

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



FlameShield™ firesleeve is the standard heat, flame and fire protection for hoses and cables in harsh environments. 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 reducing unexpected shutdowns.

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, busses and emergency response vehicles.

Also an excellent cold temperature sleeve with flexibility to -76°C. See further material specifications on Page 1-4.

S-FSHD 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.

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 Part Number	Price per Foot	Price per Metre	Heavy Duty Grade Part Number	Price per Foot	Price per Metre
1/4	6	-04	S-FS-M006-04	\$ 2.96	\$ 9.68	S-FSHD-M006-04-X	\$ 3.37	\$ 11.02
3/8	10	-06	S-FS-M010-06	\$ 3.37	\$ 11.02	S-FSHD-M010-06-X	\$ 3.68	\$ 12.03
7/16	11	-07	N/A	-	-	S-FSHD-M011-07-X	\$ 3.92	\$ 12.86
1/2	13	-08	S-FS-M013-08	\$ 3.97	\$ 12.98	S-FSHD-M013-08-X	\$ 4.36	\$ 14.26
9/16	15	-09	N/A	-	-	S-FSHD-M015-09-X	\$ 4.53	\$ 14.86
5/8	16	-10	S-FS-M016-10	\$ 4.34	\$ 14.19	S-FSHD-M016-10-X	\$ 4.67	\$ 15.32
3/4	19	-12	S-FS-M019-12	\$ 4.88	\$ 15.96	S-FSHD-M019-12-X	\$ 5.34	\$ 17.52
7/8	22	-14	S-FS-M022-14	\$ 5.82	\$ 19.03	S-FSHD-M022-14-X	\$ 6.33	\$ 20.76
1	25	-16	S-FS-M025-16	\$ 6.42	\$ 21.06	S-FSHD-M025-16-X	\$ 7.19	\$ 23.58
1 1/8	29	-18	S-FS-M029-18	\$ 7.25	\$ 23.78	S-FSHD-M029-18-X	\$ 8.12	\$ 26.63
1 1/4	32	-20	S-FS-M032-20	\$ 7.76	\$ 25.45	S-FSHD-M032-20-X	\$ 8.68	\$ 28.47
1 3/8	35	-22	S-FS-M035-22	\$ 7.81	\$ 25.62	S-FSHD-M035-22-X	\$ 8.75	\$ 28.70
1 1/2	38	-24	S-FS-M038-24	\$ 8.04	\$ 26.37	S-FSHD-M038-24-X	\$ 9.01	\$ 29.55
1 5/8	41	-26	S-FS-M041-26	\$ 8.17	\$ 26.80	S-FSHD-M041-26-X	\$ 9.14	\$ 29.98
1 3/4	44	-28	S-FS-M044-28	\$ 10.43	\$ 34.21	S-FSHD-M044-28-X	\$ 11.68	\$ 38.31
1 7/8	48	-30	S-FS-M048-30	\$ 11.50	\$ 37.72	S-FSHD-M048-30-X	\$ 13.63	\$ 44.71
2	51	-32	S-FS-M051-32	\$ 12.18	\$ 39.95	S-FSHD-M051-32-X	\$ 16.23	\$ 53.23
2 1/4	57	-36	S-FS-M057-36	\$ 14.49	\$ 47.53	S-FSHD-M057-36	\$ 18.67	\$ 61.24
2 1/2	64	-40	S-FS-M064-40	\$ 18.83	\$ 61.76	S-FSHD-M064-40	\$ 21.10	\$ 69.21
2 5/8	67	-42	S-FS-M067-42	\$ 21.45	\$ 70.36	S-FSHD-M067-42	\$ 23.87	\$ 78.29
2 3/4	70	-44	S-FS-M070-44	\$ 24.11	\$ 79.08	S-FSHD-M070-44	\$ 24.45	\$ 80.20
2 7/8	73	-46	S-FS-M073-46	\$ 25.91	\$ 84.98	S-FSHD-M073-46	\$ 29.24	\$ 95.91
3	76	-48	S-FS-M076-48	\$ 27.21	\$ 89.25	S-FSHD-M076-48	\$ 29.98	\$ 98.33
3 1/4	83	-52	S-FS-M083-52	\$ 29.14	\$ 95.58	S-FSHD-M083-52	\$ 30.17	\$ 98.96
3 1/2	89	-56	S-FS-M089-56	\$ 31.26	\$ 102.53	S-FSHD-M089-56	\$ 31.94	\$ 104.76
3 3/4	95	-60	S-FS-M095-60	\$ 32.34	\$ 106.08	S-FSHD-M095-60	\$ 32.63	\$ 107.03
4	102	-64	S-FS-M102-64	\$ 32.65	\$ 107.09	S-FSHD-M102-64	\$ 33.83	\$ 110.96
4 1/2	114	-72	S-FS-M114-72	\$ 44.24	\$ 145.11	S-FSHD-M114-72	\$ 39.55	\$ 129.56
5	127	-80	S-FS-M127-80	\$ 47.92	\$ 157.18	S-FSHD-M127-80	\$ 42.53	\$ 139.51

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

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 colors are Oxide-Red in all sizes for both *Industrial* and *Heavy Duty* Grades, and Black is available in sizes from -04 through -32 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.

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

SAE AS1072 Aviation / Aerospace Firesleeve: High Temperature, Heat, Flame & Fire Resistant

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

Aviation / Aerospace Grade: Meets SAE AS1072

Silicone Rubber Coated Fiberglass Sleeve



FlameShield™ Aviation / Aerospace grade firesleeve 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.

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 1-4.

