

**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 standard heat, flame and fire protection for hoses, tubing, cables and wiring 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 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 1-5.

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.

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.

On March 17, 2017, AB Technology Group became the largest firesleeve manufacturer globally.

# 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 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
5/16	8	-05	S-FS-M008-05	\$ 3.21	\$ 10.53	S-FSHD-M008-05-X	\$ 3.47	\$ 11.38
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	S-FS-M011-07	\$ 3.69	\$ 12.10	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	S-FS-M015-09	\$ 4.21	\$ 13.80	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
11/16	17	-11	S-FS-M017-11	\$ 4.63	\$ 15.18	S-FSHD-M017-11-X	\$ 5.07	\$ 16.63
3/4	19	-12	S-FS-M019-12	\$ 4.88	\$ 15.96	S-FSHD-M019-12-X	\$ 5.34	\$ 17.52
13/16	20	-13	S-FS-M020-13	\$ 5.55	\$ 18.20	S-FSHD-M020-13-X	\$ 5.94	\$ 19.48
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 3/8	60	-38	S-FS-M060-38	\$ 16.79	\$ 55.07	S-FSHD-M060-38	\$ 19.93	\$ 65.37
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	\$ 23.37	\$ 76.65
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	\$ 27.24	\$ 89.35
3	76	-48	S-FS-M076-48	\$ 27.21	\$ 89.25	S-FSHD-M076-48	\$ 28.98	\$ 94.99
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	\$ 33.63	\$ 110.31
4	102	-64	S-FS-M102-64	\$ 32.65	\$ 107.09	S-FSHD-M102-64	\$ 35.83	\$ 117.52
4 1/2	114	-72	S-FS-M114-72	\$ 44.24	\$ 145.11	S-FSHD-M114-72	\$ 39.55	\$ 129.72
5	127	-80	S-FS-M127-80	\$ 47.92	\$ 157.18	S-FSHD-M127-80	\$ 42.53	\$ 139.50
5 1/2	140	-87	S-FS-M140-87	\$ 52.71	\$ 172.88	S-FSHD-M140-87	\$ 44.96	\$ 147.47
6	152	-96	S-FS-M152-96	\$ 57.50	\$ 188.60	S-FSHD-M152-96	\$ 47.03	\$ 154.26
8	203	-128	S-FS-M203-128	\$ 76.19	\$ 249.90	S-FSHD-M203-128	\$ 67.62	\$ 221.79
10	254	-160	S-FS-M254-160	\$ 95.84	\$ 314.35	S-FSHD-M254-160	\$ 85.06	\$ 278.99
12	305	-193	S-FS-M305-193	\$ 115.00	\$ 377.20	S-FSHD-M305-193	\$ 102.07	\$ 334.79
14	356	-225	S-FS-M356-225	\$ 134.17	\$ 440.07	S-FSHD-M356-225	\$ 119.08	\$ 390.58
16	406	-257	S-FS-M406-257	\$ 153.34	\$ 502.95	S-FSHD-M406-257	\$ 136.09	\$ 446.37

- 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 - other colors such as Black, Silver/Grey, Yellow, Green and Blue are available. 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 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 1-6.

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**

# SAE AS1072 Aviation / Aerospace Firesleeve: High Temperature, Heat, Flame & Fire Resistant Type 2 Silicone Rubber Composite

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



FlameShield™ Aviation / Aerospace grade firesleeve is manufactured to the SAE AS1072 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.

