resistant Braided Alumina Sleeve - Premium		
Part Number	Nominal ID inch / mm	Spool Length Ft / m
S-ALUMINA-XT-HDW-0.500-M0127	1/2" / 12.7	50 / 15
S-ALUMINA-XT-HDW-0.750-M0190	3/4" / 19.0	50 / 15
S-ALUMINA-XT-HDW-1.000-M0254	1" / 25.4	25 / 7.5
S-ALUMINA-XT-HDW-1.500-M0381	1 1/2" / 38.1	25 / 7.5

This product is made to order - please allow 4 to 6 business days for production

High Alumina Content Braided Ceramic Sleeve Typical Properties AluMax™ High Temperature & Heat Resistant Sleeve

S-Alumina and S-Alumina XT part numbers

During production, some organic content may be transferred to the sleeve from the production machinery. This may be vaporized by heat treating the sleeve at 950°C for 1 hour.

AluMax™ High Temperature & Heat Resistant Sleeve – Typical Properties			
Property	Unit	AluMax™ S-Alumina	AluMax™ S-Alumina-XT
Composition	Weight, %	62.5 AL ₂ O ₃ 24.5 SiO ₂ 13 B ₂ O ₃	70 AL ₂ O ₃ 28 SiO ₂ 2 B ₂ O ₃
Melting Point	C	1800	1800
Continuous Use Temperature (40% retained tensile strength) *	C	1200	1300
Filament Diameter	µm	8-12	10-12
Crystal size	nm	<500	<500
Crystal Phase		Distorted Mullite + amorphous	γ-AL ₂ O ₃ + amorphous
Density	g/cc	2.8	3.0
Refractive Index		1.57	1.61
Filament Tensile Strength (25.4 mm guage)	MPa / ksi	1630 / 236	1840 / 267
Filament Tensile Modulus	GPa / msi	150 / 22	190 / 27
Thermal Expansion (100-1100°C)	Ppm/°C	3.0 (25-500°C)	5.3
Dielectric Constant @ 9.5 GHz	** / ***	2.7 / 4.8	2.8 / 5.0
Loss Tangent @ 9.5 GHz	** / ***	0.003 / 0.004	0.001 / 0.001
Specific Heat @ 395°C	cal/g/°C	0.46	0.51

* Tested at room temperature after 100 hours soak.

** As per standard IEC 61189-2-721: AF-20 (312), BF-20 (440), DF-19 (610) and EF-19 (720) heat clean fabrics were used to run dielectric data using cavity method.

*** Test data after Air part subtracted.

**** Test ran on fibers heat treated at 950°C for 1 hour.

Spark Plug & Ignition Wire Boot Protection Sleeve

1200°F / 648°C: FlameShield™ High Temperature & Heat Resistant Sleeve



- Soft and pliable. Asbestos free.
- Easy to install - just slide over boot or plug.
- Requires no clearance to the header - direct contact will not deteriorate the sleeve.
- Wall thickness of .085". Diameter of .75" / 19mm
- Fits straight and angled boots.
- Available in 3 lengths: 4 1/2" (short), 7 1/2" (medium) and 12" (long).
- 4 Colors: White, Red, Blue, Black
- Short sleeves are available from stock in natural (White). Colors by special order
- Medium sleeves from stock are available in all colors.
- Long sleeves are available by special order.

1200°F / 648°C continuous rating, high insulation value

FlameShield™ High Temperature & Heat Resistant Sleeves for Ignition Boot and Spark Plug Protection	
Part Number	Length
S-FG-SPB-S-M019-12-X	4 1/2" / 115mm
S-FG-SPB-M-M019-12-X	7 1/2" / 190mm
S-FG-SPB-L-M019-12-X	12" / 305mm

For the "X" value use BK - Black, BU - Blue, RD - Red and NT for Natural (White)

Aluminized Heat Reflecting Fiberglass Sleeve - PET Film Coated 1200°F / 648°C DeltaGlass™ Base Material - 454°F / 240°C Film Coating



- Protection from intense radiant heat. Reflects more than 95% of the radiant heat that contacts its surface.
- Base fabric rated for continuous operation at 1200°F / 648°C.
- This sleeve is the perfect protection for cables and hoses when radiant heat from infrared sources such as super-hot metal slabs, proximity to liquid metal, open flame/plasma or engine exhaust manifolds and piping is a concern.
- Wall thickness .025" / .635mm.
- Sleeve is supplied collapsed flat on a spool.

This high temperature and radiant heat reflective sleeve is constructed from a high-temperature fine braid fiberglass sleeve, which is then coated with highly-reflective polished aluminum. The base fabric is designed for long term continuous operation at 1000°F / 537°C, this sleeve will withstand short duration exposure up to 1200°F / 650°C.

Added protection can be achieved by layering with other sleeve materials underneath the reflective layer.

FlameShield™ Aluminized PET Film Coated Fiberglass Radiant Heat Reflective Sleeve .025" / .635mm Wall Thickness		
Part Number	Inside Diameter inch / mm / dash#	Spool Length, feet Bulk / Small
S-FG-ALM-0.250-M006-04-X	0.25 / 6 / -04	350 / 100
S-FG-ALM-0.375-M010-06-X	0.37 / 9 / -06	300 / 100
S-FG-ALM-0.500-M013-08-X	0.50 / 13 / -08	250 / 100
S-FG-ALM-0.625-M016-10-X	0.62 / 16 / -10	250 / 100
S-FG-ALM-0.750-M019-12-X	0.75 / 19 / -12	250 / 100
S-FG-ALM-0.875-M022-14-X	0.87 / 22 / -14	250 / 100
S-FG-ALM-1.000-M025-16-X	1.00 / 25 / -16	250 / 100
S-FG-ALM-1.250-M032-20-X	1.25 / 32 / -20	250 / 100
S-FG-ALM-1.500-M038-24-X	1.50 / 38 / -24	250 / 100
S-FG-ALM-1.750-M044-28-X	1.75 / 44 / -28	100 / 50
S-FG-ALM-2.000-M051-32-X	2.00 / 51 / -32	100 / 50
S-FG-ALM-2.500-M064-40-X	2.50 / 64 / -40	100 / 50
S-FG-ALM-3.000-M076-48-X	3.00 / 76 / -48	100 / 50

For the "X" value:

use "B" for Bulk Spool size, use "S" for Small Spool size, use "F" for by-the-foot lengths

This Product is available in bulk spools, shop spools and By-The-Foot

Heat Reflecting Aluminized Film Coated Fiberglass Sleeve

454°F / 240°C Convoluted High Bulk – with Aluminum Foil Coating

DeltaGlass™ / PET filament Blended Base Material



- Protection from radiant heat. Reflects more than 95% of the radiant heat that contacts its surface.
- Base yarn is a blend of e-fiberglass and PET filaments, rated for continuous operation at 454°F / 240°C. The PET interweave keeps the sleeve in its round form for easy wire/cable/hose insertion.
- This sleeve provides protection for cables and hoses when radiant heat from infrared sources such as super-hot metal slabs, proximity to liquid metal, open flame/plasma or engine exhaust manifolds is a concern.
- Wall thickness .045" / 1.14mm. Sleeve is supplied in a 4 foot length.

This high temperature and radiant heat reflective sleeve is constructed from a high-temperature fine braid fiberglass and PET filament interwoven base sleeve, which is then coated with highly-reflective polished aluminum foil. The base fabric is designed for long term continuous operation at 454°F / 240°C.

Added protection can be achieved by layering with other sleeve or tape materials underneath the reflective layer.

FlameShield™ Aluminum Foil Coated Fiberglass Radiant Heat Reflective Convoluted Sleeve .045" / 1.14mm Wall Thickness	
Part Number	Inside Diameter inch / mm / dash#
S-FG-AL-CONVOL-0.375-M010-06	0.37 / 10 / -06
S-FG-AL-CONVOL-0.500-M013-08	0.50 / 13 / -08
S-FG-AL-CONVOL-0.620-M016-10	0.62 / 16 / -10
S-FG-AL-CONVOL-0.750-M019-12	0.75 / 19 / -12
S-FG-AL-CONVOL-0.875-M022-14	0.87 / 22 / -14
S-FG-AL-CONVOL-1.000-M025-16	1.00 / 25 / -16
S-FG-AL-CONVOL-1.250-M032-20	1.25 / 32 / -20

This Product is only available in 4 foot length sections

Aluminized Film Coated Fiberglass Heat Reflective Split Sleeve with Adhesive Closure

454°F / 240°C DeltaGlass™ / PET Base Material blend - Aluminum Foil Coating

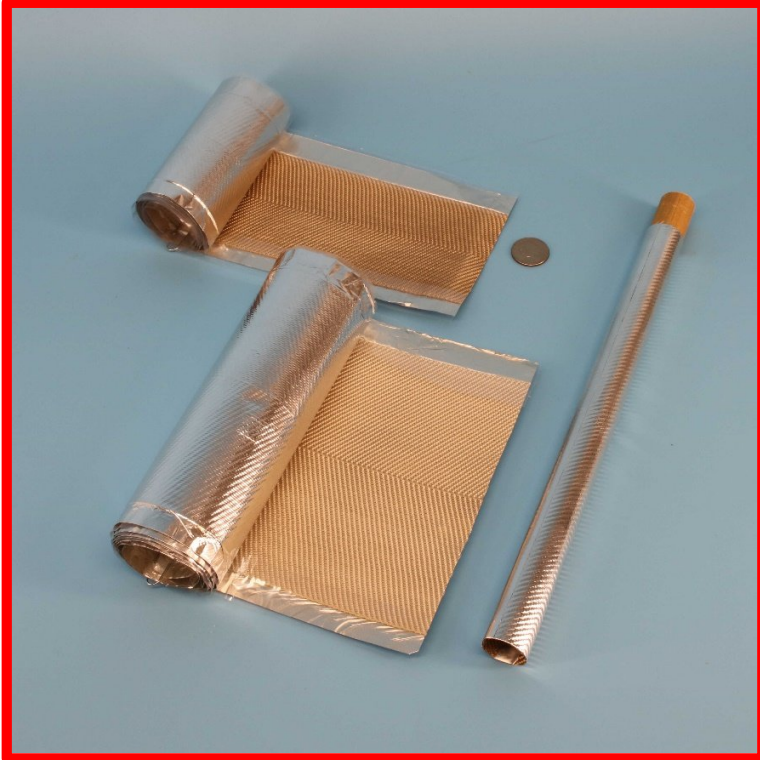


- Split Sleeve for easy installation on existing wires, cables or hoses.
- Supplied in 4 foot / 1.2 metre lengths.
- Fiberglass base sleeve with PET filament interleave. Aluminum foil coating, with an aluminum foil adhesive closure strip.
- Adhesive strip closure keeps out contaminants and liquids.
- Cuts cleanly.
- Protects wiring or hoses from radiant and convective heat.
- Excellent automotive under-hood protection of wiring and hoses from engine heat.
- .042" / 1.06mm wall thickness.
- The sleeve keeps its round shape due to the PET filament interweave. Resists crushing.

DeltaGlass™ Heat Reflective Split Sleeve Aluminized Film Coated Fiberglass with Adhesive Closure			
Part Number	ID Size inch / mm		Weight/Section oz / grams
S-FG-AL-SPLIT-ACL-0.250-M006-04	1/4"	6	1.3 / 36
S-FG-AL-SPLIT-ACL-0.375-M010-06	3/8"	10	2.6 / 73
S-FG-AL-SPLIT-ACL-0.500-M013-08	1/2"	13	3.3 / 93
S-FG-AL-SPLIT-ACL-0.625-M016-10	5/8"	16	4.0 / 115
S-FG-AL-SPLIT-ACL-0.750-M019-12	3/4"	19	4.8 / 138
S-FG-AL-SPLIT-ACL-1.000-M025-16	1"	25	5.9 / 166
S-FG-AL-SPLIT-ACL-1.250-M032-20	1 1/4"	32	7.5 / 212
S-FG-AL-SPLIT-ACL-1.500-M038-24	1 1/2"	38	7.8 / 220
S-FG-AL-SPLIT-ACL-2.000-M051-32	2"	51	9.4 / 266

This sleeve is non-expandable – please measure your application carefully.

**Aluminized Heat Reflecting Fiberglass Sleeve forming Tape/Wrap;
with adhesive strip - PET Film Coated**
1200°F / 648°C DeltaGlass™ Base Material - 454°F / 240°C Film Coating



- Protection from intense radiant heat. Reflects more than 95% of the radiant heat that contacts its surface.
- Base fabric rated for continuous operation at 1200°F / 648°C. The adhesive withstands 425°F / 218°C.
- This tape wrap has a high temperature adhesive strip along its length, allowing the tape to be wrapped and formed into a sleeve around wires, cables or hoses, or wrapped spirally down the length.
- Provides protection for cables and hoses when radiant heat from infrared sources such as super-hot metal slabs, proximity to liquid metal, open flame/plasma or engine exhaust manifolds is a concern.
- Thickness .025".

This high temperature and radiant heat reflective tape wrap is constructed from a high-temperature fine woven fiberglass fabric substrate, which is then coated with highly-reflective polished aluminum. The base fabric is designed for long term continuous operation at 1200°F / 648°C.

Added protection can be achieved by layering with other sleeve or tape materials underneath the reflective layer.