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									
Nominal ID Inches / mm / Dash #			Part Number	Price per Foot / Metre	Nominal ID Inches / mm / Dash #			Part Number	Price per Foot / Metre
1/4	6	-04	S-AS1072-M006-04-X	\$ 3.54 / \$ 11.61	1 7/8	48	-30	S-AS1072-M048-30-X	\$ 14.99 / \$ 49.17
3/8	10	-06	S-AS1072-M010-06-X	\$ 3.86 / \$ 12.66	2	51	-32	S-AS1072-M051-32-X	\$ 17.85 / \$ 58.55
7/16	11	-07	S-AS1072-M011-07-X	\$ 4.36 / \$ 14.30	2 1/4	57	-36	S-AS1072-M057-36	\$ 20.54 / \$ 67.37
1/2	13	-08	S-AS1072-M013-08-X	\$ 4.62 / \$ 15.15	2 1/2	64	-40	S-AS1072-M064-40	\$ 23.21 / \$ 76.13
9/16	15	-09	S-AS1072-M015-09-X	\$ 4.88 / \$ 16.01	2 5/8	67	-42	S-AS1072-M067-42	\$ 26.26 / \$ 86.13
5/8	16	-10	S-AS1072-M016-10-X	\$ 5.13 / \$ 16.83	2 3/4	70	-44	S-AS1072-M070-44	\$ 26.89 / \$ 88.20
3/4	19	-12	S-AS1072-M019-12-X	\$ 5.87 / \$ 19.25	2 7/8	73	-46	S-AS1072-M073-46	\$ 30.56 / \$ 100.24
7/8	22	-14	S-AS1072-M022-14-X	\$ 6.96 / \$ 22.83	3	76	-48	S-AS1072-M076-48	\$ 32.39 / \$ 106.24
1	25	-16	S-AS1072-M025-16-X	\$ 7.90 / \$ 25.91	3 1/4	83	-52	S-AS1072-M083-52	\$ 32.91 / \$ 107.95
1 1/8	29	-18	S-AS1072-M029-18-X	\$ 8.93 / \$ 29.29	3 1/2	89	-56	S-AS1072-M089-56	\$ 35.13 / \$ 115.23
1 1/4	32	-20	S-AS1072-M032-20-X	\$ 9.55 / \$ 31.32	3 3/4	95	-60	S-AS1072-M095-60	\$ 35.89 / \$ 117.72
1 3/8	35	-22	S-AS1072-M035-22-X	\$ 9.63 / \$ 31.59	4	102	-64	S-AS1072-M102-64	\$ 37.21 / \$ 122.05
1 1/2	38	-24	S-AS1072-M038-24-X	\$ 9.90 / \$ 32.47	4 1/2	114	-72	S-AS1072-M114-72	\$ 42.72 / \$ 140.12
1 5/8	41	-26	S-AS1072-M041-26-X	\$ 10.05 / \$ 32.96	5	127	-80	S-AS1072-M127-80	\$ 46.83 / \$ 153.60
1 3/4	44	-28	S-AS1072-M044-28-X	\$ 12.85 / \$ 42.15					

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

AS1072 Aerospace 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 FAA TSO-C42 (Propeller feathering hose assemblies), TSO-C53a (Fuel and Oil system hose assemblies) and TSO-C75 (Hydraulic hose assemblies). 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**

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.

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	Price per Foot / Metre	Nominal ID Inches / mm / Dash #			Part Number	Price per Foot / Metre
1/4	6	-04	S-ISO15540-M006-04-X	\$ 3.54 / \$ 11.61	1 7/8	48	-30	S-ISO15540-M048-30-X	\$ 14.99 / \$ 49.17
3/8	10	-06	S-ISO15540-M010-06-X	\$ 3.86 / \$ 12.66	2	51	-32	S-ISO15540-M051-32-X	\$ 17.85 / \$ 58.55
7/16	11	-07	S-ISO15540-M011-07-X	\$ 4.36 / \$ 14.30	2 1/4	57	-36	S-ISO15540-M057-36	\$ 20.54 / \$ 67.37
1/2	13	-08	S-ISO15540-M013-08-X	\$ 4.62 / \$ 15.15	2 1/2	64	-40	S-ISO15540-M064-40	\$ 23.21 / \$ 76.13
9/16	15	-09	S-ISO15540-M015-09-X	\$ 4.88 / \$ 16.01	2 5/8	67	-42	S-ISO15540-M067-42	\$ 26.26 / \$ 86.13
5/8	16	-10	S-ISO15540-M016-10-X	\$ 5.13 / \$ 16.83	2 3/4	70	-44	S-ISO15540-M070-44	\$ 26.89 / \$ 88.20
3/4	19	-12	S-ISO15540-M019-12-X	\$ 5.87 / \$ 19.25	2 7/8	73	-46	S-ISO15540-M073-46	\$ 30.56 / \$ 100.24
7/8	22	-14	S-ISO15540-M022-14-X	\$ 6.96 / \$ 22.83	3	76	-48	S-ISO15540-M076-48	\$ 32.39 / \$ 106.24
1	25	-16	S-ISO15540-M025-16-X	\$ 7.90 / \$ 25.91	3 1/4	83	-52	S-ISO15540-M083-52	\$ 32.91 / \$ 107.95
1 1/8	29	-18	S-ISO15540-M029-18-X	\$ 8.93 / \$ 29.29	3 1/2	89	-56	S-ISO15540-M089-56	\$ 35.13 / \$ 115.23
1 1/4	32	-20	S-ISO15540-M032-20-X	\$ 9.55 / \$ 31.32	3 3/4	95	-60	S-ISO15540-M095-60	\$ 35.89 / \$ 117.72
1 3/8	35	-22	S-ISO15540-M035-22-X	\$ 9.63 / \$ 31.59	4	102	-64	S-ISO15540-M102-64	\$ 37.21 / \$ 122.05
1 1/2	38	-24	S-ISO15540-M038-24-X	\$ 9.90 / \$ 32.47	4 1/2	114	-72	S-ISO15540-M114-72	\$ 42.72 / \$ 140.12
1 5/8	41	-26	S-ISO15540-M041-26-X	\$ 10.05 / \$ 32.96	5	127	-80	S-ISO15540-M127-80	\$ 46.83 / \$ 153.60
1 3/4	44	-28	S-ISO15540-M044-28-X	\$ 12.85 / \$ 42.15					

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**

FlameShield™ Firesleeve Technical Data For Part Numbers S-FS / S-FSHD / S-AS1072 / S-ISO15540

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.

