

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

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

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



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



Standard Wall Thickness
Heat Treated with Binders

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

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

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

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

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

E-Glass Properties:

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

Common Properties:

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

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

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

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

For the "X" value in the part number:

use "HT" to specify Heat Treated

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

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

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

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

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

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

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

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

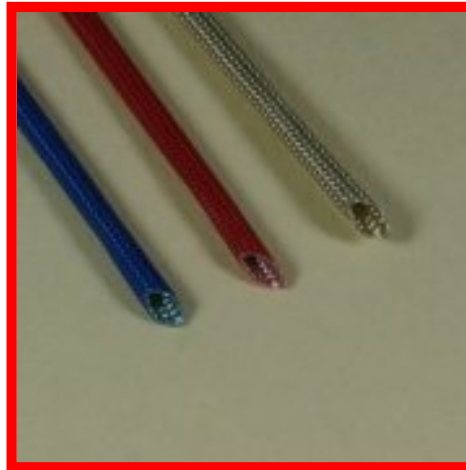
This product is not stock, it is made to order: Delivery is approximately 10 to 15 business days.

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

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



S-Fiberglass Sleeve: Plain & Heat Treated



Heat Treated Sleeve with Binders

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

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

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

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

S-Glass Properties:

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

Common Properties:

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

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

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

For the "X" value in the part number:

use "P" to specify Plain

use "HT" to specify Heat Treated

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

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

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

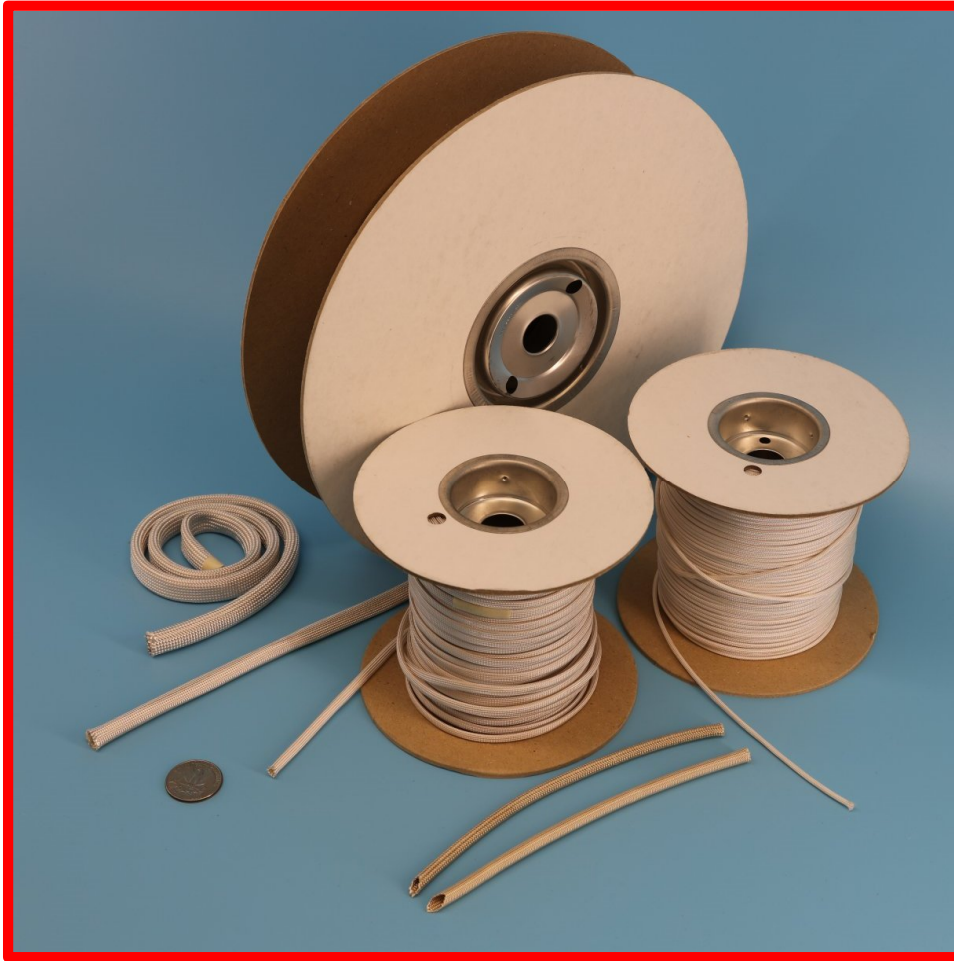
- See table at end of section for dimensional specifications for this product.
- Plain & Heat Treated sleeve is 1200°F / 648°C continuous, 1742°F / 950°C intermittent.
- Sleeve with binders is rated to 600°F / 316°C continuous, 1140°F / 616°C intermittent
- This product is available in full coils except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

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



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

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



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

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

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

For the "X" value in the part number:

use "HT" to specify Heat Treated

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

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

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

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

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

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

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

This Product must be purchased in full coils.