FlameShield™ Aluminized PET Film Coated Fiberglass Radiant Heat Reflective Tape Wrap for Sleeve Formation			
Part Number	Resulting Sleeve Maximum Inside Diameter inch / mm / dash#	Tape Width	Spool Length, feet Bulk / Small
S-FG-AL-TACL-0.500-M013-08-X	0.50 / 13 / -08	1.5"	250 / 100
S-FG-AL-TACL-0.750-M019-12-X	0.75 / 19 / -12	2.25"	250 / 100
S-FG-AL-TACL-1.000-M025-16-X	1.00 / 25 / -16	3.75"	200 / 100
S-FG-AL-TACL-1.250-M032-20-X	1.25 / 32 / -20	4.5"	200 / 100
S-FG-AL-TACL-1.500-M038-24-X	1.50 / 38 / -24	5.25"	200 / 100
S-FG-AL-TACL-1.750-M044-28-X	1.75 / 44 / -28	6"	100 / 50
S-FG-AL-TACL-2.000-M051-32-X	2.00 / 51 / -32	6.5"	100 / 50
S-FG-AL-TACL-2.250-M057-36-X	2.25 / 57 / -36	7.5"	100 / 50

For the "X" value: use "B" for Bulk Spool size, use "S" for Small Spool size

Radiant Heat Reflective Sleeve for Cable, Hose, Wire and Line Protection: Aluminum Foil Coated Fiberglass 1000°F / 537°C: FlameShield™: High Temperature & Radiant Heat Reflective Sleeve for Low Flex Static Applications



- Protection from intense radiant heat. Reflects more than 95% of the radiant heat that contacts its surface.
- The base fabric is rated for continuous operation at 1200°F / 648°C. The aluminum foil melts at 1220°F / 660°C. The aluminum is bonded to the fiberglass under pressure and with an adhesive that will smoke off at 425°F / 218°C - long term high temperature exposure may result in the aluminum foil being separated from the underlying fabric material.
- This sleeve provides optimum protection for cables and hoses when radiant heat from infrared sources such as super-hot metal slabs, proximity to liquid metal, open flame/plasma or engine exhaust manifolds is a concern.
- Heat reflecting layer is pure aluminum foil.
- This sleeve is designed for low flex or low movement and static applications. High flexing cycles will result in the foil cracking.
- Excellent automotive under-hood protection for wiring and hoses.

This heat reflecting sleeve is constructed from a high-temperature base fabric which is then coated with highly-reflective polished aluminum foil. The aluminum coating melts at 1220°F / 660°C, however it does take some time for the aluminum to absorb enough heat to melt – thereby it can withstand short exposure to the higher temperatures.

The sleeve is fabricated from a roll of heat reflecting fabric, and is sewn with a double lock-stitch seam utilizing high-temperature fiberglass thread. The resulting sleeve has a teardrop or tadpole profile when viewed on-end; the width of the sewn tail is typically 5/8" or 16mm. A sleeve with Velcro closure is available, making the sleeve installable on cables and hoses without having to disconnect them. Added thermal protection can be achieved by layering with other sleeve materials underneath the reflective layer.

FlameShield™ Aluminum Foil Coated Fiberglass Radiant Heat Reflective Sewn Sleeve – Low Flex & Static Applications	
Part Number	Inside Diameter inch / mm / dash#
S-FG-ALF-SWN-0.500-M013-08-X	0.50 / 13 / -08
S-FG-ALF-SWN-0.750-M019-12-X	0.75 / 19 / -12
S-FG-ALF-SWN-1.000-M025-16-X	1.00 / 25 / -16
S-FG-ALF-SWN-1.250-M032-20-X	1.25 / 32 / -20
S-FG-ALF-SWN-1.500-M038-24-X	1.50 / 38 / -24
S-FG-ALF-SWN-1.750-M044-28-X	1.75 / 44 / -28
S-FG-ALF-SWN-2.000-M051-32-X	2.00 / 51 / -32
S-FG-ALF-SWN-2.500-M064-40-X	2.50 / 64 / -40
S-FG-ALF-SWN-3.000-M076-48-X	3.00 / 76 / -48
S-FG-ALF-SWN-3.500-M089-56-X	3.50 / 89 / -56
S-FG-ALF-SWN-4.000-M102-64-X	4.00 / 102 / -64
Other sizes available – please enquire	

For the X value: specify "21" for construction from 21 oz/yd² fabric; specify "35" for construction from 35 oz/yd² fabric

Note: The aluminum adhesion on the 35oz fabric is not as high as on the 21oz fabric, and some cracking of the aluminum foil will occur due to repeated folding or flexing of the material.

This Product is Available By-The-Foot; some minimums may apply

Aluminized PET Film Coated Fiberglass Radiant Heat Reflective Sewn Sleeve

1000°F / 537°C DeltaGlass™ Base Material - 454°F / 240°C Film Coating
High Temperature & Radiant Heat Reflective Sleeve for High Flex Applications



- Protection from intense radiant heat.
- Reflects more than 95% of the radiant heat that contacts its surface.
- While the base fabric is rated for continuous operation at 1200°F / 648°C, the PET film coating is rated for continuous 392°F/200°C with no degradation. The aluminized PET coated film melts at 489°F / 254°C
- This sleeve provides optimum protection for cables and hoses when radiant heat from infrared sources such as super-hot metal slabs, proximity to liquid metal, open flame/plasma or engine exhaust manifolds is a concern.
- Heat reflecting layer is dual side aluminized film.
- This sleeve is designed for high flex or high movement applications.
- Highly popular for engine under-hood wiring & hose/tube protection

The sleeve is fabricated from a roll fabric, and is sewn with a double lock-stitch seam utilizing high-temperature thread. The resulting sleeve has a teardrop or tadpole profile when viewed on-end; the width of the sewn tail is typically 5/8" or 16mm. A sleeve with Velcro closure is available, making the sleeve installable on cables and hoses without having to disconnect them. The Velcro sleeve results in a circular sleeve profile when closed. Added protection can be achieved by layering with other sleeve materials underneath the reflective layer.

FlameShield™ Aluminized PET Film Coated Fiberglass Radiant Heat Reflective Sewn Sleeve – High Flex Applications	
Part Number	Inside Diameter inch / mm / dash#
S-FG-ALM-SWN-0.500-M013-08	0.50 / 13 / -08
S-FG-ALM-SWN-0.750-M019-12	0.75 / 19 / -12
S-FG-ALM-SWN-1.000-M025-16	1.00 / 25 / -16
S-FG-ALM-SWN-1.250-M032-20	1.25 / 32 / -20
S-FG-ALM-SWN-1.500-M038-24	1.50 / 38 / -24
S-FG-ALM-SWN-1.750-M044-28	1.75 / 44 / -28
S-FG-ALM-SWN-2.000-M051-32	2.00 / 51 / -32
S-FG-ALM-SWN-2.500-M064-40	2.50 / 64 / -40
S-FG-ALM-SWN-3.000-M076-48	3.00 / 76 / -48
S-FG-ALM-SWN-3.500-M089-56	3.50 / 89 / -56
S-FG-ALM-SWN-4.000-M102-64	4.00 / 102 / -64
Other sizes available – please enquire	

This Product is Available By-The-Foot

Aluminum Foil Coated Fiberglass Heat Reflective Sleeve with VELCRO® Brand Hook & Loop Closure

**350°F / 176°C: Aluminum Foil Coated Fiberglass High Temperature &
Radiant Heat Reflective, For Low Flex and Static Applications**



- Protection from intense radiant heat.
- Reflects more than 95% of the radiant heat that contacts its surface.
- Base fabric is rated for continuous operation at 1200°F / 648°C.
- This sleeve is the perfect protection for cables and hoses when radiant heat from infrared sources such as super-hot metal slabs, proximity to liquid metal, open flame/plasma or engine exhaust manifolds is a concern.
- VELCRO® Brand hook & loop closure allows the sleeve to be installed and removed from wire, cable, hose and pipe without disconnection.
- Designed for low flex and static applications.

Constructed from a high-temperature base fiberglass fabric which is then laminated with highly heat reflective polished aluminum foil. The temperature limited component of this fabrication is the hook/loop closure at 350°F / 176°C; this sleeve will withstand short duration exposure up to 1200°F / 650°C. The aluminum coating melts at 1220°F / 660°C, however it does take some time for the aluminum to absorb enough heat to melt – thereby it can withstand short exposure to the higher temperatures. A higher temperature rated nomex hook and loop is also available.

The sleeve is fabricated from a roll fabric, and is then sewn with VELCRO® Brand hook and loop, allowing this sleeve to be installed and removed without disconnection of wiring, cables, hose and pipe. Sewing is performed with high temperature thread. Added protection can be achieved by layering with other sleeve materials underneath the reflective layer.

The same base fabric can be used for constructing a wide variety of protective sleeves and covers.

Aluminum Foil Coated Fiberglass Radiant Heat Protection Sleeve with VELCRO® Brand Hook & Loop	
Part Number	Inside Diameter inch / mm / dash#
S-FG-ALF-VCL-0.750-M019-12-X	0.75 / 19 / -12
S-FG-ALF-VCL-1.000-M025-16-X	1.00 / 25 / -16
S-FG-ALF-VCL-1.250-M032-20-X	1.25 / 32 / -20
S-FG-ALF-VCL-1.500-M038-24-X	1.50 / 38 / -24
S-FG-ALF-VCL-1.750-M044-28-X	1.75 / 44 / -28
S-FG-ALF-VCL-2.000-M051-32-X	2.00 / 51 / -32
S-FG-ALF-VCL-2.500-M064-40-X	2.50 / 64 / -40
S-FG-ALF-VCL-3.000-M076-48-X	3.00 / 76 / -48
S-FG-ALF-VCL-3.500-M089-56-X	3.50 / 89 / -56
S-FG-ALF-VCL-4.000-M102-64-X	4.00 / 102 / -64
Other sizes available – please enquire. Nomex hook/loop also available.	

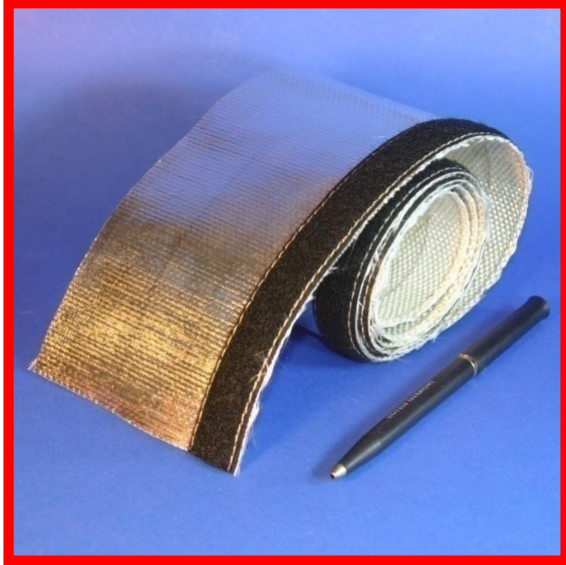
For the X value: specify "21" for construction from 21 oz/yd² fabric; specify "35" for construction from 35 oz/yd² fabric

This Product is Available By-The-Foot

Heat Reflective Aluminized PET Coated Fiberglass Sleeve with VELCRO® Brand Hook & Loop Closure

350°F / 176°C Maximum exposure

High Temperature & Radiant Heat Reflective For High Flex and
High Movement Applications



- Protection from intense radiant heat.
- Reflects more than 95% of the radiant heat that contacts its surface.
- Base fabric is rated for continuous operation at 1000°F / 537°C.
- This sleeve is the perfect protection for cables and hoses when radiant heat from infrared sources such as super-hot metal slabs, proximity to liquid metal, open flame/plasma or engine exhaust manifolds is a concern.
- Velcro closure allows the sleeve to be installed and removed from wire, cable, hose and pipe without disconnection.
- Designed for high flex and movement applications.

Constructed from a high-temperature base fiberglass fabric which is then laminated with dual side aluminized PET film. The temperature limited component of this fabrication is the hook/loop closure at 350°F / 176°C; the aluminized PET film coating will survive exposure to 454°F / 240°C, this sleeve will withstand short duration exposure up to 1000°F / 537°C.

The sleeve is fabricated from a roll fabric, and is then sewn with hook & loop tape, allowing this sleeve to be installed and removed without disconnection of wiring, cables, hose and pipe. Sewing is performed with high temperature thread. The hook and loop sleeve results in a circular sleeve profile when closed. Added protection can be achieved by layering with other sleeve materials underneath the reflective layer.

The same base fabric can be used for constructing a wide variety of protective sleeves and covers.

Aluminum Film Coated Fiberglass Radiant Heat Protection Sleeve with VELCRO® Brand Hook & Loop	
Part Number	Inside Diameter inch / mm / dash#
S-FG-ALM-VCL-0.750-M019-12	0.75 / 19 / -12
S-FG-ALM-VCL-1.000-M025-16	1.00 / 25 / -16
S-FG-ALM-VCL-1.250-M032-20	1.25 / 32 / -20
S-FG-ALM-VCL-1.500-M038-24	1.50 / 38 / -24
S-FG-ALM-VCL-1.750-M044-28	1.75 / 44 / -28
S-FG-ALM-VCL-2.000-M051-32	2.00 / 51 / -32
S-FG-ALM-VCL-2.500-M064-40	2.50 / 64 / -40
S-FG-ALM-VCL-3.000-M076-48	3.00 / 76 / -48
S-FG-ALM-VCL-3.500-M089-56	3.50 / 89 / -56
S-FG-ALM-VCL-4.000-M102-64	4.00 / 102 / -64
Other sizes available – please enquire	

This Product is Available By-The-Foot

Heat Reflective Aluminized PET Coated Fiberglass Sleeve with Zipper Closure

454°F / 240°C Maximum exposure

High Temperature & Radiant Heat Reflective For High Flex and Movement Applications



- Protection from intense radiant heat.
- Reflects more than 95% of the radiant heat that contacts its surface.
- Base fabric is 20oz/yd² and is rated for continuous operation at 1000°F / 537°C.
- This sleeve is the perfect protection for cables and hoses when radiant heat from infrared sources such as super-hot metal slabs, proximity to liquid metal, open flame/plasma or engine exhaust manifolds is a concern.
- Zipper closure allows the sleeve to be installed and removed from wire, cable, hose and pipe without disconnection.
- Designed for high flex and movement applications.
- Zippers maximum length is 150 feet. Shorter lengths for lower volume orders.