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 1-6. This sleeve is marked per the AS1072 specification. Other markings such as tradenames 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	Price per Foot / Metre	Nominal ID Inches / mm / Dash #			Part Number	Price per Foot / Metre
1/4	6	-04	AS1072-04 SIL-FG	\$ 3.99 / \$ 13.09	1 3/4	44	-28	AS1072-28 SIL-FG	\$ 13.88 / \$ 45.52
5/16	8	-05	AS1072-05 SIL-FG	\$ 4.17 / \$ 13.66	1 7/8	48	-30	AS1072-30 SIL-FG	\$ 16.19 / \$ 53.10
3/8	10	-06	AS1072-06 SIL-FG	\$ 4.34 / \$ 14.24	2	51	-32	AS1072-32 SIL-FG	\$ 19.28 / \$ 63.23
7/16	11	-07	AS1072-07 SIL-FG	\$ 4.88 / \$ 16.01	2 1/4	57	-36	AS1072-36 SIL-FG	\$ 22.18 / \$ 72.76
1/2	13	-08	AS1072-08 SIL-FG	\$ 5.16 / \$ 16.92	2 3/8	60	-38	AS1072-38 SIL-FG	\$ 23.63 / \$ 77.51
9/16	15	-09	AS1072-09 SIL-FG	\$ 5.44 / \$ 17.84	2 1/2	64	-40	AS1072-40 SIL-FG	\$ 25.07 / \$ 82.22
5/8	16	-10	AS1072-10 SIL-FG	\$ 5.71 / \$ 18.73	2 5/8	67	-42	AS1072-42 SIL-FG	\$ 28.36 / \$ 93.02
11/16	17	-11	AS1072-11 SIL-FG	\$ 6.11 / \$ 20.04	2 3/4	70	-44	AS1072-44 SIL-FG	\$ 29.04 / \$ 95.26
3/4	19	-12	AS1072-12 SIL-FG	\$ 6.51 / \$ 21.35	2 7/8	73	-46	AS1072-46 SIL-FG	\$ 33.01 / \$ 108.26
13/16	20	-13	AS1072-13 SIL-FG	\$ 7.11 / \$ 23.32	3	76	-48	AS1072-48 SIL-FG	\$ 34.98 / \$ 114.74
7/8	22	-14	AS1072-14 SIL-FG	\$ 7.69 / \$ 25.22	3 1/4	83	-52	AS1072-52 SIL-FG	\$ 35.54 / \$ 116.58
1	25	-16	AS1072-16 SIL-FG	\$ 8.70 / \$ 28.54	3 1/2	89	-56	AS1072-56 SIL-FG	\$ 37.94 / \$ 124.44
1 1/8	29	-18	AS1072-18 SIL-FG	\$ 9.55 / \$ 31.32	3 3/4	95	-60	AS1072-60 SIL-FG	\$ 38.76 / \$ 127.14
1 1/4	32	-20	AS1072-20 SIL-FG	\$ 10.48 / \$ 34.37	4	102	-64	AS1072-64 SIL-FG	\$ 40.19 / \$ 131.81
1 3/8	35	-22	AS1072-22 SIL-FG	\$ 11.33 / \$ 37.16	4 1/2	114	-72	AS1072-72 SIL-FG	\$ 46.14 / \$ 151.33
1 1/2	38	-24	AS1072-24 SIL-FG	\$ 12.18 / \$ 39.95	5	127	-80	AS1072-80 SIL-FG	\$ 50.58 / \$ 165.89
1 5/8	41	-26	AS1072-26 SIL-FG	\$ 13.03 / \$ 42.74	6	162	-96	AS1072-96 SIL-FG	\$ 60.69 / \$ 199.08

SAE 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 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 Silicone Rubber Composite for  
“Sleeve, hose assembly, fire protection”  
500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods**



FlameShield™ Aviation / Aerospace grade firesleeve is manufactured to the SAE AS1072 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.

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.

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)	Price per Foot / Metre	Nominal ID Inches / mm / Dash #			Part Number (Yellow highlights NSN/NATO Spec)	Price per Foot / Metre	
1/4	6	-04	AS1072-04 SIL-FG	\$ 3.99 / \$ 13.09	1 3/4	44	-28	5970-14-413-6220	\$ 13.88 / \$ 45.52	
5/16	8	-05	5970-14-455-2318	\$ 4.17 / \$ 13.66	1 7/8	48	-30	AS1072-30 SIL-FG	\$ 16.19 / \$ 53.10	
3/8	10	-06	5970-14-455-2322	\$ 4.34 / \$ 14.24	2	51	-32	5970-14-413-6221	\$ 19.28 / \$ 63.23	
7/16	11	-07	AS1072-07 SIL-FG	\$ 4.88 / \$ 16.01	2 1/4	57	-36	5970-14-413-6222	\$ 22.18 / \$ 72.76	
1/2	13	-08	5970-14-455-2324	\$ 5.16 / \$ 16.92	2 3/8	60	-38	AS1072-38 SIL-FG	\$ 23.63 / \$ 77.51	
9/16	15	-09	AS1072-09 SIL-FG	\$ 5.44 / \$ 17.84	2 1/2	64	-40	5970-14-455-2328	\$ 25.07 / \$ 82.22	
5/8	16	-10	5970-14-413-6212	\$ 5.71 / \$ 18.73	2 5/8	67	-42	AS1072-42 SIL-FG	\$ 28.36 / \$ 93.02	
11/16	17	-11	AS1072-11 SIL-FG	\$ 6.11 / \$ 20.04	2 3/4	70	-44	AS1072-44 SIL-FG	\$ 29.04 / \$ 95.26	
3/4	19	-12	5970-14-413-6213	\$ 6.51 / \$ 21.35	2 7/8	73	-46	AS1072-46 SIL-FG	\$ 33.01 / \$ 108.26	
13/16	20	-13	AS1072-13 SIL-FG	\$ 7.11 / \$ 23.32	3	76	-48	5970-14-455-2331	\$ 34.98 / \$ 114.74	
7/8	22	-14	5970-14-413-6214	\$ 7.69 / \$ 25.22	3 1/4	83	-52	AS1072-52 SIL-FG	\$ 35.54 / \$ 116.58	
1	25	-16	5970-14-413-6215	\$ 8.70 / \$ 28.54	3 1/2	89	-56	5970-14-455-2332	\$ 37.94 / \$ 124.44	
1 1/8	29	-18	AS1072-18 SIL-FG	\$ 9.55 / \$ 31.32	3 3/4	95	-60	AS1072-60 SIL-FG	\$ 38.76 / \$ 127.14	
1 1/4	32	-20	5970-14-413-6216	\$ 10.48 / \$ 34.37	4	102	-64	5970-14-455-2334	\$ 40.19 / \$ 131.81	
1 3/8	35	-22	AS1072-22 SIL-FG	\$ 11.33 / \$ 37.16	4 1/2	114	-72	AS1072-72 SIL-FG	\$ 46.14 / \$ 151.33	
1 1/2	38	-24	5970-14-413-6217	\$ 12.18 / \$ 39.95	5	127	-80	AS1072-80 SIL-FG	\$ 50.58 / \$ 165.89	
1 5/8	41	-26	AS1072-26 SIL-FG	\$ 13.03 / \$ 42.74	6	162	-96	AS1072-96 SIL-FG	\$ 60.69 / \$ 199.08	