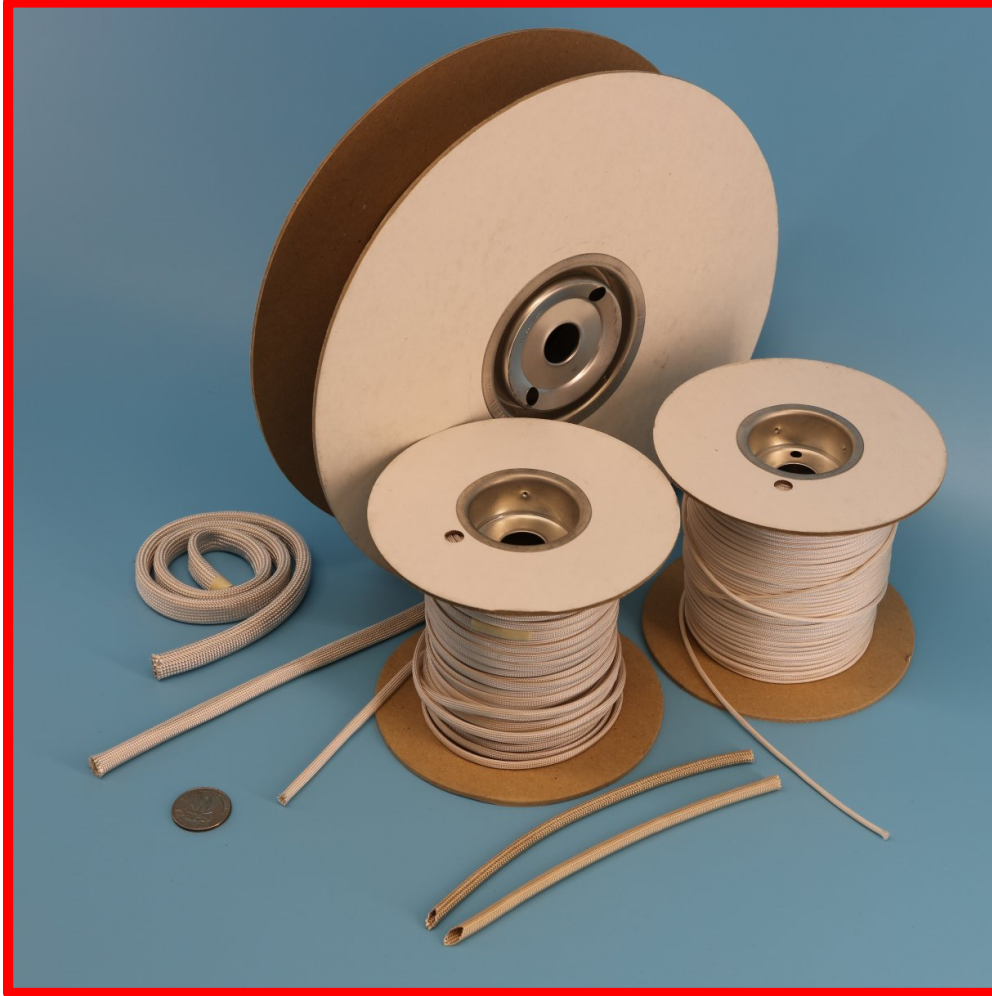
This product is not stock, it is made to order: Delivery is approximately 10 business days.