Constructed from a high-temperature base fiberglass fabric which is then laminated with dual side aluminized PET film. Designed for long term continuous operation at 454°F / 240°C, this sleeve will withstand short duration exposure up to 1200°F / 648°C. The aluminum film coating melts at 460°F.

Sleeve may be installed and removed without disconnection of wiring, cables, hose and pipe. Sewing is performed with high temperature thread. The zipper tape is nomex and the zipper teeth and guides are brass. Added protection can be achieved by layering with other sleeve materials underneath the reflective layer.

Aluminum Film Coated Fiberglass Radiant Heat Protection Sleeve with Zipper Closure	
Part Number	Inside Diameter inch / mm / dash#
S-FG-ALM-ZC-0.750-M019-12	0.75 / 19 / -12
S-FG-ALM-ZC-1.000-M025-16	1.00 / 25 / -16
S-FG-ALM-ZC-1.250-M032-20	1.25 / 32 / -20
S-FG-ALM-ZC-1.500-M038-24	1.50 / 38 / -24
S-FG-ALM-ZC-1.750-M044-28	1.75 / 44 / -28
S-FG-ALM-ZC-2.000-M051-32	2.00 / 51 / -32
S-FG-ALM-ZC-2.500-M064-40	2.50 / 64 / -40
S-FG-ALM-ZC-3.000-M076-48	3.00 / 76 / -48
S-FG-ALM-ZC-3.500-M089-56	3.50 / 89 / -56
S-FG-ALM-ZC-4.000-M102-64	4.00 / 102 / -64
Other sizes available – please enquire	

This Product is Available By-The-Foot

Heat Reflective Aluminum Foil Coated Fiberglass Sleeve with Snap Closure

454°F / 240°C Continuous Exposure
High Temperature & Radiant Heat Reflective



- Protection from radiant heat. Reflects more than 95% of the radiant heat that contacts its surface.
- Base fabric is a silicone wash coated fiberglass woven fabric (the wash coating reduces release of loose fibers) of 20oz/yd² weight and is rated for continuous operation at 1000°F / 537°C. Aluminum foil coating on one side.
- This sleeve is suitable protection for wiring, cables and hoses when radiant heat from infrared sources such as hot metal slabs, proximity to liquid metal, open flame/plasma or engine exhaust manifolds is a concern.
- Snap closure allows the sleeve to be installed and removed from wire, cable, hose and pipe without disconnection.
- Maximum length is 150 feet.

Constructed from a high-temperature base fiberglass fabric which is then laminated with aluminum foil. Designed for long term continuous operation at 454°F / 240°C, this sleeve will withstand short duration exposure up to 1200°F / 648°C.

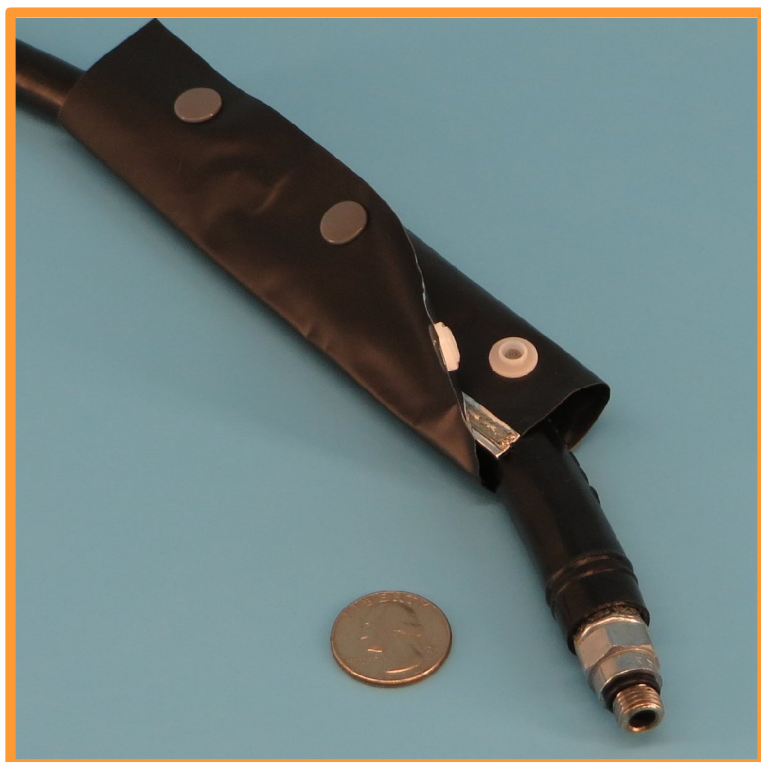
Sleeve may be installed and removed without disconnection of wiring, cables, hose and pipe. Added protection can be achieved by layering with other sleeve materials underneath the reflective layer.

Aluminum Foil Coated Fiberglass Radiant Heat Protection Sleeve with Metal Snap Closure	
Part Number	Inside Diameter inch / mm / dash#
S-FG-ALF-SNAP-0.750-M019-12	0.75 / 19 / -12
S-FG-ALF-SNAP-1.000-M025-16	1.00 / 25 / -16
S-FG-ALF-SNAP-1.125-M028-18	1.125 / 28 / -18
S-FG-ALF-SNAP-1.500-M038-24	1.50 / 38 / -24
S-FG-ALF-SNAP-2.000-M051-32	2.00 / 51 / -32
S-FG-ALF-SNAP-2.750-M070-44	2.75 / 70 / -44
Other custom sizes available – please enquire	

This Product is Available By-The-Foot

EMI / RFI Shielding Split Sleeve with earthing braid & snap closure

302°F / 150°C Maximum Continuous Exposure

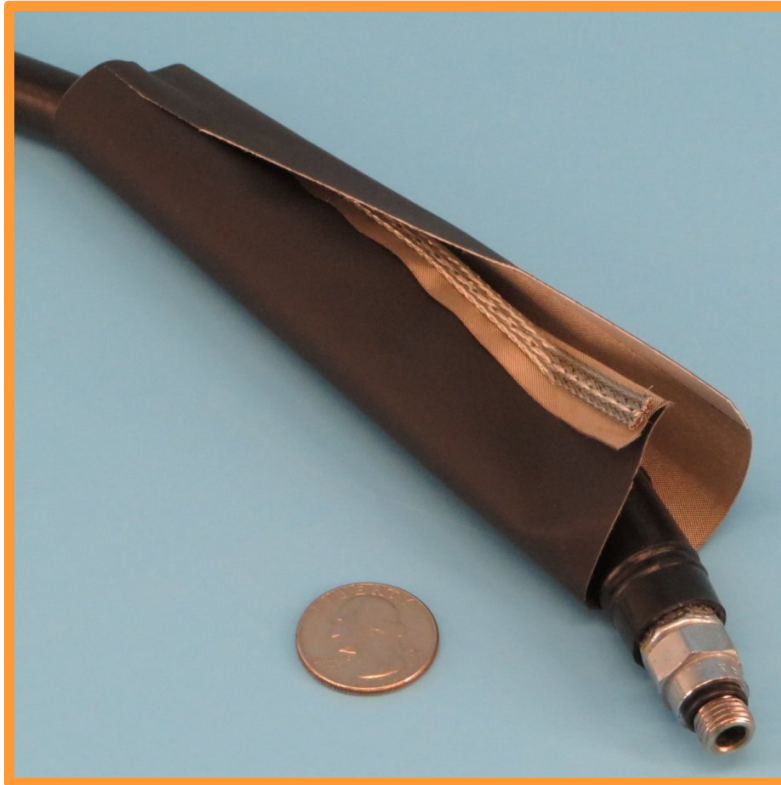


- Easy to install PVC sleeve with snap closure.
- Aluminized internal layer is connected to an earthing drain 15 AWG tinned copper braid for connection to ground at one end of the sleeve or both.
- Available as a 50 or 164 foot roll length.
- Sleeve may be easily cut to length and be installed/removed without disconnection of wiring or cables.
- Flexible to -70°F / -57°C.

PVC with Aluminized Side and Earthing Drain Wire for EMI/RFI Protection - Plastic Snap Closure	
Part Number	Inside Diameter inch / mm / dash#
S-EMIRFI-PVC-SNAP-0.375-M010-06-X	0.375 / 10 / -06
S-EMIRFI-PVC-SNAP-0.500-M013-08-X	0.50 / 13 / -08
S-EMIRFI-PVC-SNAP-0.750-M019-12-X	0.75 / 19 / -12
S-EMIRFI-PVC-SNAP-1.000-M025-16-X	1.00 / 25 / -16
S-EMIRFI-PVC-SNAP-1.125-M028-18-X	1.125 / 28 / -18
S-EMIRFI-PVC-SNAP-1.500-M038-24-X	1.50 / 38 / -24
S-EMIRFI-PVC-SNAP-2.000-M051-32-X	2.00 / 51 / -32
S-EMIRFI-PVC-SNAP-2.750-M070-44-X	2.75 / 70 / -44
S-EMIRFI-PVC-SNAP-4.000-M101-64-X	4.00 / 101 / -64
Other custom sizes available – please enquire	

For the “X” value: use “B” for 164 foot spool size, use “S” for 50 foot spool size

EMI / RFI / EMF Non Magnetic Shielding Split Sleeve with Adhesive Closure 250°F / 121°C Maximum Continuous Exposure (176°F for UL version)



- Easy to install Polyurethane (PFR-8235) with nylon ripstop laminate that has an integrated copper coating; includes a tinned copper earthing braid and acrylic closure strip.
- The earthing drain 15 AWG tinned copper braid allows for connection to ground at one end of the sleeve or both.
- Minimum roll length is 50 feet. Bulk spool length is 200 feet.
- Sleeve may be easily cut to length and be installed/removed without disconnection of wiring or cables.
- Nickel and halogen free.
- Flexible to -70°F / -57°C.
- Provides Non-magnetic shielding.

Conductive layer:

- Conductive: < 0.1 ohm/sq
- 0.005" thickness
- RoHS compliant

Outer Shell:

- Dielectric: 800v/mil
- 0.007" thickness
- RoHS compliant
- Flame Retardant: UL-510
- Acrylic adhesive strip with release liner

Shielding Effectiveness (E-field) MIL-STD-285

30 MHz - >60dB; 100 MHz - >80dB; 200 MHz - >75dB; 300 MHz - >75dB;
400 to 1000 MHz - >70dB; 1000 to 7000 MHz - >58dB

EMI / RFI / EMF Non Magnetic Shielding Split Sleeve with Adhesive Closure (Continued)

250°F / 121°C Maximum Continuous Exposure (176°F for UL version)



**Polyurethane with laminated nylon/copper impregnation sleeve.
integrated earthing drain wire for EMI / RFI / EMF Protection
Acrylic Adhesive Closure**

Part Number	Inside Diameter inch / mm / dash#
S-EMIRFI-PU-CU-ACL-0.250-M006-04-X	0.250 / 06 / -04
S-EMIRFI-PU-CU-ACL-0.375-M010-06-X	0.375 / 10 / -06
S-EMIRFI-PU-CU-ACL-0.500-M013-08-X	0.50 / 13 / -08
S-EMIRFI-PU-CU-ACL-0.675-M016-10-X	0.675 / 16 / -10
S-EMIRFI-PU-CU-ACL-0.750-M019-12-X	0.75 / 19 / -12
S-EMIRFI-PU-CU-ACL-0.875-M022-14-X	0.875 / 22 / -14
S-EMIRFI-PU-CU-ACL-1.000-M025-16-X	1.00 / 25 / -16
S-EMIRFI-PU-CU-ACL-1.125-M028-18-X	1.125 / 28 / -18
S-EMIRFI-PU-CU-ACL-1.500-M038-24-X	1.50 / 38 / -24
S-EMIRFI-PU-CU-ACL-1.750-M044-28-X	1.75 / 44 / -28
S-EMIRFI-PU-CU-ACL-2.000-M051-32-X	2.00 / 51 / -32
S-EMIRFI-PU-CU-ACL-2.250-M057-36-X	2.25 / 57 / -36
S-EMIRFI-PU-CU-ACL-2.500-M064-40-X	2.50 / 64 / -40
S-EMIRFI-PU-CU-ACL-2.750-M070-44-X	2.75 / 70 / -44
S-EMIRFI-PU-CU-ACL-3.000-M076-48-X	3.00 / 76 / -48
S-EMIRFI-PU-CU-ACL-3.500-M089-56-X	3.50 / 89 / -56
S-EMIRFI-PU-CU-ACL-4.000-M101-64-X	4.00 / 101 / -64
Other custom sizes available – please enquire	

For the “X” value: use “50” for 50 foot roll size, use “200” for 200 foot bulk roll size

EMI / RFI Wire and Cable Harness Shielding Sleeve

302°F / 150°C: FlameShield™



- Lightweight
- Extreme Flexibility
- Excellent Electro-Magnetic Interference and Radio Frequency Interference (EMI / RFI) Shielding 1 MHz to 1 GHz
- Aramid fiber with conductivity
- Expandability
- Approximate 20% attenuation at maximum expanded diameter