SAE 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 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.

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 \$75.00 per print run applies. Cost of printing is \$0.25 per foot. Standard SAE marking is \$0.20 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 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.

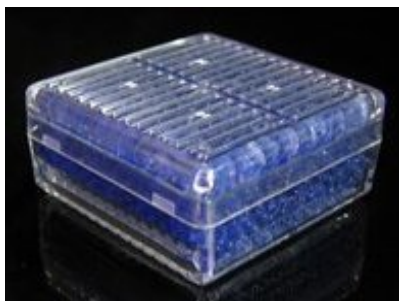
A Low VOC version is available: Maximum VOC is 20g/L.

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 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 End Wrap 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" 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.

<b>FlameShield™ High Temperature Silicone Self Fusing Firesleeve End Wrap Tape</b>				
<b>Meets MIL-I-46852 / A-A-59163 / ABS 5334 Specifications - Type I and Type II</b>				
<b>Part Number</b>	<b>Tape Width Inches / mm</b>	<b>Thickness inches / mm</b>	<b>Color / Type / Profile</b>	<b>Single Roll Price Per Roll</b>
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 1/2 / 38.1	0.020 / 0.508	Black or Red / I / Rectangular	\$ 48.77
T-SR-M038-24-RXX-12	1 1/2 / 38.1	0.012 / 0.304	Black or Red / I / Rectangular	\$ 38.47
T-SR-M051-32-RXX-20	2 / 50.8	0.020 / 0.508	Black or Red / I / Rectangular	\$ 57.13
T-SR-M051-32-TXX-20	2 / 50.8	0.020 / 0.508	Black or Red / II / Triangular	\$ 48.86
<b>Triangular Type II Tapes Only: .020" has a blue guideline / .040" has a green guideline</b>				

<b>Supported Tape with Limited Elongation</b>				
<b>Meets MIL-I-22444 (also meets MIL-I-46852 / A-A-59163 / ABS 5334 Specifications)</b>				
<b>Part Number</b>	<b>Tape Width Inches / mm</b>	<b>Thickness inches / mm</b>	<b>Color / Type / Profile</b>	<b>Single Roll Price Per Roll</b>
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 an encapsulated 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).

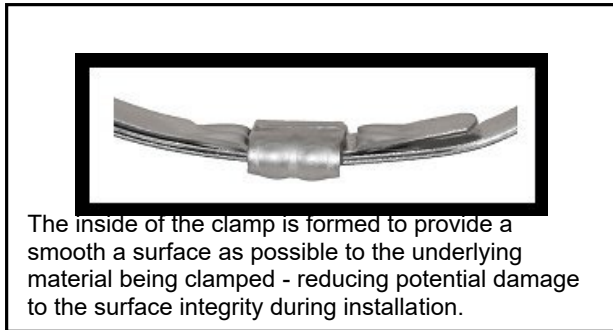
These tapes are guaranteed to meet specification for 1 year from date of manufacture providing tapes are stored dry at 21°C +/- 3°C or 70°F +/- 5°F. Standard tapes have an interleaved liner of polyethylene (Mylar®). Polyester liner available.

## 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.



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.