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

Plain, Heat Treated or Heat Treated and with Binders

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

DeltaGlass™ Very High Temperature & Heat Resistant



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

Very High Temperature & Heat Resistant E-Fiberglass Braided Sleeve
Special Thin Wall Thickness:

Plain available all sizes; or with Resin Binder up to 1/2" / 12.7mm ID

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

For the "X" value in the part number: use "8" to specify .008" wall
use "6" to specify .006" wall

For the "Y" value in the part number: use "P" to specify Plain
Use "HT" to specify Heat Treated
use "B" to specify with Binder

Acrylic Coated Fiberglass Sleeve - Flexible - AWG Small Diameter

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

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



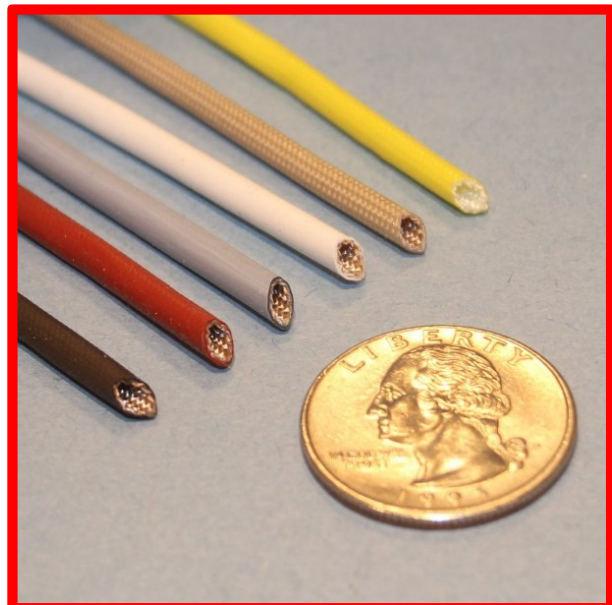
Designed as a primary insulation sleeve for protecting small diameter wire. Recognized by UL and CSA for 155°C, 600 volt service, and complies with VW-1 flammability requirements. Conforms to and is listed on the QPL for MIL-I-3190/9. Available in 3 grades: NEMA Grade A-1, B-1 and C-1.

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

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

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

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



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

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

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

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

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

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

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

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

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

This product is available in full coils only.

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

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

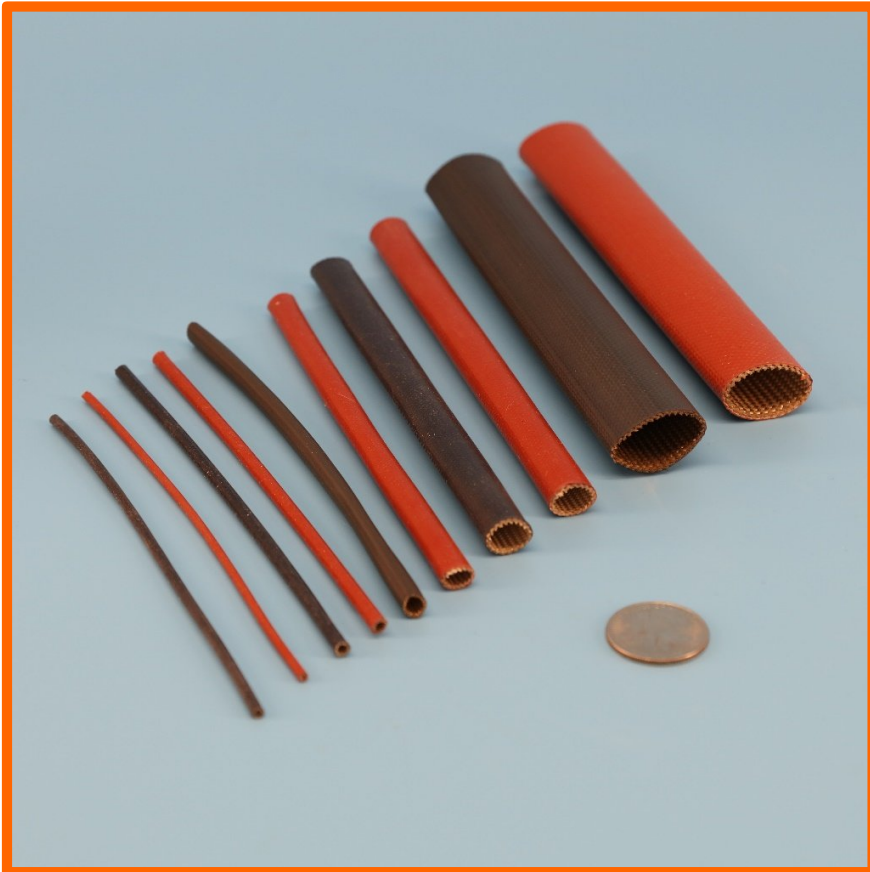
Small Diameter Firesleeve style sleeve for Wiring, Cable and Tubing Protection