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 \$150 per print run applies. Cost of printing is \$0.35 per foot. Standard SAE marking is \$0.35 per foot.



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 minutes and cures fully in 16 hours.

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 ¼" ID.

The 16 oz container opening can accommodate sleeve up to 3 1/4" ID.

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	Price
Liquid End Seal Dip		
4 oz	US-ESD-04-XX	\$ 21.76
16 oz (Pint)	US-ESD-16-XX	\$ 46.47
32 oz (Quart)	US-ESD-32-XX	\$ 87.20
128 oz (1 gallon)	US-ESD-128-XX	\$ 229.32
128 oz (1 gallon)	US-ESD-LV-128-XX*	\$ 281.08
640 oz (5 gallon)	US-ESD-640-XX	\$ 988.40
End Seal Paste		
3 oz tube	US-ESP-03-XX	\$ 19.83
10.3 oz cartridge	US-ESP-10-XX	\$ 38.47
Desiccant Box		
1.5oz Desiccant in Box	AB-SGD-1	\$ 12.87

XX = "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 ¼" x 2 ¼" 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 End Wrap Tape / High Temperature Electrical Tape

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; provides 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; provides 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" or 0.040" center thickness. Meets Mil-I-46852C & A-A-59163 specifications. Triangular tapes have a center guideline to aid in properly spacing the tape when spiral wrapping. T-SR-SA25 tape meets MIL-I-22444 and 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.

FlameShield™ MIL Spec High Temperature Silicone Self Fusing Firesleeve End Wrap Electrical Insulating Tape				
Meets MIL-I-46852 / A-A-59163 / ABS 5334 Specifications - Type I and Type II				
Part Number	Tape Width Inches / mm	Thickness inches / mm	Color / Type / Profile	Single Roll Price Per Roll
T-SR-M013-08-RBK-20	1/2 / 12.7	0.020 / 0.508	Black / I / Rectangular	\$ 29.37
T-SR-M013-08-RXX-30	1/2 / 12.7	0.030 / 0.760	Black or Red / I / Rectangular	\$ 37.16
T-SR-M016-10-RBK-20	5/8 / 15.7	0.020 / 0.508	Black / I / Rectangular	\$ 30.17
T-SR-M019-12-ROR-10	3/4 / 19	0.010 / 0.254	Oxide-Red / I / Rectangular	\$ 23.85
T-SR-M019-12-RBK-20	3/4 / 19	0.020 / 0.508	Black / I / Rectangular	\$ 31.96
T-SR-M025-16-TXX-20	1 / 25.4	0.020 / 0.508	Black or Red / II / Triangular	\$ 33.80
T-SR-M025-16-RXX-20	1 / 25.4	0.020 / 0.508	Black or Red / I / Rectangular	\$ 34.71
T-SR-M025-16-TXX-40	1 / 25.4	0.040 / 1.000	Black or Red / II / Triangular	\$ 37.91
T-SR-M025-16-RXX-40	1 / 25.4	0.040 / 1.000	Black or Red / I / Rectangular	\$ 39.64
T-SR-M038-24-RXX-20	1 ½ / 38.1	0.020 / 0.508	Black or Red / I / Rectangular	\$ 48.77
T-SR-M038-24-RXX-12	1 ½ / 38.1	0.012 / 0.304	Black or Red / I / Rectangular	\$ 38.47
Triangular Type II Tapes Only: .020" has a blue guideline / .040" has a green guideline				

Supported Tape with Limited Elongation				
Meets MIL-I-22444 (also meets MIL-I-46852 / A-A-59163 / ABS 5334 Specifications)				
Part Number	Tape Width Inches / mm	Thickness inches / mm	Color / Type / Profile	Single Roll Price Per Roll
T-SR-SA25-16-20-RBK*	1 / 25.4	0.020 / 0.508	Black / I / Rectangular	\$ 67.29
T-SR-SA25-16-20-ROR*	1 / 25.4	0.020 / 0.508	Red / I / Rectangular	\$ 67.29

* NOTE: T-SR-SA25-16-20-RBK & T-SR-SA25-16-20-ROR tape has a built-in sinusoidal weave fiberglass reinforcement layer, limiting stretch of the tape to a maximum of 25%, 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 / batch-lot. Test report is available at \$75.00 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 1 year 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 Stainless Steel Preformed Twice Around Clamps

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.



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.



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

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	Price Each
C-TA-250-13-201SS	13/16 / 20	\$ 2.84
C-TA-250-16-201SS	1 / 25	\$ 2.96
C-TA-250-22-201SS	1 3/8 / 34	\$ 3.12
C-TA-250-24-201SS	1 1/2 / 38	\$ 3.27
C-TA-250-32-201SS	2 / 51	\$ 3.48
C-TA-250-40-201SS	2 1/2 / 63	\$ 3.84
C-TA-250-44-201SS	2 3/4 / 70	\$ 4.01
C-TA-250-48-201SS	3 / 76	\$ 4.08
C-TA-250-56-201SS	3 1/2 / 88	\$ 4.40
C-TA-250-64-201SS	4 / 101	\$ 5.32
C-TA-250-72-201SS	4 1/2 / 114	\$ 6.28

Full box quantity is 100 clamps. Discount for full box purchase is 35%
Half-box quantity is 50 clamps. Discount for half-box purchase is 25%

Firesleeve Stainless Steel Preformed Twice Around Clamps

Type 201 & 316 Stainless Steel & Galvanized Carbon Steel - 3/8" / 9.6mm 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. 3/8" / 0.375" through 3/4" / 0.750 clamps are available in type 201 or 316 Stainless Steel and Galvanized Carbon Steel.