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	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%

<b>FlameShield™ Type 201 / 316 Stainless Steel / Galvanized Carbon Steel                      Preformed Twice Around Clamps</b> 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%

<b>FlameShield™ Type 201 / 316 Stainless Steel / Galvanized Carbon Steel                      Preformed Twice Around Clamps</b> 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-500-24-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%

<b>FlameShield™ Type 201 / 316 Stainless Steel / Galvanized Carbon Steel                      Preformed Twice Around Clamps</b> 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-625-28-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-625-36-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%

<b>FlameShield™ Type 201 / 316 Stainless Steel / Galvanized Carbon Steel                      Preformed Twice Around Clamps</b> 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 & 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 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	Length inch / mm	Price 100 Bag 304 / 316	Price Each 304 / 316
C-SSSL-3XX-W181-L06-X	7/16 / 11	0.181 / 5.0	6" / 152	\$ 121.00 / \$ 139.00	\$ 1.82 / \$ 2.09
C-SSSL-3XX-W181-L08-X	1 1/8 / 28	0.181 / 5.0	8" / 203	\$ 139.00 / \$ 160.00	\$ 2.09 / \$ 2.40
C-SSSL-3XX-W181-L14-X	3 / 76	0.181 / 5.0	14" / 355	\$ 159.00 / \$ 183.00	\$ 2.39 / \$ 2.75
C-SSSL-3XX-W181-L20-X	5 / 127	0.181 / 5.0	20" / 508	\$ 211.00 / \$ 243.00	\$ 3.17 / \$ 3.65

Free End Clamps – .31" / 8mm wide - 304/316 Stainless Steel – Self Locking					
Part Number	Max Sleeve ID Inches / mm	Clamp width inches / mm	Length inch / mm	Price 100 Bag 304 / 316	Price Each 304 / 316
C-SSSL-3XX-W311-L08-X	1 1/8 / 28	0.311 / 8.0	8" / 203	\$ 159.00 / \$ 183.00	\$ 2.39 / \$ 2.75
C-SSSL-3XX-W311-L14-X	3 / 76	0.311 / 8.0	14" / 355	\$ 229.00 / \$ 263.00	\$ 3.44 / \$ 3.95
C-SSSL-3XX-W311-L20-X	5 / 127	0.311 / 8.0	20" / 508	\$ 387.00 / \$ 445.00	\$ 5.80 / \$ 6.68
C-SSSL-PPAP	Level 1 PAPP Certificate – (Per Line Item)			\$ 460.00	

Clamp Tool		
C-FCT-1		\$ 44.61

For the "X" value:  
substitute "04" for 304 Stainless Steel or "16" for 316 Stainless Steel



## Firesleeve Stainless Steel Clamps Free End Clamps & Clamp Tool



### **Firesleeve Clamp Tool**

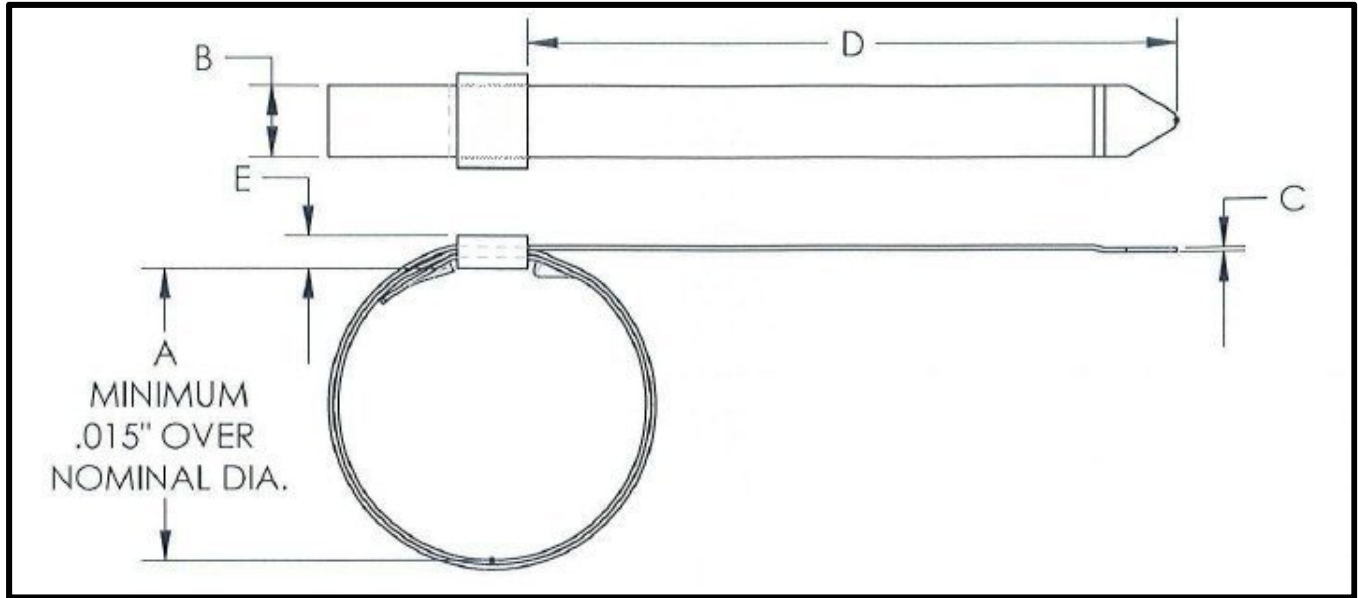
Firesleeve Clamp Tool aids in the tightening of either style of clamp up to 3/8" wide. Built-in handles for the winder and cutter or a standard 1/2" wrench can be used for additional torque on the winder. The tool requires 4.5" of clamp free end for the winder to be properly loaded.

