ACRYFLEX-F® SLEEVING

Class 155°C • Acrylic-Coated Fiberglass Sleeving (Grades A-B-C and C2)
Class 240°C • Acrylic-Coated Fiberglass Sleeving (Grade C3)
UL Recognized Component: 600 Volt, 155°C (Grade A) File No. E66526
VW-1 (Grade C3 only) File No. E51556
Canadian Standards Association: 600 Volt 155°C (Grade A) File No. 37065
MIL-I-003190/3, ASTM D372, NEMA TF-1

DESCRIPTION

ACRYFLEX-F fiberglass sleeving is a Class 155°C electrical insulation, manufactured by impregnating and coating a finely braided fiberglass sleeving with a dielectric film of acrylic resin. ACRYFLEX-F sleeving is recommended as a universal coated sleeving for all thermal requirements from Class 105°C through Class 155°C.

AVAILABLE GRADES

ACRYFLEX-F sleeving is available in the following grades. The dielectric breakdown voltages given are measured according to ASTM D149, using a rate of voltage increase of 500 volts/second.

Grade A	7,000 Volts Min. Avg.	5,000 Volts Min. Indiv.
Grade B	4,000 Volts Min. Avg.	2,500 Volts Min. Indiv.
Grade C-1	2,500 volts Min. Avg.	1,500 Volts Min. Indiv.
Grade C-2	1,500 Volts Min. Avg.	800 Volts Min. Indiv.
Grade C-3	Space factor insulation only approx. 30 VPM.	

1/32" wall constructions available on special order.

STANDARD COLOR

#24 to 1/2" – Natural (varies from white to tan), black, red and yellow.
5/8" and Larger – Natural.

APPLICATIONS

ACRYFLEX-F sleeving is widely used in fractional and integral horsepower motors on leads and crossovers. Other uses exist in dry and oil-filled transformers, relays of many types, radio and television circuits, welding apparatus and many others.

ADVANTAGES

ACRYFLEX-F sleeving is an overall superior sleeving in the 105°C to 155°C thermal rating range. Its compatibility with other components of insulation systems is equal or superior to any other type of sleeving in this temperature range. Use of this one sleeving for Class 105°C, Class 130°C and Class 155°C applications can permit reduction of sleeving inventory with attendant savings.

FEATURES

ACRYFLEX-F sleeving has superior mechanical and electrical properties, providing its rated dielectric strength during and after the most severe handling in your application. It is fully compatible with most magnet wire coatings such as polyester, acrylic, polyamide, polyimide, epoxy and phenolic, and is proven in applications and laboratory tests in both sealed and unsealed systems.

DIMENSIONS

Size NEMA STD.	I.D. Max.		I.D. Min.		Nom. Wall		Feet in Standard Package
	Inch	(mm)	Inch	(mm)	A	C	
24	.027	(.66)	.020	(.51)	.018	.014	500' spools or 36" lengths
22	.032	(.81)	.025	(.64)	.018	.014	
20	.039	(.99)	.032	(.81)	.018	.014	
18	.049	(1.24)	.040	(1.02)	.018	.014	
17	.054	(1.376	.045	(1.19)	.018	.014	
16	.061	(1.55)	.051	(1.30)	.020	.016	
15	.067	(1.70)	.057	(1.45)	.020	.016	
14	.074	(1.88)	.064	(1.63)	.020	.016	
13	.082	(2.08)	.072	(1.83)	.022	.017	250' spools or 36" lengths
12	.091	(2.31)	.081	(2.06)	.022	.017	
11	.101	(2.57)	.091	(2.31)	.022	.017	
10	.112	(2.84)	.102	(2.59)	.022	.017	
9	.124	(3.15)	.114	(2.90)	.024	.019	
8	.141	(3.58)	.129	(3.28)	.024	.019	
7	.158	(4.01)	.144	(3.66)	.024	.019	
6	.178	(4.52)	.162	(4.11)	.024	.019	
5	.198	(5.03)	.182	(4.62)	.028	.023	
4	.224	(5.69)	.204	(5.18)	.028	.023	
3	.249	(6.32)	.229	(5.82)	.028	.023	
2	.278	(7.06)	.258	(6.55)	.028	.023	
1	.311	(7.90)	.289	(7.34)	.028	.023	100' spools or 36" lengths
0	.347	(8.81)	.325	(8.26)	.028	.023	
3/8"	.399	(10.13)	.375	(9.53)	.034	.030	
7/16"	.462	(11.73)	.438	(11.13)	.034	.030	
1/2"	.524	(13.31)	.500	(12.70)	.034	.030	100' spools, coils or 36" lengths
5/8"	.655	(16.64)	.625	(15.88)	.034	.030	
3/4"	.786	(19.96)	.750	(19.05)	.040	.038	
7/8"	.911	(23.14)	.875	(22.23)	.040	.038	
1"	1.036	(26.31)	1.000	(25.40)	.040	.038	