- End-to-end shielding solution
- 164 feet per spool

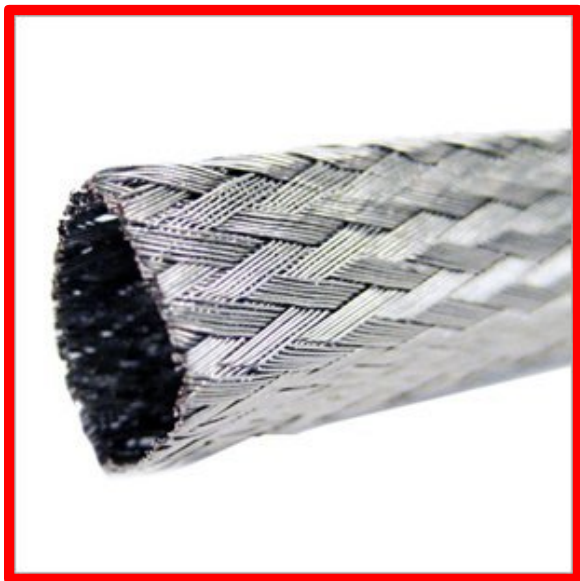


FlameShield™ EMI/RFI Wire & Cable Shielding Sleeve			
Part Number	ID Size inch / mm		Expansion Range
S-EMI-0.125-M003-02	1/8"	3	1/16 to 1/4
S-EMI-0.375-M010-06	3/8"	10	1/4 to 1/2
S-EMI-0.500-M013-08	1/2"	13	3/8 to 3/4
S-EMI-0.750-M019-12	3/4"	19	1/2 to 1

Not available By-The-Foot

Tinned Copper Metal Braided Sleeve; Tubular

HoseSaver™ / CableSaver™ : 1832°F / 1000°C: MIL QQB-575 / A-A-59569



- Made from pure copper which has been tinned.
- Excellent Abrasion Protection.
- EMI / RFI Gasket & Sleeve.
- Provides rodent protection for burial cables and hoses.
- Braid angle allows for small amount of size expansion or compression.
- Clamps or tape can hold sleeve tight to underlying wire, cable or hose.
- Supplied in round form, spooled.
- Meets MIL QQB-575 / A-A-59569

Tinned Copper Braided Sleeve HoseSaver™ / CableSaver™			
Part Number	ID Size inch / mm		Spool Length, in feet Bulk / Small Spool
S-METAL-CTT-0.062-M0015-X	1/16"	1.5	250 / 100
S-METAL-CTT-0.109-M0028-X	7/64"	2.8	250 / 100
S-METAL-CTT-0.125-M0031-X	1/8"	3.1	250 / 100
S-METAL-CTT-0.156-M004-X	5/32"	4	250 / 100
S-METAL-CTT-0.203-M005-X	13/64"	5	250 / 100
S-METAL-CTT-0.250-M006-X	1/4"	6	250 / 100
S-METAL-CTT-0.375-M010-X	3/8"	10	250 / 100
S-METAL-CTT-0.500-M013-X	1/2"	13	100 / 50
* S-METAL-CTT-0.625-M016-X	5/8"	16	100 / 50
S-METAL-CTT-0.781-M020-X	25/32"	20	100 / 50
S-METAL-CTT-0.875-M022-X	7/8"	22	100 / 50
S-METAL-CTT-1.000-M025-X	1"	25	100 / 50
S-METAL-CTT-1.125-M028-X	1 1/8"	28	100 / 50
* S-METAL-CTT-1.250-M032-X	1 1/4"	32	100 / 50
S-METAL-CTT-1.375-M035-X	1 3/8"	35	100 / 50
S-METAL-CTT-1.500-M038-X	1 1/2"	38	100 / 50
S-METAL-CTT-2.000-M051-X	2	51	100 / 50
* S-METAL-CTT-2.250-M057-X	2 1/4	57	100 / 50

For the "X" value: use "B" for Bulk Spool size, use "S" for Small Spool size,

Part numbers marked with * are not specified in the MIL Spec

Tinned Copper Metal Braided Sleeve; Tubular (Continued)

HoseSaver™ / CableSaver™ : 1832°F / 1000°C: MIL QQB-575 / A-A-59569

Meets MIL QQB-575 / A-A-59569

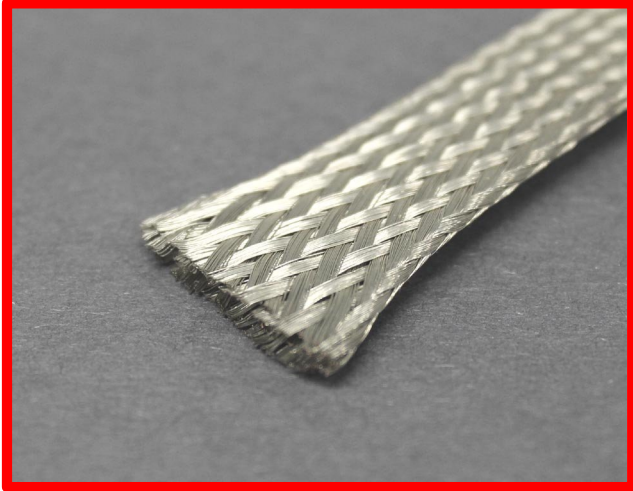
Electrical Specifications

Tinned Copper Braided Sleeve Electrical Specifications HoseSaver™ / CableSaver™				
Part Number	AWG of Individual Wires	Carriers	Wires per Carrier	Current Capacity Amps
S-METAL-CTT-0.062-M0015-X	36	24	2	11
S-METAL-CTT-0.109-M0028-X	36	24	4	19
S-METAL-CTT-0.125-M0031-X	36	24	5	25
S-METAL-CTT-0.156-M004-X	36	24	10	40
S-METAL-CTT-0.203-M005-X	32	24	5	46
S-METAL-CTT-0.250-M006-X	36	24	16	53
S-METAL-CTT-0.375-M010-X	36	48	8	53
S-METAL-CTT-0.500-M013-X	36	48	11	62
* S-METAL-CTT-0.625-M016-X	34	48	8	64
S-METAL-CTT-0.781-M020-X	36	48	18	88
S-METAL-CTT-0.875-M022-X	30	48	7	100
S-METAL-CTT-1.000-M025-X	30	48	8	120
S-METAL-CTT-1.125-M028-X	30	48	9	130
* S-METAL-CTT-1.250-M032-X	30	48	10	145
S-METAL-CTT-1.375-M035-X	30	48	11	150
S-METAL-CTT-1.500-M038-X	30	48	12	165
S-METAL-CTT-2.000-M051-X	30	48	14	180
* S-METAL-CTT-2.250-M057-X	30	48	16	190

Part numbers marked with * are not specified in the MIL Spec

Tinned Copper Metal Braided Sleeve; Flat

HoseSaver™ / CableSaver™ : 1832°F / 1000°C: MIL QQB-575 / A-A-59569



- Made from Pure Copper. Then Tinned.
- Excellent Abrasion Protection.
- EMI / RFI Gasket & Sleeve.
- Provides Blow-out protection for hydraulic hoses.
- Provides rodent protection for burial cables and hoses.
- Braid angle allows for small amount of size expansion or compression.
- Clamps or tape can hold sleeve tight to underlying wire, cable or hose.
- Supplied in flat form, spooled.
- Meets MIL QQB-575 / A-A-59569

Tinned Copper Braided Sleeve: Flat HoseSaver™ / CableSaver™			
Part Number	ID Size inch / mm		Spool Length, in feet Bulk / Small Spool
S-METAL-CTF-0.125-M0031-X	1/8"	3.1	250 / 100
S-METAL-CTF-0.187-M005-X	3/16"	5	250 / 100
S-METAL-CTF-0.250-M006-X	1/4"	6	250 / 100
* S-METAL-CTF-0.375-M010-X	3/8"	10	250 / 100
S-METAL-CTF-0.625-M016-X	5/8"	16	100 / 50
S-METAL-CTF-0.750-M019-X	3/4"	19	100 / 50
* S-METAL-CTF-1.000-M025-X	1"	25	100 / 50
S-METAL-CTF-1.375-M035-X	1 3/8"	35	100 / 50
S-METAL-CTF-1.500-M038-X	1 1/2"	38	100 / 50
* S-METAL-CTF-2.000-M051-X	2	51	50 / 50
* S-METAL-CTF-3.000-M076-X	3	76	50 / 25

For the "X" value:
use "B" for Bulk Spool size, use "S" for Small Spool size, use "F" for By The Foot

Part numbers marked with * are not specified in the MIL Spec

Tinned Copper Metal Braided Sleeve; Flat (Continued)

HoseSaver™ / CableSaver™ : 1832°F / 1000°C: MIL QQB-575 / A-A-59569

Meets MIL QQB-575 / A-A-59569

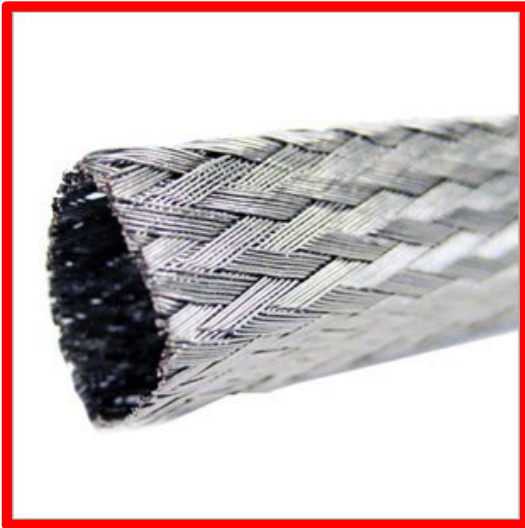
Electrical Specifications

Tinned Copper Braided Sleeve Electrical Specifications HoseSaver™ / CableSaver™				
Part Number	AWG of Individual Wires	Carriers	Wires per Carrier	Current Capacity Amps
S-METAL-CT-0.125-M0031-X	36	24	3	16
S-METAL-CT-0.187-M005-X	36	24	5	25
S-METAL-CT-0.250-M006-X	36	24	10	40
S-METAL-CT-0.375-M010-X	36	48	6	40
S-METAL-CT-0.625-M016-X	36	48	8	53
S-METAL-CT-0.750-M019-X	36	48	18	88
S-METAL-CT-1.000-M025-X	36	48	18	85
S-METAL-CT-1.375-M035-X	30	48	7	100
S-METAL-CT-1.500-M038-X	30	48	11	145
S-METAL-CT-2.000-M051-X	30	48	28	255
S-METAL-CT-3.000-M076-X	30	48	47	390

Part numbers marked with * are not specified in the MIL Spec

Nickel Plated Copper Metal Braided Sleeve; Tubular

HoseSaver™ / CableSaver™ : 1832°F / 1000°C: MIL QQB-575 / A-A-59569



- Pure copper which has been nickel plated.
- Individual strands have 50 micro-inches of nickel plating.
- Excellent corrosion protection
- Excellent Abrasion Protection.
- EMI / RFI Gasket & Sleeve.
- Provides rodent protection for burial cables and hoses.
- Braid angle allows for small amount of size expansion or compression.
- Clamps or tape can hold sleeve tight to underlying wire, cable or hose.
- Supplied in round form, spooled.
- Meets MIL QQB-575 / A-A-59569

Nickel Plated Copper Braided Sleeve HoseSaver™ / CableSaver™ MIL QQB-575 / A-A-59569			
Part Number	ID Size inch / mm		Spool Length, in feet Bulk / Small Spool
S-METAL-NC-0.032-M0008-X	1/32"	0.79	250 / 100
# S-METAL-NC-0.062-M0015-X	1/16"	1.58	250 / 100
S-METAL-NC-0.078-M0019-X	5/64"	1.98	250 / 100
# S-METAL-NC-0.109-M0028-X	7/64"	2.77	250 / 100
# S-METAL-NC-0.125-M0031-X	1/8"	3.17	250 / 100
* S-METAL-NC-0.140-M0035-X	9/64"	3.57	250 / 100
S-METAL-NC-0.156-M0039-X	5/32"	3.96	250 / 100
# S-METAL-NC-0.171-M0043-X	11/64"	4.36	250 / 100
* S-METAL-NC-0.187-M0047-X	3/16"	4.76	250 / 100
# S-METAL-NC-0.203-M0051-X	13/64"	5.15	250 / 100
# S-METAL-NC-0.250-M0063-X	1/4"	6.35	250 / 100
S-METAL-NC-0.281-M0071-X	9/32"	7.14	250 / 100
# S-METAL-NC-0.375-M0095-X	3/8"	9.52	250 / 100
S-METAL-NC-0.437-M0111-X	7/16"	11.11	250 / 100
# S-METAL-NC-0.500-M0127-X	1/2"	12.70	100 / 50
S-METAL-NC-0.562-M0142-X	9/16"	14.28	100 / 50

indicates that multiple versions of this product are available with other than R36N construction. Please inquire.

For the "X" value: use "B" for Bulk Spool size, use "S" for Small Spool size,

Part numbers marked with * are not specified in the MIL Spec

Nickel Plated Copper Metal Braided Sleeve; Tubular (Continued)

HoseSaver™ / CableSaver™ : 1832°F / 1000°C: MIL QQB-575 / A-A-59569



Part Number	ID Size	
	inch	mm
* S-METAL-NC-0.625-M015-X	5/8"	15.87
S-METAL-NC-0.656-M016-X	21/32"	16.66
* S-METAL-NC-0.687-M017-X	11/16"	17.46
# S-METAL-NC-0.781-M019-X	25/32"	19.84
# S-METAL-NC-0.875-M022-X	7/8"	22.22
S-METAL-NC-1.000-M025-X	1"	25.40
S-METAL-NC-1.125-M028-X	1 1/8"	28.57
* S-METAL-NC-1.250-M032-X	1 1/4"	31.75
S-METAL-NC-1.375-M035-X	1 3/8"	34.92
S-METAL-NC-1.500-M038-X	1 1/2"	38.10
S-METAL-NC-2.000-M051-X	2	50.80
* S-METAL-NC-2.250-M057-X	2 1/4	57.15

For sizes in this table, bulk spool is 100 feet. Small spool is 50 feet.