Clamp Tool		
C-FCT-1		\$ 44.61



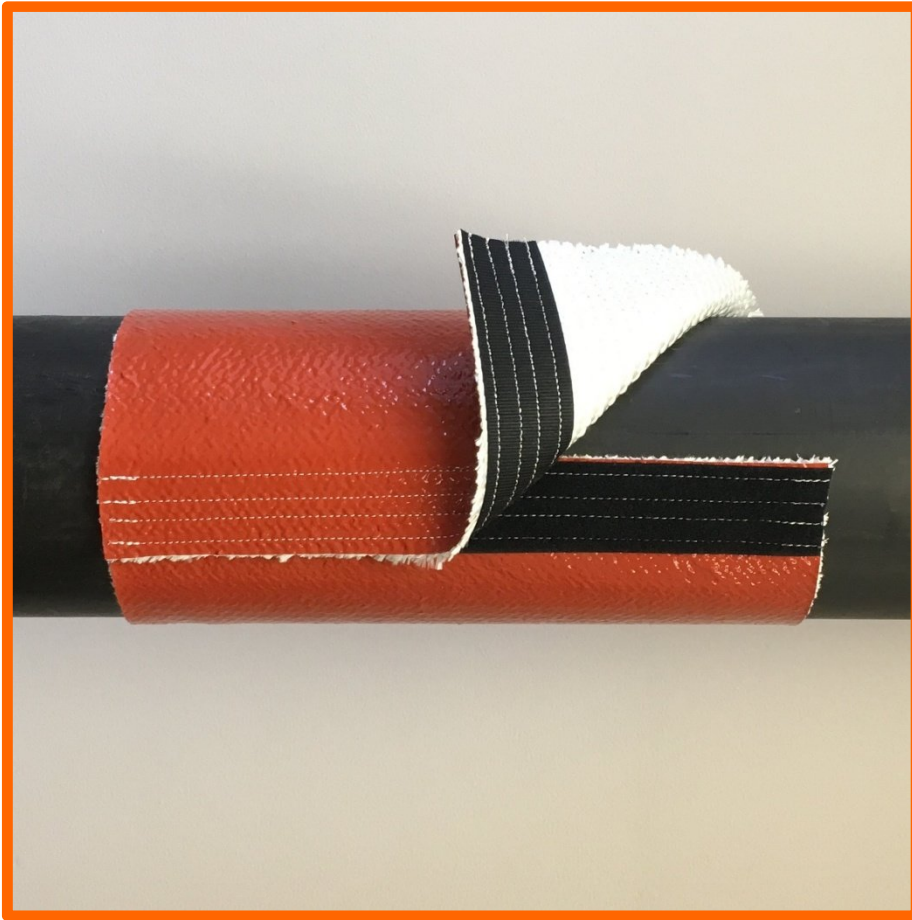
Using FlameShield™ end wrap compression tape over the clamp makes for a neat and clean installation that prevents contamination of the sleeve end.

## Firesleeve 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

**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.

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

<b>InsulDynamic™ HiFlex Firesleeve with VELCRO® Brand Hook / Loop Closure - Small Diameter</b>						
<b>Nominal ID inches / mm / Dash #</b>			<b>Part Number</b>	<b>Hook &amp; loop Width, inches</b>	<b>Price per Foot</b>	<b>Price per Metre</b>
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
3 3/4	95	-60	S-FS-VCL-SM-M095-60	1	\$ 44.51	\$ 145.99
4	102	-64	S-FS-VCL-SM-M102-64	1	\$ 48.37	\$ 158.65
4 1/4	108	-68	S-FS-VCL-SM-M108-68	1	\$ 50.54	\$ 165.77
4 1/2	114	-72	S-FS-VCL-SM-M114-72	1	\$ 52.94	\$ 173.64
4 3/4	121	-76	S-FS-VCL-SM-M121-76	1	\$ 55.17	\$ 180.96
5	127	-80	S-FS-VCL-SM-M127-80	1	\$ 57.54	\$ 188.73