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.



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

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	Price Each 201 / 316 / Galv
C-TA-375-13-X	13/16 / 20	\$ 2.46 / \$ 6.93 / \$ 0.93
C-TA-375-16-X	1 / 25	\$ 2.83 / N/A / \$ 1.00
C-TA-375-22-X	1 3/8 / 34	\$ 2.76 / \$ 7.60 / \$ 1.03
C-TA-375-32-X	2 / 51	\$ 3.13 / \$ 9.00 / \$ 1.30
C-TA-375-40-X	2 1/2 / 63	\$ 3.56 / \$ 10.26 / \$ 1.90
C-TA-375-48-X	3 / 76	\$ 4.00 / N/A / \$ 1.67
C-TA-375-56-X	3 1/2 / 88	\$ 4.93 / \$ 12.60 / \$ 2.40
C-TA-375-64-X	4 / 101	\$ 4.73 / \$ 14.03 / \$ 2.63

For the "X" value, substitute:

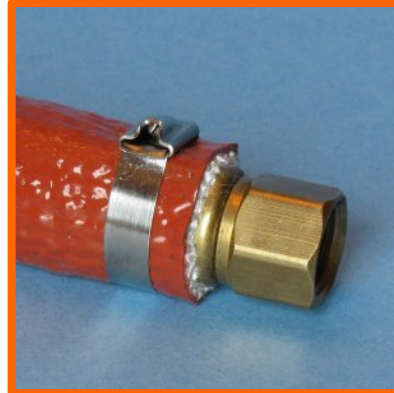
- "201SS" for 201 Stainless Steel
- "316SS" for 316 Stainless Steel
- "GAL" for Galvanized Carbon Steel

Full box quantity is 100 clamps. Discount for full box purchase is 35%
Half-box quantity is 50 clamps. Discount for half-box purchase is 25%

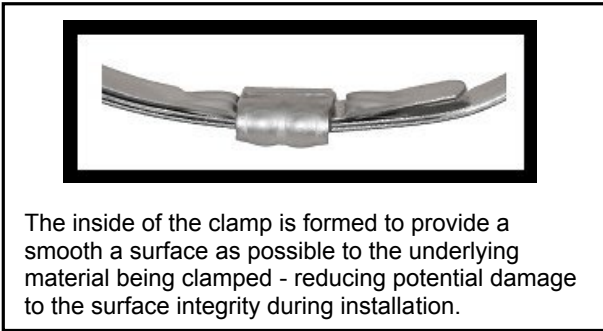
Firesleeve Stainless Steel Preformed Twice Around Clamps Type 201 & 316 Stainless Steel & Galvanized Carbon Steel - 1/2" / 12.7mm wide



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. 3/8" / 0.375" through 3/4" / 0.750 clamps are available in type 201 or 316 Stainless Steel and Galvanized Carbon Steel.



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.



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

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	Price Each 201 / 316 / Galv
C-TA-500-16-X	1 / 25	\$ 3.43 / \$ 10.47 / \$ 1.33
C-TA-500-20-X	1 1/4 / 31	\$ 3.77 / \$ 11.43 / \$ 1.47
C-TA-500-22-X	1 1/2 / 38	\$ 4.33 / N/A / \$ 1.63
C-TA-500-28-X	1 3/4 / 44	\$ 4.93 / N/A / \$ 1.93
C-TA-500-32-X	2 / 51	\$ 5.16 / \$ 15.80 / \$ 2.00
C-TA-500-40-X	2 1/2 / 63	\$ 5.43 / \$ 16.87 / \$ 2.10
C-TA-500-44-X	2 3/4 / 69	\$ 5.70 / N/A / \$ 2.30
C-TA-500-48-X	3 / 76	\$ 6.30 / \$ 19.23 / \$ 2.53
C-TA-500-56-X	3 1/2 / 88	\$ 6.90 / \$ 21.20 / \$ 2.87
C-TA-500-64-X	4 / 101	\$ 7.53 / \$ 23.00 / \$ 3.23

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 35%

Half-box quantity is 50 clamps. Discount for half-box purchase is 25%

Firesleeve Stainless Steel Preformed Twice Around Clamps

Type 201 & 316 Stainless Steel & Galvanized Carbon Steel - 5/8" / 15.9mm 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. 3/8" / 0.375" through 3/4" / 0.750 clamps are available in type 201 or 316 Stainless Steel and Galvanized Carbon Steel.



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.



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

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	Price Each 201 / 316 / Galv
C-TA-625-24-X	1 1/2 / 38	\$ 5.44 / \$ 16.56 / \$ 2.04
C-TA-625-24-X	1 3/4 / 38	\$ 6.04 / \$ 18.60 / \$ 2.28
C-TA-625-32-X	2 / 51	\$ 6.60 / \$ 20.40 / \$ 2.48
C-TA-625-24-X	2 1/4 / 57	\$ 7.04 / \$ 21.76 / \$ 2.64
C-TA-625-40-X	2 1/2 / 63	\$ 7.48 / \$ CALL / \$ 2.88

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 35%
Half-box quantity is 50 clamps. Discount for half-box purchase is 25%

Firesleeve Stainless Steel Preformed Twice Around Clamps

Type 201 & 316 Stainless Steel & Galvanized Carbon Steel - 3/4" / 19.1mm 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. 3/8" / 0.375" through 3/4" / 0.750 clamps are available in type 201 or 316 Stainless Steel and Galvanized Carbon Steel.



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.