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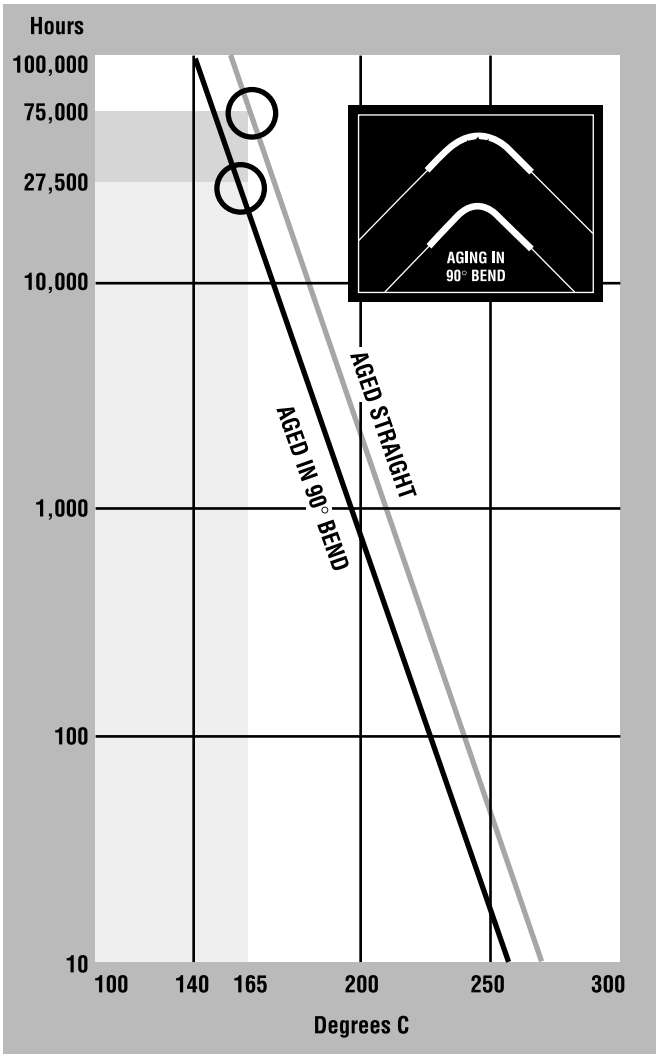
UL Recognized Component: 600 Volt, 155°C (Grade A) File No. E66526
Canadian Standards Association, 600 Volt 155°C (Grade A) File No. 37065

PERFORMANCE CHARACTERISTICS



Thermal Aging In 90° Bend
Exceeds 25,000 hrs. at 155°C, using 50% of initial dielectric strength.

FUNCTIONAL THERMAL AGING

The 90° Bend Test is significant in that it simulates the full functional characteristics of ACRYFLEX-F fiberglass sleeving. The sleeving is held on a mandrel in a 90° bend during the entire aging cycle. The performance of the sleeving is measured by a dielectric breakdown test on the 90° bend, where the sleeving is both stretched on the outer radius and compressed on the inner radius of the bend.

TRANSFORMER OIL IMMERSION

Transformer oil retains more than 90% of its Interfacial Surface Tension after 14 days aging at 105°C with an immersed specimen of ACRYFLEX-F fiberglass sleeving.

MECHANICAL PROPERTIES

The tough, flexible dielectric coating is thermosetting and can withstand the rigors experienced during the assembly, dipping and baking cycle, without excessive loss of its electrical properties.

THERMAL AGING TIME†

Aging Temperature	Aged in 90° Bend	Aged Straight
225°C	118 Hrs.	120 Hrs.
200°C	690 Hrs.	990 Hrs.
175°C	3,280 Hrs.	5,045 Hrs.

† to ½ original dielectric strength.

COMPATIBILITY

Excellent with most wire enamels (polyester, acrylic, polyimide, polyamide, epoxy and phenolic, etc.) — tested in sealed and unsealed systems.

WEIGHT LOSS

2% - 3% after 24 hours at 180°C.

LOW TEMPERATURE

Bends without cracking at -25°C.

RATE OF BURNING

Conforms with requirements of NEMA TF-1, MIL-I-003190/3, and ASTM D372.

CHEMICAL RESISTANCE

Resistant to oils, acids, alkalies and most organic solvents. After more than 168 hours in the most commonly used aromatics, xylene and toluene, the dried sleeving substantially regains its original properties.