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

<b>InsulDynamic™ Firesleeve with VELCRO® Brand Hook &amp; Loop Closure: Large Diameter</b>						
Nominal ID inches / mm / Dash #			Part Number	Hook/Loop Width, inches	Price per Foot	Price per Metre
5 1/4	133	-84	S-FS-VCL-LG-M133-84	1.5	\$ 59.37	\$ 194.73
5 1/2	140	-88	S-FS-VCL-LG-M140-88	1.5	\$ 61.66	\$ 202.25
5 3/4	146	-92	S-FS-VCL-LG-M146-92	1.5	\$ 63.94	\$ 209.72
6	152	-96	S-FS-VCL-LG-M152-96	1.5	\$ 66.11	\$ 216.84
6 1/4	159	-100	S-FS-VCL-LG-M159-100	1.5	\$ 68.51	\$ 224.71
6 1/2	165	-104	S-FS-VCL-LG-M165-104	1.5	\$ 70.74	\$ 232.03
6 3/4	171	-108	S-FS-VCL-LG-M171-108	1.5	\$ 72.74	\$ 238.59
7	178	-112	S-FS-VCL-LG-M178-112	1.5	\$ 74.97	\$ 245.90
7 1/4	184	-116	S-FS-VCL-LG-M184-116	1.5	\$ 76.97	\$ 252.46
7 1/2	191	-120	S-FS-VCL-LG-M191-120	1.5	\$ 79.54	\$ 260.89
7 3/4	197	-124	S-FS-VCL-LG-M197-124	1.5	\$ 81.77	\$ 268.21
8	203	-128	S-FS-VCL-LG-M203-128	1.5	\$ 83.69	\$ 274.50
8 1/4	210	-132	S-FS-VCL-LG-M210-132	1.5	\$ 86.26	\$ 282.93
8 1/2	216	-136	S-FS-VCL-LG-M216-136	1.5	\$ 88.43	\$ 290.05
8 3/4	222	-140	S-FS-VCL-LG-M222-140	1.5	\$ 90.23	\$ 295.95
9	229	-144	S-FS-VCL-LG-M229-144	1.5	\$ 92.57	\$ 303.63
9 1/4	235	-148	S-FS-VCL-LG-M235-148	1.5	\$ 94.49	\$ 309.93
9 1/2	241	-152	S-FS-VCL-LG-M241-152	1.5	\$ 97.20	\$ 318.82
9 3/4	248	-156	S-FS-VCL-LG-M248-156	1.5	\$ 99.37	\$ 325.93
10	254	-160	S-FS-VCL-LG-M254-160	1.5	\$ 101.66	\$ 333.45
10 1/4	260	-164	S-FS-VCL-LG-M260-164	1.5	\$ 104.00	\$ 341.12
10 1/2	267	-168	S-FS-VCL-LG-M267-168	1.5	\$ 105.60	\$ 346.37
10 3/4	273	-172	S-FS-VCL-LG-M273-172	1.5	\$ 113.31	\$ 371.66
11	279	-176	S-FS-VCL-LG-M279-176	1.5	\$ 115.66	\$ 379.36
11 1/4	286	-180	S-FS-VCL-LG-M286-180	1.5	\$ 118.51	\$ 388.71
11 1/2	292	-184	S-FS-VCL-LG-M292-184	1.5	\$ 122.37	\$ 401.37
11 3/4	298	-188	S-FS-VCL-LG-M298-188	1.5	\$ 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 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.

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

**SplashGard™ HD Sleeve with VELCRO® Brand Hook / Loop Closure  
Small Diameter**

Nominal ID inches / mm / Dash #			Part Number	Hook & loop Width, inches	Price per Foot	Price per Metre
1 1/2	38	-24	S-FGSRHD-VCL-M038-24	3/4	\$ 24.83	\$ 81.44
1 3/4	44	-28	S-FGSRHD-VCL-M044-28	3/4	\$ 26.77	\$ 87.81
2	51	-32	S-FGSRHD-VCL-M051-32	3/4	\$ 29.21	\$ 95.81
2 1/4	57	-36	S-FGSRHD-VCL-M057-36	3/4	\$ 31.23	\$ 102.43
2 1/2	64	-40	S-FGSRHD-VCL-M064-40	3/4	\$ 33.49	\$ 109.85
2 3/4	70	-44	S-FGSRHD-VCL-M070-44	3/4	\$ 35.80	\$ 117.42
3	76	-48	S-FGSRHD-VCL-M076-48	1	\$ 37.94	\$ 124.44
3 1/4	83	-52	S-FGSRHD-VCL-M083-52	1	\$ 40.34	\$ 132.32
3 1/2	89	-56	S-FGSRHD-VCL-M089-56	1	\$ 42.29	\$ 138.71
3 3/4	95	-60	S-FGSRHD-VCL-M095-60	1	\$ 44.51	\$ 145.99
4	102	-64	S-FGSRHD-VCL-M102-64	1	\$ 48.37	\$ 158.65
4 1/4	108	-68	S-FGSRHD-VCL-M108-68	1	\$ 50.54	\$ 165.77
4 1/2	114	-72	S-FGSRHD-VCL-M114-72	1	\$ 52.94	\$ 173.64
4 3/4	121	-76	S-FGSRHD-VCL-M121-76	1	\$ 55.17	\$ 180.96
5	127	-80	S-FGSRHD-VCL-M127-80	1	\$ 57.54	\$ 188.73