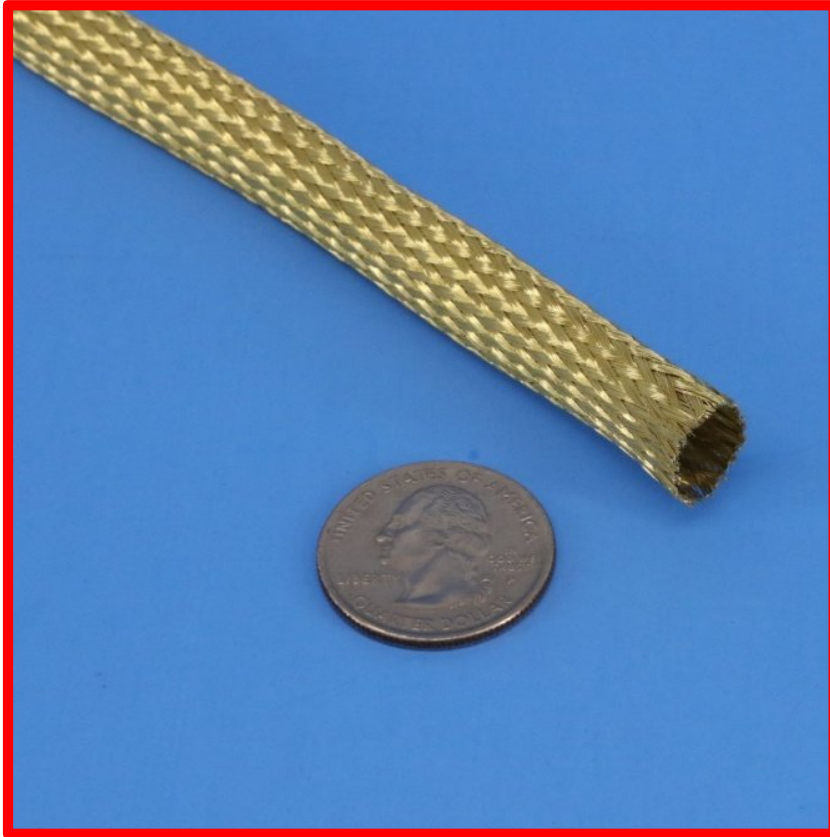
indicates that multiple versions of this product are available with other than R36N construction. Please inquire.

For the "X" value: use "B" for Bulk Spool size, use "S" for Small Spool size,

Part numbers marked with * are not specified in the MIL Spec

Brass Metal Braided Sleeve; Tubular

HoseSaver™ / CableSaver™ : 1472°F / 800°C



- Made from brass (copper/zinc alloy).
- Antimicrobial.
- EMI / RFI Gasket & Sleeve.
- Provides rodent protection for burial cables and hoses.
- Braid angle allows for size expansion.
- Clamps or tape can hold sleeve tight to underlying wire, cable or hose.
- Supplied in flattened form, spooled. Easily re-tubularized.
- Popular for improving aesthetic appearance of hoses and wiring on automotive and industrial equipment.

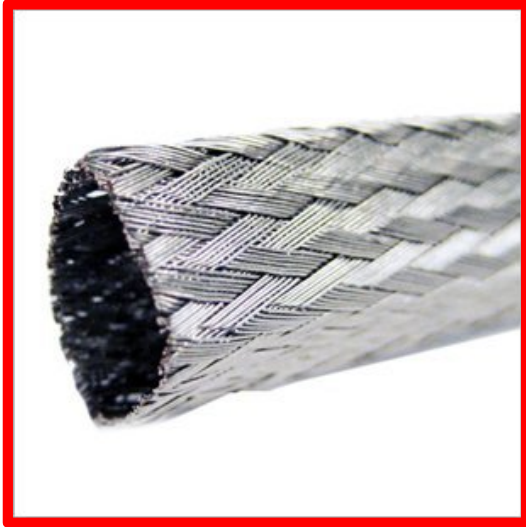
Brass Braided Sleeve HoseSaver™ / CableSaver™				
Part Number	Nominal ID inch / mm	ID Range inch / mm		Spool Length, feet Bulk / Small Spool
S-METAL-BRA-0.125-M0031-X	1/8 / 3.1	1/8" – 1/4	3.1 - 6	250 / 25
S-METAL-BRA-0.250-M006-X	1/4 / 6	1/4" – 3/8	6 - 10	100 / 25
S-METAL-BRA-0.375-M010-X	3/8 / 10	3/8" – 3/4"	10 – 19	100 / 25
S-METAL-BRA-0.500-M013-X	1/2 / 12.7	1/2" – 1"	12.7 - 25	100 / 25

Wall Thickness: 0.125 ID - .015". 0.250 ID - .027". 0.375 ID - .015". 0.500 ID - .020"

For the "X" value: use "B" for Bulk Spool size, use "S" for Small Spool size

Aluminum Braided Sleeve: 5154A Aluminum

1022°F / 550°C:

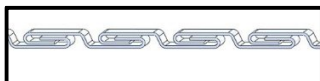


- 1/3 the weight of copper.
- Abrasion Protection & Crush Resistance.
- EMI / RFI Protection.
- Can be secured with metal tie wraps, bands, and clamps.
- Supplied as a round sleeve, coiled and boxed.
- Highly flexible and small bend radius.
- RoHS compliant

Aluminum Braided Sleeve		
Part Number	I.D. inch / m m	Weight per 1000 foot in lbs.
S-METAL-AL-0.125-M0031	0.125 / 3.1	4.3
S-METAL-AL-0.187-M0047	0.187 / 4.7	7.3
S-METAL-AL-0.250-M0063	0.250 / 6.3	12.7
S-METAL-AL-0.375-M0095	0.375 / 9.5	13.3
S-METAL-AL-0.500-M0127	0.500 / 12.7	17.6
S-METAL-AL-0.625-M0158	0.625 / 15.8	18.7
S-METAL-AL-0.875-M0222	0.875 / 22.2	33.5
S-METAL-AL-1.000-M0254	1.000 / 25.4	46.6
S-METAL-AL-2.000-M0508	2.000 / 50.8	76.6

Stainless Steel Metal Spiral Wound Sleeve: T304 or T316

SensorGuard™ 2500°F / 1371°C:



Wall Construction

- Spiral wound stainless steel sleeve provides excellent high-flexibility protection for wiring, tubing, wiring bundles, cables & small hoses on industrial machinery, and for small gauge sensor wiring applications. Available in various wall construction profiles and stainless grades.
- Excellent Abrasion Protection & Crush Resistance.
- EMI / RFI Protection.
- Can be secured with metal tie wraps, bands, and clamps.
- Silicone end plugs can be drilled for passthru and used to seal the ends for temperatures up to 500F/260C.
- Provides rodent protection for burial wires, cables, tubing and hoses.
- Supplied as a round sleeve, coiled and boxed.
- Highly flexible and small bend radius.
- Due to fluctuating raw material pricing please call.
- Other construction profiles available, including with a sealing gasket and/or liners between spirals to allow gas & material conveyance with a smooth ID.

Stainless Steel Spiral Wound High-Flexibility Sleeve SensorGuard™

Part Number	I.D. inch / m m	Stainless Thickness	Bend Radius inch	Weight per foot in lbs.
S-METAL-SS-SG-0.187-M0047	0.187 / 4.7	.008"	1.1	.05
S-METAL-SS-SG-0.250-M006	0.250 / 6	.008"	1.4	.05
S-METAL-SS-SG-0.312-M0079	0.312 / 7.9	.008"	1.7	.06
S-METAL-SS-SG-0.375-M0095	0.375 / 9.5	.010"	2.2	.11
S-METAL-SS-SG-0.437-M011	0.437 / 11	.010"	2.5	.12
S-METAL-SS-SG-0.500-M013	0.500 / 13	.012"	2.8	.17
S-METAL-SS-SG-0.562-M014	0.562 / 14	.012"	3.5	.19
S-METAL-SS-SG-0.625-M0158	0.625 / 15.8	.012"	3.8	.21
S-METAL-SS-SG-0.750-M019	0.750 / 19	.012"	4.9	.27
S-METAL-SS-SG-0.875-M022	0.875 / 22	.012"	5.7	.29
S-METAL-SS-SG-1.000-M025	1.000 / 25	.012"	6.5	.31

Other sizes up to 12" ID available – please call to inquire

This product is made to order – however we typically have the 0.250 and 0.375 sizes in stock. Due to fluctuating raw material pricing, please call or email for pricing. Last pricing displayed.

This Product may be Available By-The-Foot: Standard coils are typically 300 to 1000 feet
For By-the-foot pricing add 25%

Stainless Steel Metal Braided Sleeve; Round – Hose Size / Heavy Duty HoseSaver™ / CableSaver™ : 2500°F / 1371°C:



- Designed for common hose sizes. Made from 304L Stainless Steel. 321 and 316L Stainless Available.
- Excellent Abrasion Protection.
- EMI / RFI Sleeve.
- Provides Blow-out protection for hydraulic hoses.
- Provides rodent protection for burial cables and hoses.
- Also available in Bronze, Monel, Inconel, Copper and Hastelloy.
- Braid angle allows for small amount of size expansion or compression.
- Clamps or tape can hold sleeve tight to underlying wire, cable or hose.
- Supplied as a round sleeve, coiled and boxed.
- Other larger ID sizes available: 16.6"; 18.9"; 20.9"; 22.9"; 24.9" and 30.9".

Braid Construction

The braid construction is defined by the number of carriers (group of individual wires), the number of wires in each group, and the diameter of the wire.

For example; 36x8x.012 is a braid having 36 carriers, 8 wires per carrier, and each wire is 0.12" in diameter.

There may be two braid sizes that are shown for the same hose ID – this is due to different hose layer construction or wall thicknesses resulting in different hose OD's. Choose the braid with the closest sizing. It is often better to have a slightly larger braid than a smaller one – it makes for easier installation, and the braid can always be held close to the hose by tensioning the braid and clamping at intervals as necessary.

Also different braid construction (carriers, number of wires and wire size) may result in a slightly different ID size of the finished braid, even if its for the same size hose ID.

"Hose" Size 304L Tubular Stainless Steel Braided Sleeve HoseSaver™ / CableSaver™ Hose Sizes up to 1 ½" Hose size					
Part Number	Actual Size I.D. of braid inch / mm / construction	"Hose" Size ID inch / mm		Braid coverage %	Weight per foot in lbs.
S-METAL-SS-HS-0.38-M0096P3	0.38 / 9.6 / 24x6x.010	1/4"	6	95	.05
S-METAL-SS-HS-0.40-M0101P4	0.40 / 10.1 / 24x5x.014	1/4"	6	98	.09
S-METAL-SS-HS-0.48-M0122P7	0.48 / 12.1 / 24x5x.014	1/4"	6	89	.08
S-METAL-SS-HS-0.50-M0127P9	0.50 / 12.7 / 24x4x.016	1/4"	6	83	.08
S-METAL-SS-HS-0.48-M0122P3	0.48 / 12.1 / 24x7x.010	5/16"	7.9	92	.06
S-METAL-SS-HS-0.48-M0122P4	0.48 / 12.1 / 24x6x.014	5/16"	7.9	98	.10
S-METAL-SS-HS-0.56-M0142P3	0.56 / 14.2 / 24x7x.012	3/8"	9.5	93	.09
S-METAL-SS-HS-0.63-M0161P4	0.63 / 16.1 / 24x8x.014	3/8"	9.5	98	.14
S-METAL-SS-HS-0.63-M0161P7	0.63 / 16.1 / 24x7x.014	3/8"	9.5	91	.12
S-METAL-SS-HS-0.67-M0170P8	0.67 / 17.0 / 24x6x.016	3/8"	9.5	89	.12
S-METAL-SS-HS-0.66-M0167P3	0.66 / 16.7 / 24x8x.012	½"	12.7	92	.10
S-METAL-SS-HS-0.82-M0208P7	0.82 / 20.8 / 24x7x.014	½"	12.7	82	.11
S-METAL-SS-HS-0.82-M0208P8	0.82 / 20.8 / 24x7x.020	½"	12.7	96	.24
S-METAL-SS-HS-0.84-M0213P4	0.84 / 21.3 / 24x9x.014	½"	12.7	94	.16
S-METAL-SS-HS-0.85-M0216P3	0.85 / 21.6 / 36x6x.014	5/8"	15.9	93	.15
S-METAL-SS-HS-1.05-M0267P3	1.05 / 26.7 / 36x8x.014	¾"	19	96	.21
S-METAL-SS-HS-1.21-M0307P8	1.21 / 30.7 / 36x6x.020	¾"	19	92	.31
S-METAL-SS-HS-1.21-M0307P4	1.21 / 30.7 / 36x9x.014	¾"	19	95	.23
S-METAL-SS-HS-1.21-M0307P7	1.21 / 30.7 / 36x8x.014	¾"	19	90	.20
S-METAL-SS-HS-1.22-M0309P9	1.22 / 30.9 / 48x4x.024	¾"	19	93	.27
S-METAL-SS-HS-1.27-M0322P3	1.27 / 32.2 / 48x7x.014	1"	25.4	95	.24
S-METAL-SS-HS-1.50-M0381P8	1.50 / 38.1 / 36x8x.020	1"	25.4	95	.39
S-METAL-SS-HS-1.51-M0383P4	1.51 / 38.3 / 36x10x.014	1"	25.4	92	.26
S-METAL-SS-HS-1.51-M0383P7	1.51 / 38.3 / 36x9x.014	1"	25.4	85	.22
S-METAL-SS-HS-1.52-M0386P9	1.52 / 38.6 / 48x5x.024	1"	25.4	94	.46
S-METAL-SS-HS-1.62-M0411P3	1.62 / 41.1 / 48x9x.014	1 ¼"	41.1	95	.32
S-METAL-SS-HS-1.85-M0470P8	1.85 / 47.0 / 48x6x.025	1 ¼"	41.1	95	.64
S-METAL-SS-HS-1.85-M0470P4	1.85 / 47.0 / 48x8x.016	1 ¼"	41.1	92	.36
S-METAL-SS-HS-1.85-M0470P7	1.85 / 47.0 / 48x7x.016	1 ¼"	41.1	83	.31
S-METAL-SS-HS-1.95-M0495P3	1.95 / 49.5 / 48x9x.016	1 ½"	38.1	94	.40
S-METAL-SS-HS-2.17-M0551P8	2.17 / 55.1 / 48x7x.025	1 ½"	38.1	95	.75
S-METAL-SS-HS-2.19-M0556P4	2.19 / 55.6 / 48x10x.016	1 ½"	38.1	93	.45
S-METAL-SS-HS-2.19-M0556P7	2.19 / 55.6 / 48x9x.016	1 ½"	38.1	87	.39
S-METAL-SS-HS-2.19-M0556P9	2.19 / 55.6 / 48x7x.024	1 ½"	38.1	93	.64