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

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	Price Each 201 / 316 / Galv
C-TA-750-32-X	2 / 51	\$ 8.16 / \$ 25.60 / \$ 3.04
C-TA-750-44-X	2 3/4 / 69	\$ 8.88 / \$ 29.64 / \$ 3.44
C-TA-750-48-X	3 / 76	\$ 9.64 / \$ 30.96 / \$ 3.60
C-TA-750-56-X	3 1/2 / 88	\$ 10.24 / \$ 33.68 / \$ 3.92
C-TA-750-64-X	4 / 101	\$ 11.76 / \$ 36.32 / \$ 4.52
C-TA-750-72-X	4 1/2 / 114	\$ 12.64 / \$ 39.00 / \$ 4.76
C-TA-750-80-X	5 / 127	\$ 13.64 / \$ 41.68 / \$ 5.90
C-TA-750-84-X	5 1/4 / 133	\$ 14.16 / \$ 43.56 / \$ 6.10
C-TA-750-96-X	6 / 152	\$ 15.68 / \$ 48.16 / \$ 6.40
C-TA-750-100-X	6 1/4 / 165	\$ 17.28 / \$ N/A / \$ 6.56
C-TA-750-112-X	7 / 177	\$ CALL / \$ N/A / \$ 7.12
C-TA-750-128-X	8 / 203	\$ 21.28 / \$ N/A / \$ 10.08

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 35%
Half-box quantity is 50 clamps. Discount for half-box purchase is 25%

Firesleeve Stainless Steel Clamps
Free End Clamps – Twice Around 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. Available in two widths: .181” (tensile 96 lbs) and .311” (tensile 242 lbs). Clamps longer than 20” are available – call for details. Available in 304 and 316 Stainless Steel.

Free End Clamps – .18” / 5mm wide - 304/316 Stainless Steel – Self Locking				
Part Number	Max Sleeve ID Inches / mm	Clamp width inches / mm	Type	Price Each 304 / 316
C-SSSL-WM5-L06-X	7/16 / 11	0.181 / 5.0	Free End – 6”	\$ 1.21 / \$ 1.39
C-SSSL-WM5-L08-X	1 1/8 / 28	0.181 / 5.0	Free End – 8”	\$ 1.39 / \$ 1.60
C-SSSL-WM5-L14-X	3 / 76	0.181 / 5.0	Free End – 14”	\$ 1.59 / \$ 1.83
C-SSSL-WM5-L20-X	5 / 127	0.181 / 5.0	Free End – 20”	\$ 2.11 / \$ 2.43

Free End Clamps – .31” / 8mm wide - 304/316 Stainless Steel – Self Locking				
C-SSSL-WM8-L08-X	1 1/8 / 28	0.311 / 8.0	Free End – 8”	\$ 1.59 / \$ 1.83
C-SSSL-WM8-L14-X	3 / 76	0.311 / 8.0	Free End – 14”	\$ 2.29 / \$ 2.63
C-SSSL-WM8-L20-X	5 / 127	0.311 / 8.0	Free End – 20”	\$ 3.87 / \$ 4.45
C-SSSL-PPAP	Level 1 PAPP Certificate – (Per Line Item)			\$ 460.00

Clamp Tool		
C-FCT-1		\$ 44.61

For the “X” value:
 substitute “304” for 304 Stainless Steel or “316” for 316 Stainless Steel



Firesleeve Clamp Tool

Firesleeve Clamp Tool aids in the tightening of either style of clamp up to 3/8" wide. 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.

Clamp Tool		
C-FCT-1		\$ 44.61



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

Firesleeve with Velcro® Hook & Loop Closure – Small & Large Diameter
500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods
High Temperature, Heat, Flame, Fire, Weld Splatter and Molten Slag Resistant



FlameShield™ EasyInstall™ Firesleeve is a high temperature sleeve with hook and loop or Velcro® closure is a heavy duty sleeve perfect 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, 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. 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.

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

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™ Firesleeve with Velcro® Hook / Loop Closure						
Small Diameter						
Nominal ID inches / mm / Dash #			Part Number	Hook & loop Width, inches	Price per Foot	Price per Metre
1/2	13	-08	S-FS-VCL-SM-M013-08	1/2	\$ 14.56	\$ 47.76
3/4	19	-12	S-FS-VCL-SM-M019-12	1/2	\$ 17.34	\$ 56.88
1	25	-16	S-FS-VCL-SM-M025-16	5/8	\$ 20.29	\$ 66.55
1 1/4	32	-20	S-FS-VCL-SM-M032-20	5/8	\$ 22.60	\$ 74.13
1 1/2	38	-24	S-FS-VCL-SM-M038-24	3/4	\$ 24.83	\$ 81.44
1 3/4	44	-28	S-FS-VCL-SM-M044-28	3/4	\$ 26.77	\$ 87.81
2	51	-32	S-FS-VCL-SM-M051-32	3/4	\$ 29.21	\$ 95.81
2 1/4	57	-36	S-FS-VCL-SM-M057-36	3/4	\$ 31.23	\$ 102.43
2 1/2	64	-40	S-FS-VCL-SM-M064-40	3/4	\$ 33.49	\$ 109.85
2 3/4	70	-44	S-FS-VCL-SM-M070-44	3/4	\$ 35.80	\$ 117.42
3	76	-48	S-FS-VCL-SM-M076-48	1	\$ 37.94	\$ 124.44
3 1/4	83	-52	S-FS-VCL-SM-M083-52	1	\$ 40.34	\$ 132.32
3 1/2	89	-56	S-FS-VCL-SM-M089-56	1	\$ 42.29	\$ 138.71

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).

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.

This product is fabricated from braided substrate fabric (for sizes up to and including 3.5" I.D.) and woven substrate fabric for larger sizes (greater than 3.5" I.D.). For both base materials 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.