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

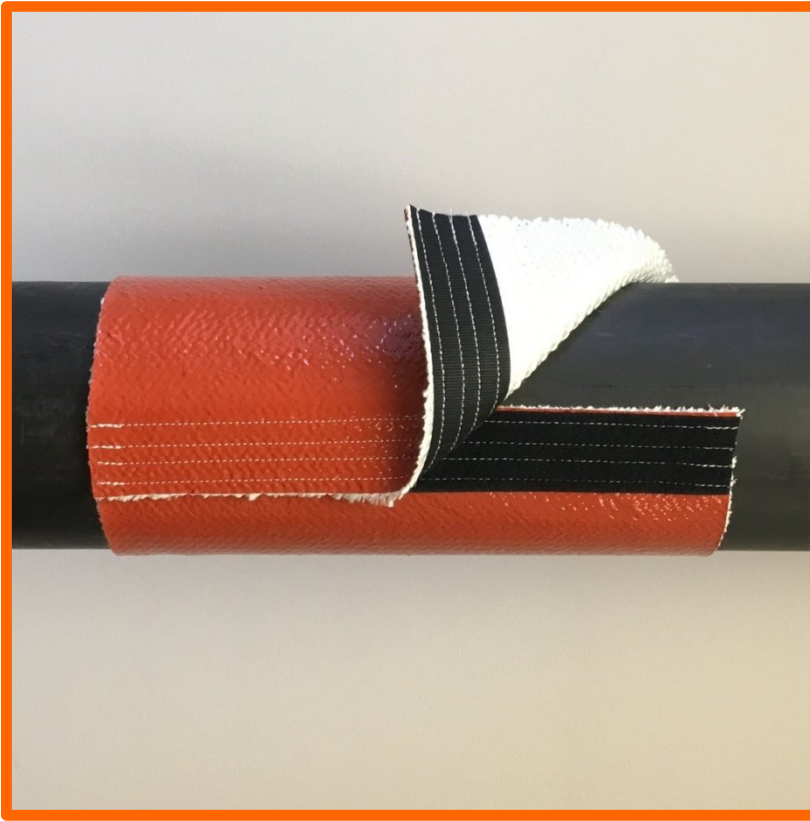
<b>SplashGard™ HD Sleeve with VELCRO® Brand Hook &amp; Loop Closure: Large Diameter</b>						
<b>Nominal ID inches / mm / Dash #</b>			<b>Part Number</b>	<b>Hook/Loop Width, inches</b>	<b>Price per Foot</b>	<b>Price per Metre</b>
5 1/4	133	-84	S-FGSRHD-VCL-M133-84	2	\$ 59.37	\$ 194.73
5 1/2	140	-88	S-FGSRHD-VCL-M140-88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

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 FR 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.

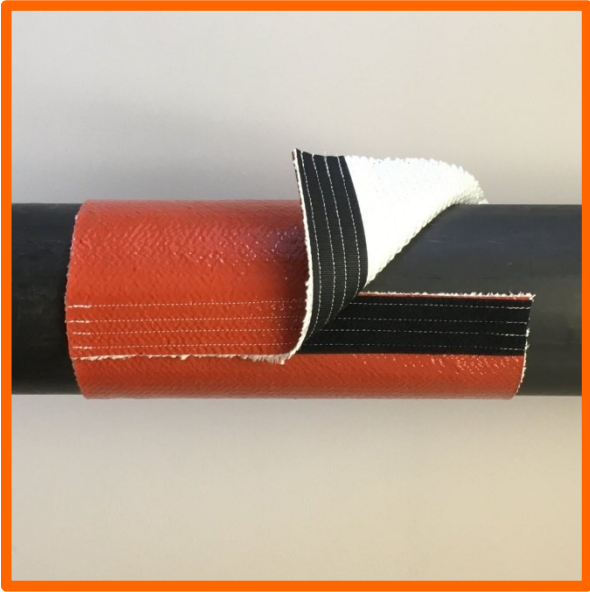
To aid in keeping the firesleeve closed in the event of exposure to higher than rated temperatures or in the event of flame exposure, this sleeve should be further secured with metal band clamps spaced at regular intervals.