Some items are available By-The-Foot: Produced in long random lengths or 100 / 110 foot lengths

A note about sizes: The "Hose" sizes refer to the nominal hose size. For example: a ¼" "Hose" size nominal braided stainless sleeve is actually 0.48" ID, which would be the nominal OD of a ¼" hose. For "standard" size stainless sleeve see next catalog page.

* Sizes of 8" and above are normally Braided braid (each pair of parallel wires in each carrier are twisted)

"Hose" Size 304L Tubular Stainless Steel Braided Sleeve HoseSaver™ / CableSaver™ Hose Sizes 2" and larger					
Part Number	Actual Size I.D. of braid inch / mm / construction	"Hose" Size ID inch / mm		Braid coverage %	Weight per foot in lbs.
S-METAL-SS-HS-2.38-M0604P3	2.38 / 60.4 / 48x9x.020	2"	50.8	94	.64
S-METAL-SS-HS-2.51-M0637P9	2.51 / 63.7 / 48x8x.024	2"	50.8	93	.74
S-METAL-SS-HS-2.51-M0637P8	2.51 / 63.7 / 48x9x.025	2"	50.8	95	.94
S-METAL-SS-HS-2.60-M0660P7	2.60 / 66.0 / 48x9x.020	2"	50.8	89	.62
S-METAL-SS-HS-2.61-M0663P4	2.61 / 66.3 / 48x10x.020	2"	50.8	95	.71
S-METAL-SS-HS-3.23-M0820P4	3.23 / 82.0 / 72x8x.020	2 ½"	63.5	94	.70
S-METAL-SS-HS-3.23-M0820P7	3.23 / 82.0 / 72x7x.020	2 ½"	63.5	86	.70
S-METAL-SS-HS-3.23-M0820P8	3.23 / 82.0 / 72x7x.025	2 ½"	63.5	96	1.12
S-METAL-SS-HS-3.78-M0960P4	3.78 / 96.0 / 72x9x.020	3"	76.2	93	.79
S-METAL-SS-HS-3.78-M0960P8	3.78 / 96.0 / 72x9x.025	3"	76.2	88	1.45
S-METAL-SS-HS-3.78-M0960P7	3.78 / 96.0 / 72x8x.020	3"	76.2	85	.79
S-METAL-SS-HS-4.32-M1097P7	4.32 / 109.7 / 72x10x.020	3 ½"	89	84	.99
S-METAL-SS-HS-4.81-M1221P4	4.81 / 122.1 / 72x9x.025	4"	101.6	89	1.45
S-METAL-SS-HS-4.85-M1231P4	4.85 / 123.1 / 72x11x.020	4"	101.6	91	.99
S-METAL-SS-HS-4.85-M1231P7	4.85 / 123.1 / 72x10x.020	4"	101.6	84	.99
S-METAL-SS-HS-5.90-M1498P7	5.90 / 149.8 / 72x8x.025	5"	127	74	1.25
S-METAL-SS-HS-6.87-M1745P7	6.87 / 174.5 / 96x12x.020	6"	152.4	90	1.28
S-METAL-SS-HS-9.09-M2309*P7	9.09 / 230.9 / 96x21x.024	8"	203.2	96	3.88
S-METAL-SS-HS-11.18-M2840*P7	11.18 / 284 / 96x25x.028	10"	254	98	6.10
S-METAL-SS-HS-13.17-M3345*P7	13.17 / 334 / 96x25x.028	12"	304.8	97	5.81
S-METAL-SS-HS-14.70-M373*	14.70 / 373 / 96x29x.025	14"	355	80	7.89

Most items are available By-The-Foot: Produced in long random lengths or 100 / 110 foot lengths

A note about sizes: The "Hose" sizes refer to the nominal hose size. For example: a ¼" "Hose" size nominal braided stainless sleeve is actually 0.48" ID, which would be the nominal OD of a ¼" hose. For "standard" size stainless sleeve see next catalog page.

* Sizes of 8" and above are normally Braided braid (each pair of parallel wires in each carrier are twisted)

Stainless Steel Metal Braided Sleeve

XL High Coverage flat sleeve; SD Standard Coverage round sleeve

2500°F / 1371°C: Standard Size HoseSaver™ / CableSaver™



- “Standard” size stainless braid sleeve: an alternative to “Hose” size sleeve.
- Flexible size – can expand or shrink by approx 25% due to the high braid angle. Expanded position results in slightly lower braid coverage.
- Excellent Abrasion Protection.
- EMI / RFI Gasket & Sleeve.
- Provides Blow-out protection for hydraulic hoses.
- Provides rodent protection for burial cables and hoses.
- Clamps, tape or ties can hold the sleeve tight to underlying wire, cable or hose if required, and at the connector ends.
- S-METAL-SS-XL is supplied as a flat sleeve, on spools. S-METAL-SS-SD is supplied as round.
- S-METAL-SS-XL is a high coverage braid allowing greater expandability than the S-METAL-SS-SD version.

“Standard” Size 304L Tubular Stainless Steel Braided Sleeve HoseSaver™ / CableSaver™

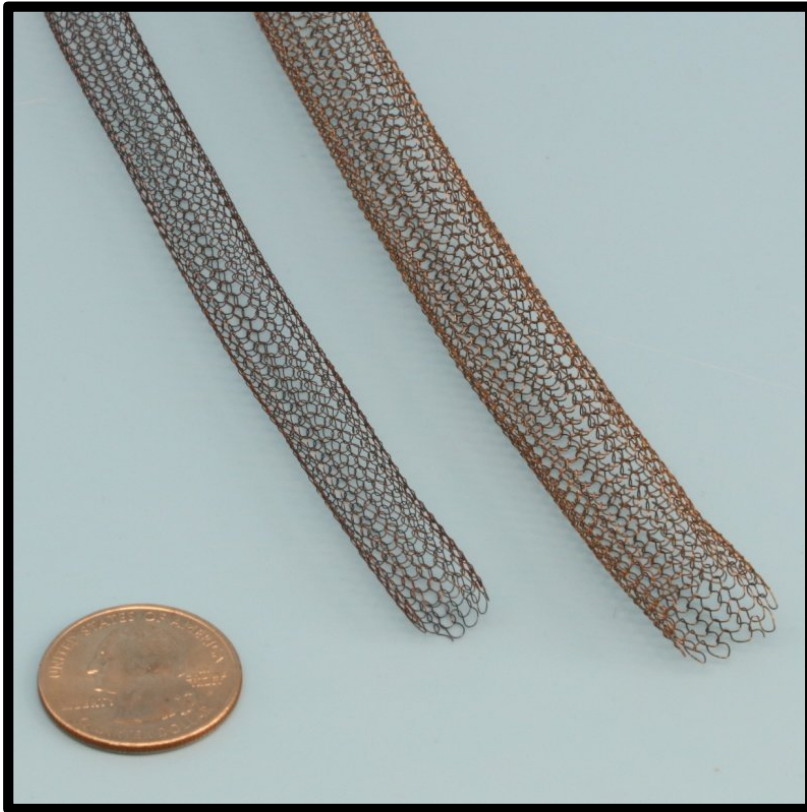
Part Number	ID Size inch / mm		Size Range	Wall Thickness	Spool Length, feet Bulk / Small Spool
S-METAL-SS-XL-0.125-M003-02-X	1/8"	3	1/16 – 11/32	.013"	250 / 100
S-METAL-SS-XL-0.250-M006-04-X	1/4"	6	3/16 – 13/32	.013"	250 / 100
S-METAL-SS-XL-0.375-M010-06-X	3/8"	10	¼ - 5/8	.013"	250 / 100
S-METAL-SS-XL-0.500-M013-08-X	1/2"	13	3/8 – 3/4	.013"	100 / 50
S-METAL-SS-XL-0.750-M019-12-X	3/4"	19	½ - 1 1/4	.013"	100 / 50
S-METAL-SS-XL-1.000-M025-16-X	1"	25	5/8 – 1 5/16	.025"	100 / 50
S-METAL-SS-XL-1.250-M032-20-X	1 1/4"	32	¾ - 1 3/4	.025"	100 / 50
S-METAL-SS-XL-1.500-M035-24-X	1 1/2"	35	1 – 2 1/8	.025"	100 / 50
S-METAL-SS-SD-0.500-M013-08-X	1/2"	13	1/4" - 5/8"	.025"	100 / 25
S-METAL-SS-SD-0.625-M016-10-X	5/8"	16	3/8" - 3/4"	.025"	100 / 25
S-METAL-SS-SD-0.750-M019-12-X	3/4"	19	1/2 - 1"	.025"	100 / 25
S-METAL-SS-SD-1.000-M025-16-X	1"	25	3/4" - 1 1/4"	.025"	100 / 25
S-METAL-SS-SD-1.250-M032-20-X	1 1/4"	32	1 - 1 1/2	.035"	100 / 25
S-METAL-SS-SD-1.750-M044-28-X	1 3/4"	44	1 1/2 - 2 1/4	.040"	100 / 25

For the “X” value: use “B” for Bulk Spool size, use “S” for Small Spool size

For “Hose” size stainless sleeve see previous page

Stainless Steel Hollow Knitted Mesh Sleeve

1200°F / 648°C:



- Excellent Compressability and pushback with no compression set.
- Provides abrasion protection.
- Excellent EMI / RFI Gasket.
- Used as a bulb material in some tadpole and gasket ropes instead of solid mesh rope for added compressability of the bulb.
- 304 Stainless

304 Stainless Steel Hollow Knitted Mesh Sleeve			
ID Size inch / mm		Part Number	Feet per Carton
1/4"	6	S-SS-HOLLOW-M006-04	1000
3/8"	10	S-SS-HOLLOW-M010-06	1000
1/2"	13	S-SS-HOLLOW-M013-08	500
5/8"	16	S-SS-HOLLOW-M016-10	500
3/4"	19	S-SS-HOLLOW-M019-12	500

Please call for additional discount pricing when ordering more than 2 cartons.

Solid Wall Stainless Steel Flexible Sleeve

1200°F / 648°C:



- Annular corrugated construction provides ability to easily flex and bend, compress and expand.
- Excellent abrasion and splash Protection.
- EMI / RFI Shield.
- Provides Blow-out protection for hydraulic hoses.
- Provides rodent protection for burial cables and hoses.
- Wires cables and hoses can be spiral wrapped with tapes prior to insertion for insulation spacing to the sidewall.
- Range of fittings and connection flanges available to terminate sleeve onto metalwork, bulkheads, etc.
- Available in Bronze, Monel, Inconel & Hastelloy.