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

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

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

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



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

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

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

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

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

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

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

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

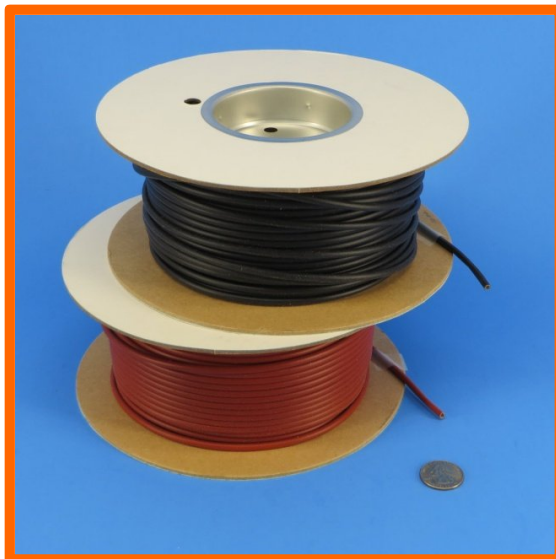
Depending on the sleeve diameter, this product is supplied in 100, 150 or 250 foot lengths on spools.

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

NEMA allows non continuous lengths according to the following limitations:

Feet per Spool	Max # of lengths
100ft	3
150ft	3
250ft	4
500ft	7
1,000ft	10

If your requirement includes a minimum continuous length, please specify at time of ordering.



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

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

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

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

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

Small Diameter Firesleeve style sleeving (Continued)

High Temperature, Heat & Flame Resistant Small

Silicone Rubber Coated Fiberglass Sleeve

Primary Insulation Silicone Rubber Coated Fiberglass Sleeve for

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

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

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

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

This product is available in full coils only.

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

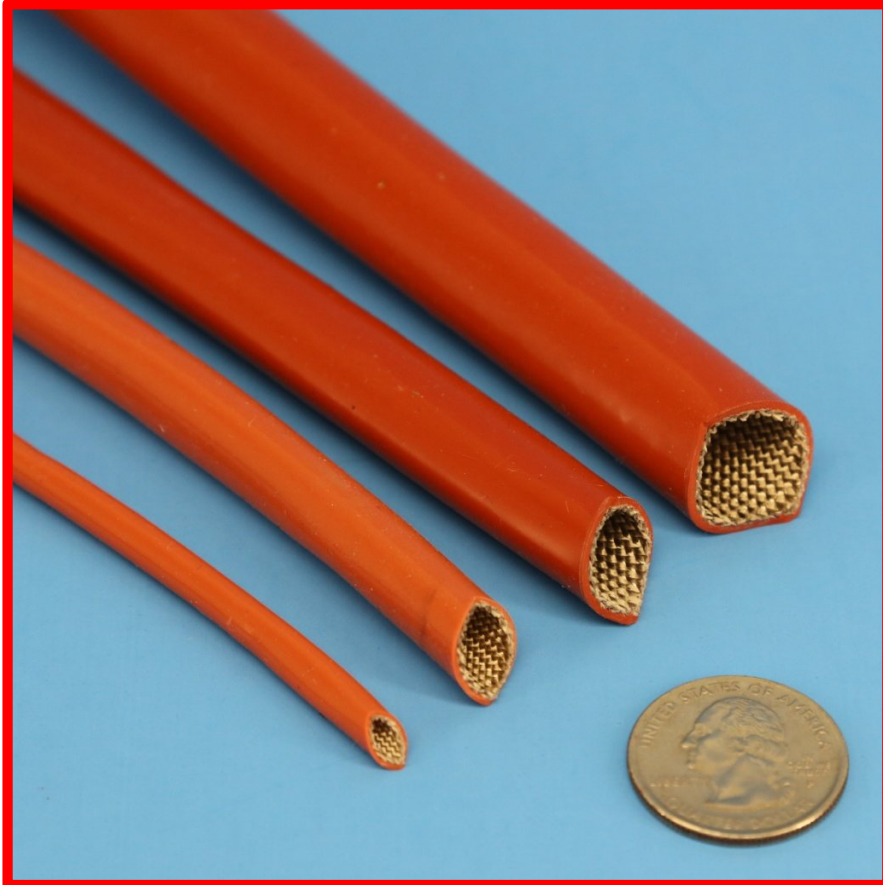
* Longer Spool Lengths Available. ** Minimum order 99 feet. *** Minimum order 60 feet.