Firesleeve with Velcro® Hook & Loop Closure (Continued)

Large Diameter

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™ Firesleeve with Velcro® Hook & Loop Closure: Large Diameter						
Nominal ID inches / mm / Dash #			Part Number	Hook/Loop Width, inches	Price per Foot	Price per Metre
3 3/4	95	-60	S-FS-VCL-LG-M095-60	1	\$ 44.51	\$ 145.99
4	102	-64	S-FS-VCL-LG-M102-64	1	\$ 48.37	\$ 158.65
4 1/4	108	-68	S-FS-VCL-LG-M108-68	1	\$ 50.54	\$ 165.77
4 1/2	114	-72	S-FS-VCL-LG-M114-72	1	\$ 52.94	\$ 173.64
4 3/4	121	-76	S-FS-VCL-LG-M121-76	1	\$ 55.17	\$ 180.96
5	127	-80	S-FS-VCL-LG-M127-80	1	\$ 57.54	\$ 188.73
5 1/4	133	-84	S-FS-VCL-LG-M133-84	2	\$ 59.37	\$ 194.73
5 1/2	140	-88	S-FS-VCL-LG-M140-88	2	\$ 61.66	\$ 202.25
5 3/4	146	-92	S-FS-VCL-LG-M146-92	2	\$ 63.94	\$ 209.72
6	152	-96	S-FS-VCL-LG-M152-96	2	\$ 66.11	\$ 216.84
6 1/4	159	-100	S-FS-VCL-LG-M159-100	2	\$ 68.51	\$ 224.71
6 1/2	165	-104	S-FS-VCL-LG-M165-104	2	\$ 70.74	\$ 232.03
6 3/4	171	-108	S-FS-VCL-LG-M171-108	2	\$ 72.74	\$ 238.59
7	178	-112	S-FS-VCL-LG-M178-112	2	\$ 74.97	\$ 245.90
7 1/4	184	-116	S-FS-VCL-LG-M184-116	2	\$ 76.97	\$ 252.46
7 1/2	191	-120	S-FS-VCL-LG-M191-120	2	\$ 79.54	\$ 260.89
7 3/4	197	-124	S-FS-VCL-LG-M197-124	2	\$ 81.77	\$ 268.21
8	203	-128	S-FS-VCL-LG-M203-128	2	\$ 83.69	\$ 274.50
8 1/4	210	-132	S-FS-VCL-LG-M210-132	2	\$ 86.26	\$ 282.93
8 1/2	216	-136	S-FS-VCL-LG-M216-136	2	\$ 88.43	\$ 290.05
8 3/4	222	-140	S-FS-VCL-LG-M222-140	2	\$ 90.23	\$ 295.95
9	229	-144	S-FS-VCL-LG-M229-144	2	\$ 92.57	\$ 303.63
9 1/4	235	-148	S-FS-VCL-LG-M235-148	2	\$ 94.49	\$ 309.93
9 1/2	241	-152	S-FS-VCL-LG-M241-152	2	\$ 97.20	\$ 318.82
9 3/4	248	-156	S-FS-VCL-LG-M248-156	2	\$ 99.37	\$ 325.93
10	254	-160	S-FS-VCL-LG-M254-160	2	\$ 101.66	\$ 333.45
10 1/4	260	-164	S-FS-VCL-LG-M260-164	2	\$ 104.00	\$ 341.12
10 1/2	267	-168	S-FS-VCL-LG-M267-168	2	\$ 105.60	\$ 346.37
10 3/4	273	-172	S-FS-VCL-LG-M273-172	2	\$ 113.31	\$ 371.66
11	279	-176	S-FS-VCL-LG-M279-176	2	\$ 115.66	\$ 379.36
11 1/4	286	-180	S-FS-VCL-LG-M286-180	2	\$ 118.51	\$ 388.71
11 1/2	292	-184	S-FS-VCL-LG-M292-184	2	\$ 122.37	\$ 401.37
11 3/4	298	-188	S-FS-VCL-LG-M298-188	2	\$ 126.22	\$ 414.01
12	305	-192	S-FS-VCL-LG-M305-192	1.5	\$ 129.41	\$ 424.46

Available in continuous lengths up to 75 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 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.

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.

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

500°F / 260°C continuous rating.

2200°F / 1205°C for periods up to 15 minutes and short excursions to 3000°F / 1650°C.

ZeusGard™ Firesleeve with Hook & Loop Closure Small Diameter						
Nominal ID inches / mm / Dash #			Part Number	Hook & loop Width, inches	Price per Foot	Price per Metre
1/2	13	-08	S-FS-VCL-AERO-M013-08	1/2	\$ 17.56	\$ 57.60
3/4	19	-12	S-FS-VCL-AERO-M019-12	1/2	\$ 20.34	\$ 66.72
1	25	-16	S-FS-VCL-AERO-M025-16	5/8	\$ 23.29	\$ 76.39
1 1/4	32	-20	S-FS-VCL-AERO-M032-20	5/8	\$ 25.60	\$ 83.97
1 1/2	38	-24	S-FS-VCL-AERO-M038-24	3/4	\$ 27.83	\$ 91.28
1 3/4	44	-28	S-FS-VCL-AERO-M044-28	3/4	\$ 29.77	\$ 97.65
2	51	-32	S-FS-VCL-AERO-M051-32	3/4	\$ 32.21	\$ 105.65
2 1/4	57	-36	S-FS-VCL-AERO-M057-36	3/4	\$ 34.23	\$ 112.27
2 1/2	64	-40	S-FS-VCL-AERO-M064-40	3/4	\$ 37.49	\$ 122.97
2 3/4	70	-44	S-FS-VCL-AERO-M070-44	3/4	\$ 38.80	\$ 127.26
3	76	-48	S-FS-VCL-AERO-M076-48	1	\$ 40.94	\$ 134.28
3 1/4	83	-52	S-FS-VCL-AERO-M083-52	1	\$ 43.34	\$ 142.16
3 1/2	89	-56	S-FS-VCL-AERO-M089-56	1	\$ 45.29	\$ 148.55

Available in continuous lengths up to 100 feet.

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.

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 1/2" and 75 feet for IDs larger than 3 3/4".

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

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.