Solid Wall Stainless Steel Flexible Sleeve						
Part Number	Nominal ID inch / mm		Min Bend Radius inch		Weight per foot	Mill Lengths feet
			Static / Dynamic			
S-METAL-SS321-SW-0.32-M008	.32	8	4	6	0.09	30-100
S-METAL-SS304-SW-0.42-M011	.42	11	2	4	0.12	30-100
S-METAL-SS304-SW-0.52-M013	.52	13	3	5	0.16	30-100
S-METAL-SS304-SW-0.81-M020	.81	20	4	6	0.26	30-100
S-METAL-SS304-SW-1.03-M026	1.03	26	4.5	7	0.36	30-100
S-METAL-SS304-SW-1.30-M033	1.30	33	4	11	0.45	30-60
S-METAL-SS304-SW-1.53-M039	1.53	39	4.5	12	0.48	30-60
S-METAL-SS304-SW-2.05-M052	2.05	52	5	13	0.70	30-60
S-METAL-SS304-SW-2.61-M066	2.61	66	5	13	1.28	7-20
S-METAL-SS304-SW-3.10-M079	3.10	79	7.5	16	1.53	7-20
S-METAL-SS321-SW-3.50-M089	3.50	89	8	17	1.65	7-20
S-METAL-SS304-SW-3.98-M101	3.98	101	10	20	1.95	7-20
S-METAL-SS304-SW-5.03-M128	5.03	128	12	24	2.76	7-20
S-METAL-SS304-SW-5.98-M152	5.98	152	15	30	3.34	7-20
S-METAL-SS304-SW-7.96-M202	7.96	202	20	40	5.32	5-12
S-METAL-SS304-SW-9.78-M248	9.78	248	25	50	8.71	5-12
S-METAL-SS304-SW-11.76-M299	11.76	299	30	60	11.58	5-12
S-METAL-SS304-SW-13.62-M346	13.62	346	35	70	14.57	5-12

This Product is Available By-The-Foot

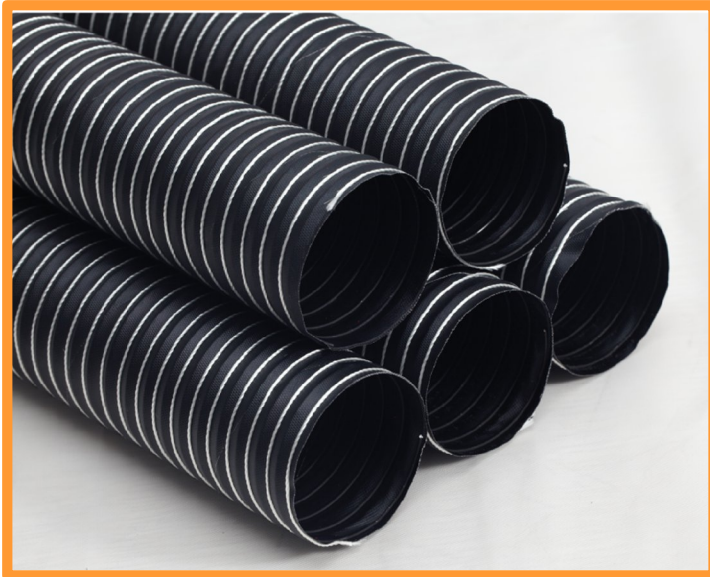
Supplied in 304SS as standard. Except (*) supplied in 321SS

Also Available in 321 & 316 Stainless, Bronze, Monel, Inconel and Hastelloy, please call for pricing

Neoprene High Temperature Ducting – Single Layer & 2 Layer

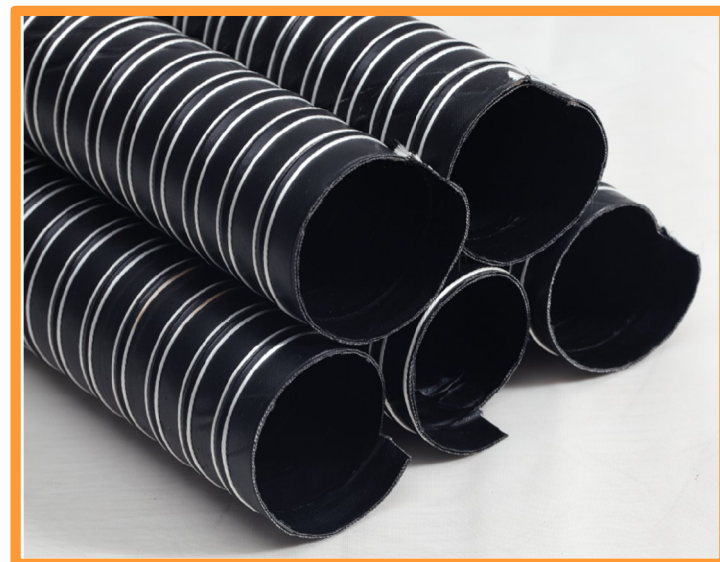
302°F / 150°C

5/8" / 16mm to 10" / 254mm ID – 13 foot / 4 m lengths



1 Layer Neoprene

- Designed for air handling – cold, ambient or hot.
- Constructed from neoprene coated glass reinforced fabric.
- 1 Layer or Two layer.
- With or without cuffs, either end.
- Standard 4m/13 foot length or custom length. Custom length tolerance is +5mm / +.19"
- Galvanized spring steel support coil.
- Glass fiber outer support spiral.
- Plain ends or with cuffs.
- High temperature use.
- Typical use to direct airflow in machinery.
- Neoprene color black



2 Layer Neoprene



Duct with cuffs installed

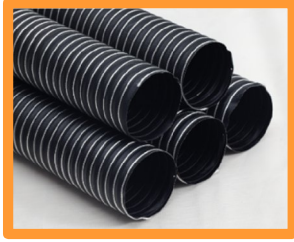


Highly Flexible

Neoprene High Temperature Ducting – 1 Layer & 2 Layer (Continued)

302°F / 150°C: FlameShield™

5/8" / 16mm to 10" / 254mm ID – 13 foot / 4 m lengths



Neoprene High Temperature Ducting Hose 13 foot / 4 m standard section length – custom length available								
Part Number	ID Size inch / mm		Layers	Working Pressure PSI / bar		Weight lbs/kg per section	Bend Radius in / cm	
HD-N1-M016-10-X-Y	5/8"	16	1	43 / 3		0.83 / 0.38	12 / 31	
HD-N1-M019-12-X-Y	3/4"	19	1	43 / 3		0.88 / 0.40	13 / 33	
HD-N2-M019-12-X-Y	3/4"	19	2	43 / 3		1.10 / 0.50	13 / 33	
HD-N1-M022-14-X-Y	7/8"	22	1	43 / 3		1.10 / 0.50	14 / 36	
HD-N2-M022-14-X-Y	7/8"	22	2	43 / 3		1.16 / 0.53	14 / 36	
HD-N1-M025-16-X-Y	1"	25	1	40 / 2.8		1.14 / 0.52	18 / 46	
HD-N2-M025-16-X-Y	1"	25	2	40 / 2.8		1.32 / 0.60	18 / 46	
HD-N1-M032-20-X-Y	1 1/4"	32	1	39 / 2.7		1.32 / 0.60	20 / 51	
HD-N2-M032-20-X-Y	1 1/4"	32	2	39 / 2.7		1.43 / 0.65	20 / 51	
HD-N1-M038-24-X-Y	1 1/2"	38	1	37 / 2.6		1.67 / 0.76	24 / 61	
HD-N2-M038-24-X-Y	1 1/2"	38	2	37 / 2.6		1.80 / 0.82	24 / 61	
HD-N1-M044-28-X-Y	1 3/4"	44	1	37 / 2.6		2.09 / 0.95	27 / 69	
HD-N2-M044-28-X-Y	1 3/4"	44	2	37 / 2.6		2.22 / 1.01	27 / 69	
HD-N1-M051-32-X-Y	2"	51	1	37 / 2.6		2.42 / 1.10	31 / 79	
HD-N2-M051-32-X-Y	2"	51	2	37 / 2.6		2.55 / 1.16	31 / 79	
HD-N1-M057-36-X-Y	2 1/4"	57	1	36 / 2.5		2.77 / 1.26	34 / 86	
HD-N2-M057-36-X-Y	2 1/4"	57	2	36 / 2.5		2.83 / 1.29	34 / 86	
HD-N1-M060-38-X-Y	2 3/8"	60	1	36 / 2.5		2.90 / 1.32	34 / 86	
HD-N2-M060-38-X-Y	2 3/8"	60	2	36 / 2.5		3.03 / 1.38	34 / 86	
HD-N1-M064-40-X-Y	2 1/2"	64	1	35 / 2.4		3.08 / 1.40	37 / 94	
HD-N2-M064-40-X-Y	2 1/2"	64	2	35 / 2.4		3.19 / 1.45	37 / 94	
HD-N1-M070-44-X-Y	2 3/4"	70	1	30 / 2.1		3.30 / 1.50	40 / 102	
HD-N2-M070-44-X-Y	2 3/4"	70	2	30 / 2.1		3.41 / 1.55	40 / 102	
HD-N1-M076-48-X-Y	3"	76	1	30 / 2.1		3.52 / 1.60	43 / 109	
HD-N2-M076-48-X-Y	3"	76	2	30 / 2.1		3.63 / 1.65	43 / 109	

For custom lengths, pricing is per metre to the closest longer cm
Each cuff is \$5.00 for sizes below 4 inches and \$7.00 for sizes above 4 inches

For the "X" value: use "S" for Standard Length

or use a number to represent total length, including cuffs, in metres to two decimal places

Example: 1.6 for 1.6 metres, or 2.23 for 2.23 metres. (tolerance + / - 1cm)

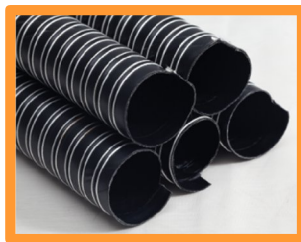
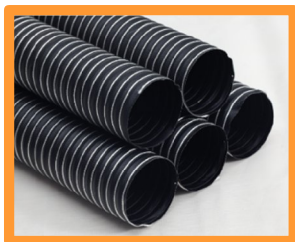
For the "Y" value: use "0" for no cuffs; "1" for 1 cuff; "2" for 2 cuffs

Minimum order quantities may apply

Neoprene High Temperature Ducting – 1 Layer & 2 Layer (Continued)

302°F / 150°C: FlameShield™

5/8" / 16mm to 10" / 254mm ID – 13 foot / 4 m lengths



Neoprene High Temperature Ducting Hose – 13 foot / 4 m section length							
Part Number	ID Size inch / mm		Layers			Weight / ft	
HD-N1-M080-46-X-Y	3 1/8"	80	1				
HD-N2-M080-46-X-Y	3 1/8"	80	2				
HD-N1-M083-52-X-Y	3 1/4"	83	1				
HD-N2-M083-52-X-Y	3 1/4"	83	2				
HD-N1-M089-56-X-Y	3 1/2"	89	1				
HD-N2-M089-56-X-Y	3 1/2"	89	2				
HD-N1-M102-64-X-Y	4"	102	1				
HD-N2-M102-64-X-Y	4"	102	2				
HD-N1-M108-68-X-Y	4 1/4"	108	1				
HD-N2-M108-68-X-Y	4 1/4"	108	2				
HD-N1-M114-72-X-Y	4 1/2"	114	1				
HD-N2-M114-72-X-Y	4 1/2"	114	2				
HD-N1-M121-76-X-Y	4 3/4"	121	1				
HD-N2-M121-76-X-Y	4 3/4"	121	2				
HD-N1-M127-80-X-Y	5"	127	1				
HD-N2-M127-80-X-Y	5"	127	2				
HD-N1-M140-88-X-Y	5.5"	140	1				
HD-N2-M140-88-X-Y	5.5"	140	2				
HD-N1-M152-96-X-Y	6"	152	1				
HD-N2-M152-96-X-Y	6"	152	2				
HD-N1-M160-112-X-Y	6 3/8"	160	1				
HD-N2-M160-112-X-Y	6 3/8"	160	2				
HD-N1-M165-112-X-Y							
HD-N1-M178-178-X-Y							
HD-N1-M203-203-X-Y							
HD-N1-M254-112-X-Y							
HD-N1-M305-112-X-Y							

Silicone High Temperature Ducting – Single Layer & 2 Layer

500°F / 260°C

5/8" / 16mm to 10" / 254mm ID – 13 foot / 4 m lengths



1 Layer Silicone

- Designed for air handling – cold, ambient or hot.
- Constructed from neoprene coated glass reinforced fabric.
- 1 Layer or Two layer.
- With or without cuffs, either end.
- Standard 4m/13 foot length or custom length. Custom length tolerance is +5mm / +.19"
- Galvanized spring steel support coil.
- Glass fiber outer support spiral.
- Plain ends or with cuffs.
- High temperature use.
- Typical use to direct airflow in machinery.
- Silicone color is oxide-red



2 Layer Silicone



Duct with cuffs installed

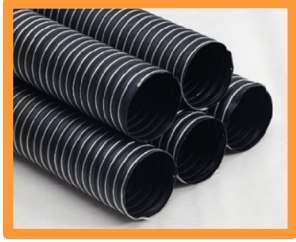


Highly Flexible

Silicone High Temperature Ducting – 1 Layer & 2 Layer (Continued)

