

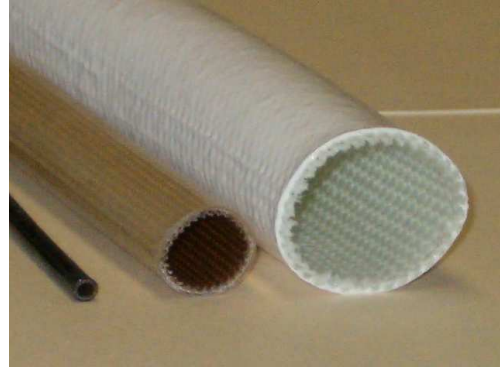


# NU-SLEEVE SG-200™

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## SILICONE RUBBER COATED BRAIDED FIBERGLASS SLEEVING

- Class “R” Insulation rated to 200°C.
- Grade A (7000V) UL & CSA Recognized-  
UL File #E93101, CSA File #LR67735
- Grade B (4000V) VW-1 Flame Retardant -  
UL File #E80713
- Applicable Specifications:
  - NEMA TF-1 Type 5
  - UL 1441 VW-1
  - FMVSS 302
  - SAE ARP 1536 Abrasion Test
  - MIL-I-3190/6, QPL-3190:  
Grade A (8000V)
- RoHS and WEEE compliant.
- Low Temperature Brittle Point Below -70°C
- Available Sizes: AWG #24 – 1 1/2”
- Packaging: Standard Spools, Bulk Spools, Cut to length (1/2” diameter and under).
- Colors: White, Black, Natural, Red Iron Oxide are standard. Other available colors are subject to factory quotation upon request.



NU-SLEEVE SG-200 is a standard wall (NEMA TF-1, Table 3-1) coated fiberglass sleeving made by applying a liquid silicone rubber to a fully annealed fiberglass substrate. It is extremely resistant to abrasion, offers better coating adhesion to the fiberglass compared to extruded rubber sleeveings and has a high heat/flex capacity. It is highly resistant to end fray and coating fracture, even when stretched over rectangular conductors or wires larger than the normal maximum inside diameter, making it an ideal choice for high stress applications over a wide temperature range from -55°C to +200°C.

NU-SLEEVE SG-200 is highly resistant to inorganic acids and alkalis. Chlorinated organic solvents and aromatic hydrocarbons will cause some swelling and subsequent reduction in Tensile strength. Testing with ASTM #1 Oil, a slight swelling was produced, while IRM #903 Oil will produce a higher volume increase of up to 40%.

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NU-SLEEVE SG-200 is used extensively in high temperature applications where one or more of the following features are required: flexibility, expandability, abrasion resistance, cut-through resistance and chemical resistance. It finds application in terminal and lead insulation and protection, wire harness protection in extreme environments as well as high current dry transformers. It may also be stacked to obtain higher dielectric voltage ratings.

NEMA Grades	Jenisco Spec.	Markel Hygrade Spec.	Min. Average Breakdown	Min. Individual Breakdown
SG-200 A	ER565	SR-398A	7000V	5000V
SG-200 B	ER564	SR-398B	4000V	2500V
SG-200 C	ER563	SR-398C	2500V	1500V

NEMA Size	Nominal Diameter (inches)	Nominal Diameter (mm)	Sofanou Grade A Part No.	Minimum Diameter (inches)	Maximum Diameter (inches)
24	0.024	0.61	ER5650024X	0.020	0.027
22	0.029	0.74	ER5650022X	0.025	0.032
20	0.036	0.91	ER5650020X	0.032	0.039
18	0.044	1.12	ER5650018X	0.040	0.049
17	0.049	1.24	ER5650017X	0.045	0.054
16	0.056	1.42	ER5650016X	0.051	0.061
15	0.062	1.57	ER5650015X	0.057	0.067
14	0.069	1.75	ER5650014X	0.064	0.074
13	0.077	1.96	ER5650013X	0.072	0.082
12	0.086	2.18	ER5650012X	0.081	0.091
11	0.096	2.44	ER5650011X	0.091	0.101
10	0.107	2.72	ER5650010X	0.102	0.112
9	0.119	3.02	ER5650009X	0.114	0.124
8	0.135	3.43	ER5650008X	0.129	0.141
7	0.148	3.76	ER5650007X	0.144	0.158
6	0.166	4.22	ER5650006X	0.162	0.178
5	0.186	4.72	ER5650005X	0.182	0.198
4	0.208	5.28	ER5650004X	0.204	0.224
3	0.234	5.94	ER5650003X	0.229	0.249
2	0.263	6.68	ER5650002X	0.258	0.278
1	0.294	7.47	ER5650001X	0.289	0.311
5/16"	0.313	7.95	ER5650312X	0.313	0.334
0	0.330	8.38	ER5650000X	0.325	0.347
3/8"	0.387	9.83	ER5650375X	0.375	0.399
7/16"	0.450	11.43	ER5650437X	0.438	0.462
1/2"	0.512	13.00	ER5650500X	0.500	0.524
5/8"	0.640	16.26	ER5650625X	0.625	0.655
3/4"	0.768	19.51	ER5650750X	0.750	0.786
7/8"	0.893	22.68	ER5650875X	0.875	0.911
1"	1.018	25.86	ER5651000X	1.000	1.036
1 1/8"	1.144	29.06	ER5651125X	1.125	1.161
1 1/4"	1.260	31.75	ER5651250X	1.250	1.286
1 1/2"	1.518	38.56	ER5651500X	1.500	1.536

**Notes:** 1) For Grade B (4000V) substitute ER564 and for Grade C (2500V) substitute ER563 for ER565 Grade A (7000V) shown in the above part number.

2) X in the part numbers listing used to designate color. B=Black, N=Natural, RO=Red Oxide, W=White. Consult the factory for availability of other colors.

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Operating Range (NEMA Class H):	-70 °C to 200 °C	
Dielectric Strength Grade A:	Dry: 8,000 Volts, 60Hz AC @ 500V/sec. Rate of rise Wet: >80% of the dry values	
Dielectric Constant:	(10,000 Hz)	2.86
	(100 Hz)	2.87
Volume Resistivity:	Ohm.cm x 10 <sup>13</sup>	6.1
Dissipation Factor:	(10,000 Hz)	.0011
	(100Hz)	.0016
Tensile Strength:	Mpa	8.3
Hardness:	Shore A	37
Elongation at Break:	%	420
Fungus Resistance:	Inert	None at 40x
Rate of Burning:	Self-extinguishing with removal of flame source	
Radiation Resistance:	(10 Mrads)	No effect
DELPHI M4613		
Heat Age	275°C for 136 hours – no effect.	
Flammability	Self-extinguishing	
Fluid exposure		
Brake fluids	No effect	
Transmission fluids	No effect	
Antifreeze	No effect	
Washer solutions	No effect	
Fuel C	No effect	
Pwr. Steering fluid	No effect	
Diesel	No effect	
Battery electrolyte	No effect	
Oil	No effect	
Abrasion resistance	1500 cycles, minimum	

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