SnapSleeve™ Firesleeve with Metal Snap Closure					
Heavy Duty Removable Molten Splash Protection Sleeve					
Nominal ID inches / mm / Dash #			Part Number	Price Per Foot	Price Per Metre
1	25	-16	S-FS-SNAP-M025-16	\$ 20.29	\$ 66.55
1 1/4	32	-20	S-FS-SNAP-M032-20	\$ 22.60	\$ 74.13
1 1/2	38	-24	S-FS-SNAP-M038-24	\$ 24.83	\$ 81.44
1 3/4	44	-28	S-FS-SNAP-M044-28	\$ 26.77	\$ 87.81
2	51	-32	S-FS-SNAP-M051-32	\$ 29.00	\$ 95.12
2 1/4	57	-36	S-FS-SNAP-M057-36	\$ 31.23	\$ 102.43
2 1/2	64	-40	S-FS-SNAP-M064-40	\$ 33.49	\$ 109.85
2 3/4	70	-44	S-FS-SNAP-M070-44	\$ 35.80	\$ 117.42
3	76	-48	S-FS-SNAP-M076-48	\$ 37.94	\$ 124.44
3 1/4	83	-52	S-FS-SNAP-M083-52	\$ 40.34	\$ 132.32
3 1/2	89	-56	S-FS-SNAP-M089-56	\$ 42.29	\$ 138.71
3 3/4	95	-60	S-FS-SNAP-M095-60	\$ 44.51	\$ 145.99
4	102	-64	S-FS-SNAP-M102-64	\$ 48.37	\$ 158.65
4 1/4	108	-68	S-FS-SNAP-M108-68	\$ 50.54	\$ 165.77
4 1/2	114	-72	S-FS-SNAP-M114-72	\$ 52.94	\$ 173.64
4 3/4	121	-76	S-FS-SNAP-M121-76	\$ 55.17	\$ 180.96
5	127	-80	S-FS-SNAP-M127-80	\$ 57.54	\$ 188.73
5 1/4	133	-84	S-FS-SNAP-M133-84	\$ 59.37	\$ 194.73
5 1/2	140	-88	S-FS-SNAP-M140-88	\$ 61.66	\$ 202.25
5 3/4	146	-92	S-FS-SNAP-M146-92	\$ 63.94	\$ 209.72
6	152	-96	S-FS-SNAP-M152-96	\$ 66.11	\$ 216.84
6 1/4	159	-100	S-FS-SNAP-M159-100	\$ 68.51	\$ 224.71
6 1/2	165	-104	S-FS-SNAP-M165-104	\$ 70.74	\$ 232.03
6 3/4	171	-108	S-FS-SNAP-M171-108	\$ 72.74	\$ 238.59
7	178	-112	S-FS-SNAP-M178-112	\$ 74.97	\$ 245.90
7 1/4	184	-116	S-FS-SNAP-M184-116	\$ 76.97	\$ 252.46
7 1/2	191	-120	S-FS-SNAP-M191-120	\$ 79.54	\$ 260.89
7 3/4	197	-124	S-FS-SNAP-M197-124	\$ 81.77	\$ 268.21
8	203	-128	S-FS-SNAP-M203-128	\$ 83.69	\$ 274.50
8 1/4	210	-132	S-FS-SNAP-M210-132	\$ 86.26	\$ 282.93
8 1/2	216	-136	S-FS-SNAP-M216-136	\$ 88.43	\$ 290.05
8 3/4	222	-140	S-FS-SNAP-M222-140	\$ 90.23	\$ 295.95
9	229	-144	S-FS-SNAP-M229-144	\$ 92.57	\$ 303.63

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

Firesleeve with Metallic Zipper Closure

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 snap closure provides heavy duty weld splatter & molten splash protection



This heavy duty silicone rubber coated fiberglass 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®. This is a custom fabrication item – please allow 3 to 10 business days from date of order. Available in continuous lengths up to 150 feet. 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.

**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.**

ZipSleeve™ Firesleeve					
Heavy Duty Removable Molten Splash Protection Sleeve					
Nominal ID inches / mm / Dash #			Part Number	Price Per Foot	Price Per Metre
1	25	-16	S-FS-ZC-M025-16	\$ 20.29	\$ 66.55
1 1/4	32	-20	S-FS-ZC-M032-20	\$ 22.60	\$ 74.13
1 1/2	38	-24	S-FS-ZC-M038-24	\$ 24.83	\$ 81.44
1 3/4	44	-28	S-FS-ZC-M044-28	\$ 26.77	\$ 87.81
2	51	-32	S-FS-ZC-M051-32	\$ 29.00	\$ 95.12
2 1/4	57	-36	S-FS-ZC-M057-36	\$ 31.23	\$ 102.43
2 1/2	64	-40	S-FS-ZC-M064-40	\$ 33.49	\$ 109.85
2 3/4	70	-44	S-FS-ZC-M070-44	\$ 35.80	\$ 117.42
3	76	-48	S-FS-ZC-M076-48	\$ 37.94	\$ 124.44
3 1/4	83	-52	S-FS-ZC-M083-52	\$ 40.34	\$ 132.32
3 1/2	89	-56	S-FS-ZC-M089-56	\$ 42.29	\$ 138.71
3 3/4	95	-60	S-FS-ZC-M095-60	\$ 44.51	\$ 145.99
4	102	-64	S-FS-ZC-M102-64	\$ 48.37	\$ 158.65
4 1/4	108	-68	S-FS-ZC-M108-68	\$ 50.54	\$ 165.77
4 1/2	114	-72	S-FS-ZC-M114-72	\$ 52.94	\$ 173.64
4 3/4	121	-76	S-FS-ZC-M121-76	\$ 55.17	\$ 180.96
5	127	-80	S-FS-ZC-M127-80	\$ 57.54	\$ 188.73
5 1/4	133	-84	S-FS-ZC-M133-84	\$ 59.37	\$ 194.73
5 1/2	140	-88	S-FS-ZC-M140-88	\$ 61.66	\$ 202.25
5 3/4	146	-92	S-FS-ZC-M146-92	\$ 63.94	\$ 209.72
6	152	-96	S-FS-ZC-M152-96	\$ 66.11	\$ 216.84
6 1/4	159	-100	S-FS-ZC-M159-100	\$ 68.51	\$ 224.71
6 1/2	165	-104	S-FS-ZC-M165-104	\$ 70.74	\$ 232.03
6 3/4	171	-108	S-FS-ZC-M171-108	\$ 72.74	\$ 238.59
7	178	-112	S-FS-ZC-M178-112	\$ 74.97	\$ 245.90
7 1/4	184	-116	S-FS-ZC-M184-116	\$ 76.97	\$ 252.46
7 1/2	191	-120	S-FS-ZC-M191-120	\$ 79.54	\$ 260.89
7 3/4	197	-124	S-FS-ZC-M197-124	\$ 81.77	\$ 268.21
8	203	-128	S-FS-ZC-M203-128	\$ 83.69	\$ 274.50
8 1/4	210	-132	S-FS-ZC-M210-132	\$ 86.26	\$ 282.93
8 1/2	216	-136	S-FS-ZC-M216-136	\$ 88.43	\$ 290.05
8 3/4	222	-140	S-FS-ZC-M222-140	\$ 90.23	\$ 295.95
9	229	-144	S-FS-ZC-M229-144	\$ 92.57	\$ 303.63