500°F / 260°C: FlameShield™

5/8" / 16mm to 10" / 254mm ID – 13 foot / 4 m lengths



Silicone High Temperature Ducting Hose							
13 foot / 4 m standard section length – custom length available							
Part Number	ID Size inch / mm		Layers	Working Pressure PSI / bar		Weight lbs/kg per section	Bend Radius in / cm
HD-S1-M019-12-X-Y	3/4"	19	1	43 / 3		0.88 / 0.40	13 / 33
HD-S2-M019-12-X-Y	3/4"	19	2	43 / 3		1.10 / 0.50	13 / 33
HD-S1-M022-14-X-Y	7/8"	22	1	43 / 3		1.10 / 0.50	14 / 36
HD-S2-M022-14-X-Y	7/8"	22	2	43 / 3		1.16 / 0.53	14 / 36
HD-S1-M025-16-X-Y	1"	25	1	40 / 2.8		1.14 / 0.52	18 / 46
HD-S2-M025-16-X-Y	1"	25	2	40 / 2.8		1.32 / 0.60	18 / 46
HD-S1-M032-20-X-Y	1 1/4"	32	1	39 / 2.7		1.32 / 0.60	20 / 51
HD-S2-M032-20-X-Y	1 1/4"	32	2	39 / 2.7		1.43 / 0.65	20 / 51
HD-S1-M038-24-X-Y	1 1/2"	38	1	37 / 2.6		1.67 / 0.76	24 / 61
HD-S2-M038-24-X-Y	1 1/2"	38	2	37 / 2.6		1.80 / 0.82	24 / 61
HD-S1-M044-28-X-Y	1 3/4"	44	1	37 / 2.6		2.09 / 0.95	27 / 69
HD-S2-M044-28-X-Y	1 3/4"	44	2	37 / 2.6		2.22 / 1.01	27 / 69
HD-S1-M051-32-X-Y	2"	51	1	37 / 2.6		2.42 / 1.10	31 / 79
HD-S2-M051-32-X-Y	2"	51	2	37 / 2.6		2.55 / 1.16	31 / 79
HD-S1-M057-36-X-Y	2 1/4"	57	1	36 / 2.5		2.77 / 1.26	34 / 86
HD-S2-M057-36-X-Y	2 1/4"	57	2	36 / 2.5		2.83 / 1.29	34 / 86
HD-S1-M060-38-X-Y	2 3/8"	60	1	36 / 2.5		2.90 / 1.32	34 / 86
HD-S2-M060-38-X-Y	2 3/8"	60	2	36 / 2.5		3.03 / 1.38	34 / 86
HD-S1-M064-40-X-Y	2 1/2"	64	1	35 / 2.4		3.08 / 1.40	37 / 94
HD-S2-M064-40-X-Y	2 1/2"	64	2	35 / 2.4		3.19 / 1.45	37 / 94
HD-S1-M070-44-X-Y	2 3/4"	70	1	30 / 2.1		3.30 / 1.50	40 / 102
HD-S2-M070-44-X-Y	2 3/4"	70	2	30 / 2.1		3.41 / 1.55	40 / 102
HD-S1-M076-48-X-Y	3"	76	1	30 / 2.1		3.52 / 1.60	43 / 109
HD-S2-M076-48-X-Y	3"	76	2	30 / 2.1		3.63 / 1.65	43 / 109

For custom lengths, pricing is per metre to the closest longer cm
Each cuff is \$5.00 for sizes below 4 inches and \$7.00 for sizes above 4 inches

For the "X" value: use "S" for Standard Length

or use a number to represent total length, including cuffs, in metres to two decimal places

Example: 1.6 for 1.6 metres, or 2.23 for 2.23 metres. (tolerance + / - 1cm)

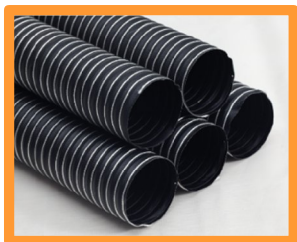
For the "Y" value: use "0" for no cuffs; "1" for 1 cuff; "2" for 2 cuffs

Minimum order value is \$50.00

Silicone High Temperature Ducting – 1 Layer & 2 Layer (Continued)

500°F / 260°C: FlameShield™

5/8" / 16mm to 10" / 254mm ID – 13 foot / 4 m lengths



Silicone High Temperature Ducting Hose – 13 foot / 4 m section length

Part Number	ID Size inch / mm		Layers			Weight / ft	
HD-S1-M080-46-X-Y	3 1/8"	80	1				
HD-S2-M080-46-X-Y	3 1/8"	80	2				
HD-S1-M083-52-X-Y	3 1/4"	83	1				
HD-S2-M083-52-X-Y	3 1/4"	83	2				
HD-S1-M089-56-X-Y	3 1/2"	89	1				
HD-S2-M089-56-X-Y	3 1/2"	89	2				
HD-S1-M102-64-X-Y	4"	102	1				
HD-S2-M102-64-X-Y	4"	102	2				
HD-S1-M108-68-X-Y	4 1/4"	108	1				
HD-S2-M108-68-X-Y	4 1/4"	108	2				
HD-S1-M114-72-X-Y	4 1/2"	114	1				
HD-S2-M114-72-X-Y	4 1/2"	114	2				
HD-S1-M121-76-X-Y	4 3/4"	121	1				
HD-S2-M121-76-X-Y	4 3/4"	121	2				
HD-S1-M127-80-X-Y	5"	127	1				
HD-S2-M127-80-X-Y	5"	127	2				
HD-S1-M140-88-X-Y	5.5"	140	1				
HD-S2-M140-88-X-Y	5.5"	140	2				
HD-S1-M152-96-X-Y	6"	152	1				
HD-S2-M152-96-X-Y	6"	152	2				
HD-S1-M160-112-X-Y	6 3/8"	160	1				
HD-S2-M160-112-X-Y	6 3/8"	160	2				
HD-S1-M165-112-X-Y							
HD-S1-M178-178-X-Y							
HD-S1-M203-203-X-Y							
HD-S1-M254-112-X-Y							
HD-S1-M305-112-X-Y							

Exhaust Hose Ducting - High Temperature & Heat Resistant

1500°F / 815°C: FlameShield™



- Designed for extracting fumes from metal fabrication works; refining, smelting, forging.
- Makes a great large air gap heat shield to cover piping, wires and cables.
- Constructed of a 3 ply non-flammable, lightweight and flexible ceramic coated hose, with a V4A internal stainless steel wire.
- Has an external steel wearstrip for abrasion resistance.
- Only sold in full coil lengths of 25 feet.

High Temperature Exhaust Hose / Ducting for Metal Processing

Part Number	ID Size inch / mm		Working Pressure	Vacuum	Bend Radius	Weight / ft
H-C-M102-64	4"	102	4 #	8	8"	1.5
H-C-M127-80	5"	127	3 #	6	10"	1.8
H-C-M152-96	6"	152	2 #	6	12"	2.2
H-C-M203-128	8"	203	1 #	5	16"	3
H-C-M254-160	10"	254	1 #	4	20"	3.5
H-C-M305-192	12"	305	1 #	3	24"	3.85

Exhaust Hose for Welding Applications

300°F / 148°C:

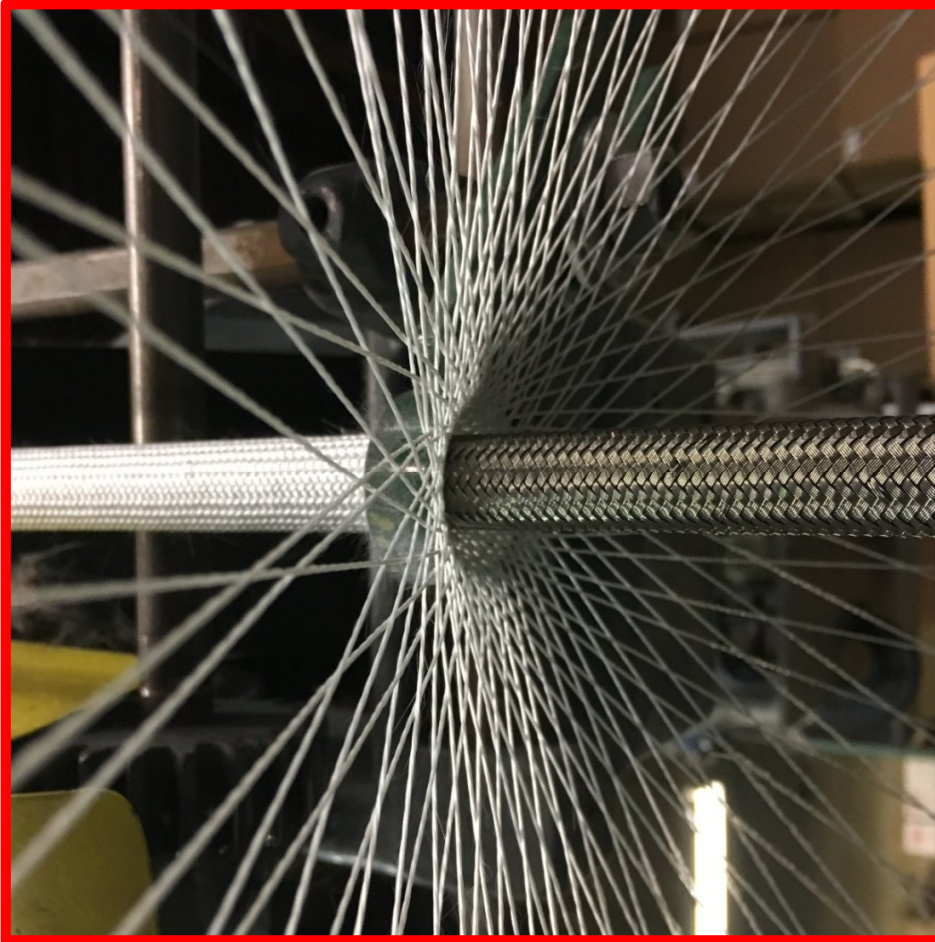


- Designed for extracting fumes from welding operations.
- Constructed of a fiberglass base material with an aluminized PET film coating. Bonded to a helix.
- Only sold in full coil lengths of 25 feet.

High Temperature Exhaust Hose / Ducting for Welding Applications						
Part Number	ID Size inch / mm		Working Pressure	Vacuum	Bend Radius	Weight / ft
H-FG-AL-M102-64	4"	102	4 #	2.7	6"	1.15
H-FG-AL-M127-80	5"	127	4 #	2.4	7.5"	1.25
H-FG-AL-M152-96	6"	152	3 #	2.2	9"	1.34
H-FG-AL-M203-128	8"	203	3 #	1.8	12"	1.75

Wire, Cable, Harness and Hose Overbraid Service

Thermal Protection / Abrasion Protection / Organization



Our in-house braiding capability and experience allows us to provide exceptional quality and a timely response to protect your wiring, cables and hoses.

Available overbraid materials include e-fibreglass filament, Kevlar®, Nomex®, Nylon, PET, Polyester and Stainless wire

Please provide a description of your materials and sizing to allow us to provide an accurate quotation.

Kevlar® & Nomex® are trademarks of DuPont™

Standard Sleeving Sizes: Inside Diameter and Wall Thickness Specifications
For S-FS-SD (prior to coating), S-FG-S, S-FG-E Sleeve

AWG Size	Nominal Size				Inside Diameter				Wall Thickness	
	AWG	in.	mm.	dash	Min / Max inches		Min / Max millimeter		In.	mm.
AWG 24	24	0.022	0.56	NA	0.020	0.027	0.508	0.685	0.011	0.279
AWG 22	22	0.027	0.69	NA	0.025	0.032	0.638	0.812	0.013	0.330
AWG 20	20	0.034	0.86	NA	0.032	0.039	0.812	0.990	0.013	0.330
AWG 19	19	0.038	0.96	NA	0.036	0.044	0.914	1.117	0.013	0.330
AWG 18	18	0.042	1.07	NA	0.040	0.049	1.016	1.244	0.015	0.381
AWG 17	17	0.047	1.19	NA	0.045	0.054	1.143	1.371	0.015	0.381
AWG 16	16	0.053	1.35	NA	0.051	0.061	1.295	1.549	0.015	0.381
AWG 15	15	0.059	1.50	NA	0.057	0.067	1.447	1.701	0.015	0.381
AWG 14	14	0.066	1.68	-01	0.064	0.074	1.625	1.879	0.015	0.381
AWG 13	13	0.076	1.93	NA	0.072	0.082	1.828	2.087	0.015	0.381
AWG 12	12	0.085	2.16	NA	0.081	0.091	2.057	2.311	0.015	0.381
AWG 11	11	0.095	2.41	NA	0.091	0.101	2.311	2.565	0.018	0.457
AWG 10	10	0.106	2.69	NA	0.102	0.112	2.59	2.844	0.018	0.457
AWG 9	9	0.118	3.10	NA	0.114	0.124	2.895	3.149	0.018	0.457
AWG 8	8	0.133	3.38	-02	0.129	0.141	3.276	3.581	0.018	0.457
AWG 7	7	0.148	3.76	NA	0.144	0.158	3.657	4.013	0.018	0.457
AWG 6	6	0.166	4.22	NA	0.162	0.178	4.114	4.521	0.020	0.508
AWG 5	5	0.186	4.72	-03	0.182	0.198	4.622	5.029	0.020	0.508
AWG 4	4	0.208	5.28	NA	0.204	0.224	5.181	5.689	0.020	0.508
AWG 3	3	0.234	5.94	NA	0.229	0.249	5.816	6.324	0.020	0.508
AWG 2	2	0.263	6.68	-04	0.258	0.278	6.553	7.061	0.020	0.508
AWG 1	1	0.294	7.47	NA	0.289	0.311	7.340	7.899	0.020	0.508
05	5/16	0.313	7.95	-05	0.312	0.334	7.924	8.483	0.020	0.508
AWG 0	0	0.330	8.38	NA	0.325	0.347	8.255	8.813	0.025	0.635
06	3/8	0.375	9.52	-06	0.375	0.399	9.525	10.134	0.025	0.635
07	7/16	0.438	11.12	-07	0.438	0.462	11.12	11.734	0.025	0.635
08	1/2	0.500	12.70	-08	0.500	0.524	12.70	13.309	0.025	0.635
10	5/8	0.625	15.87	-10	0.625	0.655	15.87	16.637	0.025	0.635
12	3/4	0.750	19.05	-12	0.750	0.786	19.05	19.964	0.025	0.635
14	7/8	0.875	22.22	-14	0.875	0.911	22.22	23.139	0.025	0.635
16	1	1.000	25.40	-16	1.000	1.036	25.00	26.314	na	

Sleeving Splices

Most sleeving is produced to NEMA TF 1 1993, which allows for the following maximum number of splices; 50 foot spool, 2 splices; 100 foot, 3 splices; 150 foot, 3 splices; 250 foot, 4 splices; 500 foot, 7 splices; 1000 foot, 10 splices. Please enquire if you require splice free lengths.



Thermal, EMI/RFI & Abrasion Protection Materials

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