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

<b>ZeusGard™ Aviation Firesleeve with Hook &amp; Loop Closure</b>						
<b>Nominal ID inches / mm / Dash #</b>			<b>Part Number</b>	<b>Hook &amp; loop Width, inches</b>	<b>Price per Foot</b>	<b>Price per Metre</b>
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
3 3/4	95	-60	S-FS-VCL-AERO-M095-60	1	\$ 47.21	\$ 154.85
4	102	-64	S-FS-VCL-AERO-M102-64	1	\$ 48.37	\$ 158.65
4 1/4	108	-68	S-FS-VCL-AERO-M108-68	1	\$ 50.54	\$ 165.77
4 1/2	114	-72	S-FS-VCL-AERO-M114-72	1	\$ 52.94	\$ 173.64
4 3/4	121	-76	S-FS-VCL-AERO-M121-76	1	\$ 55.17	\$ 180.96
5	127	-80	S-FS-VCL-AERO-M127-80	1	\$ 57.54	\$ 188.73

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 fibreglass 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”. 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.

**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

**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	Price Per Foot	Price Per Metre
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**



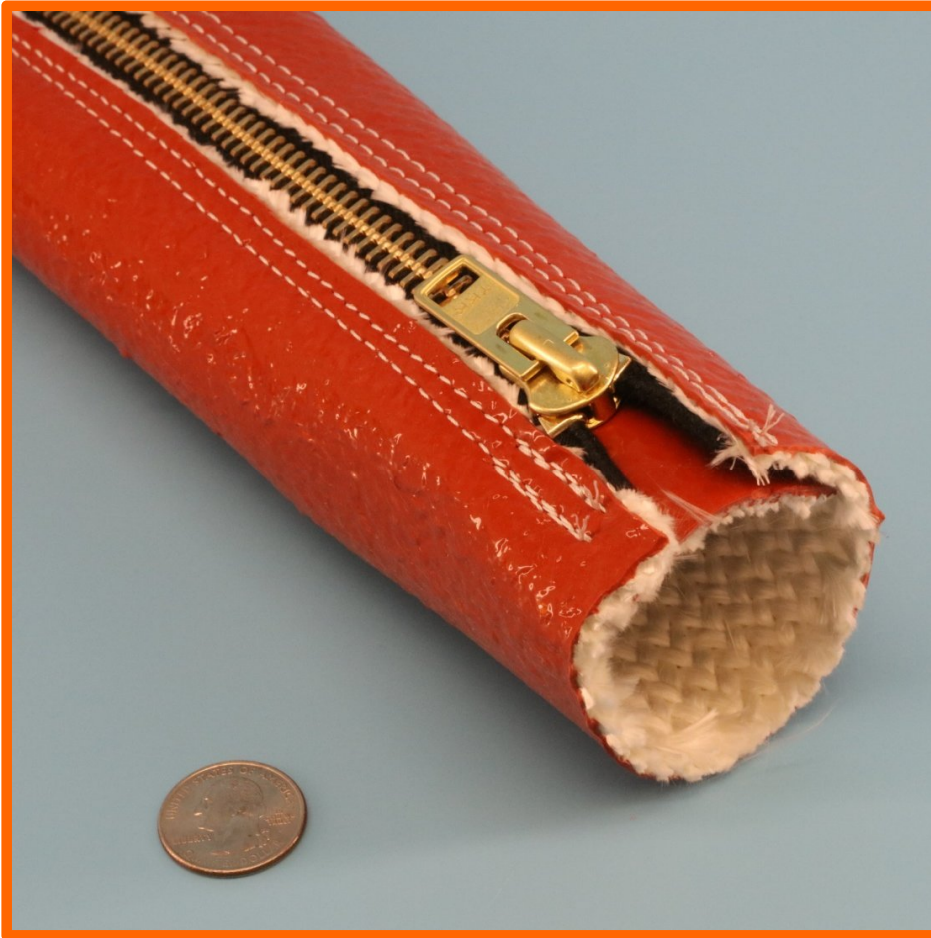


## Firesleeve with Metallic Zipper Closure - ZipSleeve™

**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 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® fabric and metal teeth. This is a custom fabrication – please allow 3 to 10 business days from date of order.

Available in continuous lengths up to 100 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.

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

For critical applications, metal clamps can be used to secure the sleeve 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.  
2200°F / 1205°C for periods up to 15 minutes and short excursions to 3000°F / 1650°C.**

**Firesleeve with Metallic Zipper Closure (Continued)**  
**500°F / 260°C Continuous Rating – Higher Temperature for Shorter Periods**  
**High Temperature, Heat, Flame & Fire Resistant Firesleeve**



<b>ZipSleeve™ Firesleeve</b>					
<b>Heavy Duty Removable Molten Splash Protection Sleeve</b>					
<b>Nominal ID inches / mm / Dash #</b>			<b>Part Number</b>	<b>Price Per Foot</b>	<b>Price Per Metre</b>
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 and the coating, 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**

**Small Diameter Firesleeve 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>
<b>Physical</b>		
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
<b>Chemical</b>		
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
<b>Electrical</b>		
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)
<b>Thermal</b>		
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 (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				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

Items highlighted in yellow are available by-the-foot