This Product is Available By-The-Foot / Metre

Small Diameter Firesleeve for Wiring, Cable and Tubing Protection

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

High Temperature, Heat & Flame Resistant

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



FlameShield™ small diameter firesleeve 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 complies with VW-1 flammability requirements. Conforms to, and is listed on the QPL for MIL-I-3190/9 (Grade A).

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, it has negligible radial elasticity.

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

464°F / 240°C continuous rating with weld splatter / molten metal splash protection

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**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				Feet per Spool	Price per Spool
	AWG / Inches / mm / -dash					
S-FS-SD-AWG24-X	24	0.022	0.56		500*	\$ 488.05
S-FS-SD-AWG22-X	22	0.027	0.69		500*	\$ 490.17
S-FS-SD-AWG20-X	20	0.034	0.86		500*	\$ 505.01
S-FS-SD-AWG19-X	19	0.038	0.96		500*	\$ 510.02
S-FS-SD-AWG18-X	18	0.042	1.07		500*	\$ 525.65
S-FS-SD-AWG17-X	17	0.047	1.19		500*	\$ 535.27
S-FS-SD-AWG16-X	16	0.053	1.35		500*	\$ 545.79
S-FS-SD-AWG15-X	15	0.059	1.50		500*	\$ 550.33
S-FS-SD-AWG14-X	14	0.066	1.68	-01	500*	\$ 580.16
S-FS-SD-AWG13-X	13	0.076	1.93		250*	\$ 295.18
S-FS-SD-AWG12-X	12	0.085	2.16		250*	\$ 325.30
S-FS-SD-AWG11-X	11	0.095	2.41		250*	\$ 342.37
S-FS-SD-AWG10-X	10	0.106	2.69		250*	\$ 362.45
S-FS-SD-AWG9-X	9	0.118	3.10		250*	\$ 372.49
S-FS-SD-AWG8-X	8	0.133	3.38	-02	250*	\$ 402.61
S-FS-SD-AWG7-X	7	0.148	3.76		250*	\$ 430.72
S-FS-SD-AWG6-X	6	0.166	4.22		150*	\$ 274.83
S-FS-SD-AWG5-X	5	0.186	4.72	-03	150*	\$ 307.05
S-FS-SD-AWG4-X	4	0.208	5.28		150*	\$ 343.29
S-FS-SD-AWG3-X	3	0.234	5.94		150*	\$ 385.57
S-FS-SD-AWG2-X	2	0.263	6.68	-04	150*	\$ 454.03
S-FS-SD-AWG1-X	1	0.294	7.47		150*	\$ 520.47
S-FS-SD-05-X	5/16	0.313	7.95	-05	150*	\$ 567.78
S-FS-SD-AWG0-X	0	0.330	8.38		150	\$ 610.07
S-FS-SD-06-X	3/8	0.375	9.52	-06	150	\$ 853.69
S-FS-SD-07-X	7/16	0.438	11.12	-07	100	\$ 751.21
S-FS-SD-08-X	1/2	0.500	12.70	-08	100	\$ 877.72
S-FS-SD-10-X	5/8	0.625	15.87	-10	100	\$ 1068.93
S-FS-SD-12-X	3/4	0.750	19.05	-12	100	\$ 1258.32
S-FS-SD-14-X	7/8	0.875	22.22	-14	100	\$ 1534.66
S-FS-SD-16-X	1	1.000	25.40	-16	100	\$ 1874.27
S-FS-SD-18-X	1 1/8	1.125	28.57	-18	100	\$ 2603.51
S-FS-SD-20-X	1 1/4	1.250	31.75	-20	100	\$ 3062.44
S-FS-SD-22-X	1 3/8	1.375	34.92	-22	3**	\$ 33.37 / 3'section
S-FS-SD-23-X	1 7/16	1.437	36.49	-23	3**	\$ 36.88 / 3'section
S-FS-SD-24-X	1 1/2	1.500	38.10	-24	3**	\$ 39.83 / 3'section
S-FS-SD-26-X	1 5/8	1.625	41.27	-26	3**	\$ 42.99 / 3'section
S-FS-SD-28-X	1 3/4	1.750	44.45	-28	3**	\$ 46.46 / 3'section
S-FS-SD-30-X	1 7/8	1.875	47.62	-30	3**	\$ 50.17 / 3'section
S-FS-SD-32-X	2	2.000	50.80	-32	3**	\$ 57.31 / 3'section

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 30 pieces