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

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

High Temperature, Heat & Flame Resistant

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



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

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

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

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

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

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

Small Diameter HD Firesleeve style sleeve

High Temperature, Heat & Flame Resistant Small

Silicone Rubber Coated Fiberglass Sleeve

Primary Insulation Silicone Rubber Coated Fiberglass Sleeve for

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

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

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

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

This product is available in full coils only.

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

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



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

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

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

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

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

E-Glass Properties:

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

Common Properties:

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

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

Suniso® is a registered trademark of Compton Corporation

Icematic® is a registered trademark of Castrol, Inc.

ZEROL® is a registered trademark of Shrieve Chemical Products Company

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

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

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

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

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

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

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

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



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

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

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

E-Glass Properties:

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

Common Properties:

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

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

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

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

Larger Sizes up to 2" ID Available

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

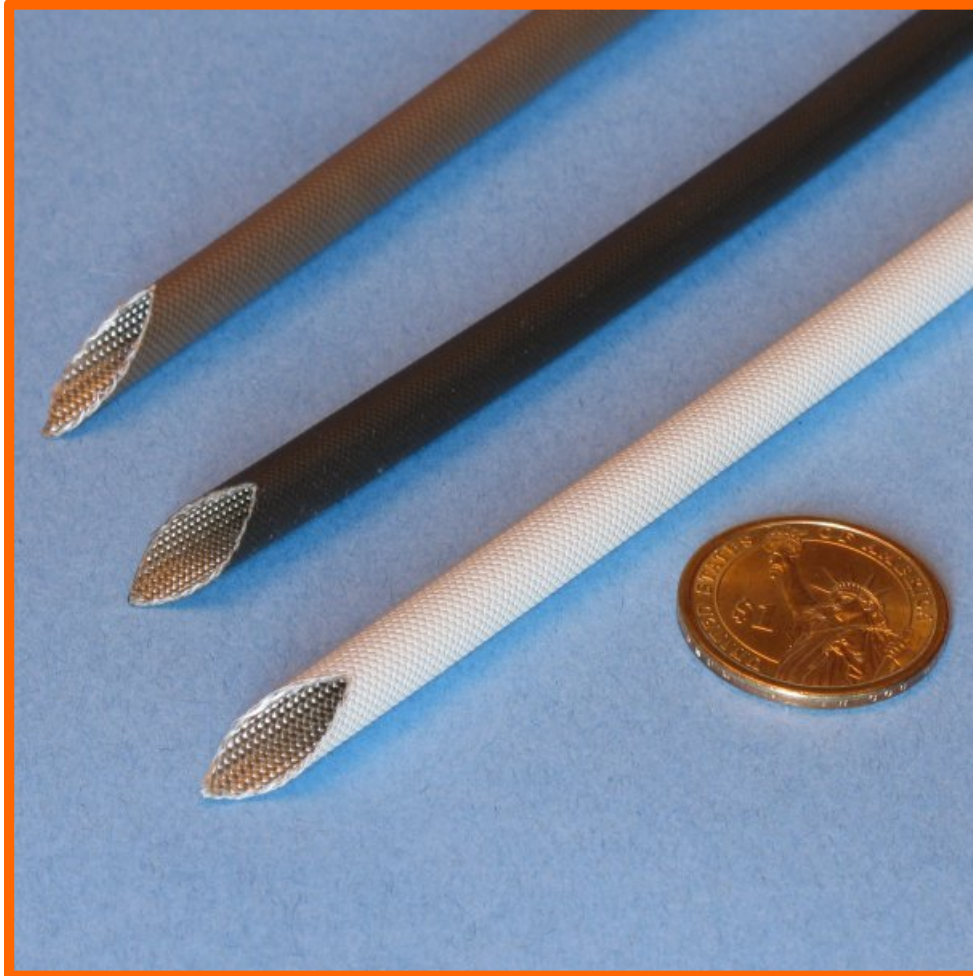
This product is not a stock item, it is made to order: Delivery is approximately 5 to 15 business days.

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

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

Cut, Puncture & Abrasion / Wear Resistance

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



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

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

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

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

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

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

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

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

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

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

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

Primary Insulation Viton® 231 Coated Fiberglass Sleeve for

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

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

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

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

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

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