

Suflex® Astra 701

General Purpose PVC Tubing

Temp Class: 90° C

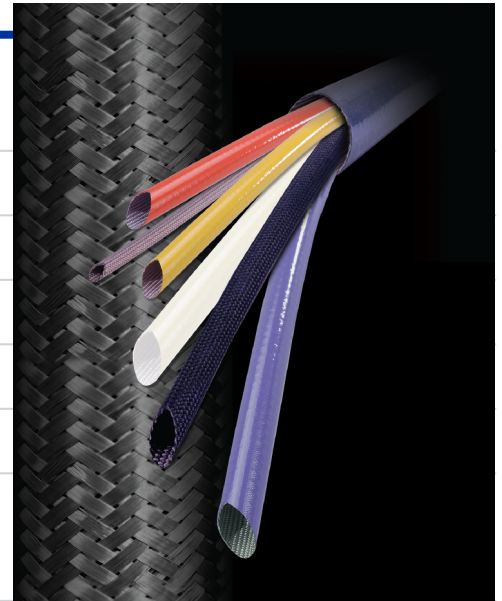
Grades Available: A, B

Material: Polyvinylchloride Tubing

Sizes Available: AWG #24 through 2-1/2" I.D.

Colors Available: Clear, Black

Applicable Standards: MIL-I-631/QPL



Features

- ▶ Extremely wide thermal range from -55°C to 90°C.
- ▶ Excellent flexibility.
- ▶ Non-corrosive and resistant to fungus.
- ▶ Maintains high dielectric strength over full temperature range.

Product Description

Suflex Astra 701 tubing is a high quality, general purpose, extruded polyvinylchloride tubing of exceptionally wide thermal range from -55°C to 90°C. Suflex Astra 701 maintains a high dielectric strength, excellent flexibility, non-corrosiveness and fungus resistance over its full temperature range.

Suggested Applications

Suflex Astra 701 tubing finds applications in appliances, electric motors, commercial and military aircraft, automotive components and a host of other installations. Its low temperature characteristics make it particularly useful in airborne equipment, electrical harnesses, motorcycles and snow machines.



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Sizes Available

Size	Inside Diameter, in. (mm)		Nominal I.D.
	Maximum	Minimum	
24 AWG	0.027 (0.69)	0.020 (0.51)	0.022
22 AWG	0.032 (0.81)	0.025 (0.64)	0.027
20 AWG	0.039 (0.99)	0.032 (0.81)	0.034
19 AWG	0.044 (1.11)	0.036 (0.91)	0.040
18 AWG	0.049 (1.25)	0.040 (1.02)	0.042
17 AWG	0.054 (1.37)	0.045 (1.14)	0.047
16 AWG	0.061 (1.55)	0.051 (1.30)	0.053
15 AWG	0.067 (1.70)	0.057 (1.45)	0.059
14 AWG	0.074 (1.88)	0.064 (1.63)	0.066
13 AWG	0.082 (2.08)	0.072 (1.83)	0.076
12 AWG	0.091 (2.31)	0.081 (2.06)	0.085
11 AWG	0.101 (2.60)	0.091 (2.31)	0.095
10 AWG	0.112 (2.80)	0.102 (2.60)	0.106
9 AWG	0.124 (3.20)	0.114 (2.90)	0.118
8 AWG	0.141 (3.60)	0.129 (3.30)	0.133
7 AWG	0.158 (4.00)	0.144 (3.70)	0.148
6 AWG	0.178 (4.50)	0.162 (4.10)	0.166
5 AWG	0.198 (5.00)	0.182 (4.60)	0.186
4 AWG	0.224 (5.70)	0.204 (5.20)	0.208
3 AWG	0.249 (6.30)	0.229 (5.80)	0.234
2 AWG	0.278 (7.10)	0.258 (6.60)	0.263
1 AWG	0.311 (7.90)	0.289 (7.30)	0.294
0 AWG	0.347 (8.80)	0.325 (8.30)	0.330
5/16"	0.334 (8.4836)	0.312 (7.9248)	0.312
3/8"	0.399 (10.10)	0.375 (9.50)	0.375
7/16"	0.462 (11.70)	0.438 (11.10)	0.438
1/2"	0.524 (13.30)	0.500 (12.70)	0.500
5/8"	0.655 (16.70)	0.625 (15.90)	0.625
3/4"	0.786 (20.00)	0.750 (19.10)	0.750
7/8"	0.911 (23.20)	0.875 (22.20)	0.875
1"	1.036 (26.30)	1.000 (25.40)	1.000
1-1/8"	1.161 (29.60)	1.125 (28.70)	1.125
1-1/4"	1.286 (32.80)	1.250 (31.90)	1.250
1-1/2"	1.536 (39.20)	1.500 (38.30)	1.500
1-3/4"	1.786 (45.50)	1.750 (44.60)	1.750
2"	2.036 (51.90)	2.000 (51.00)	2.000
2-1/4"	2.330 (59.40)	2.250 (57.40)	2.250
2-1/2"	2.536 (64.70)	2.500 (63.80)	2.500

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Product Specifications

Property		MIL-I-631 Conditioning Grade A & B	MIL-I-631 Requirements		Typical Astra 701 Performance
			Grade A	Grade B	
Dielectric Strength	Dry	C-96/23/50	Min. 800 V/mil	Min. 750 V/mil	1000 V/mil
	Wet	C-36/23/96	Min. 90% of dry	Min. 85% of dry	95% of dry
Dielectric Constant	Dry	C-96/23/50	Maximum 7.0		3.22
	Wet	C-36/23/96	Maximum 8.0		3.61
Dielectric Factor	Dry	C-96/23/50	Maximum .14		.043
	Wet	C-36/23/96	Maximum .16		.057
Volume Resistivity		24 h immersion 23°C	Min. 1×10 ⁷ ohm-cm		31.5×10 ⁷ ohm-cm
Tensile Strength		C-96/23/50	Min. 1800 psi	Min. 1450 psi	3000 psi
Elongation	Unaged	C-96/23/50	Minimum 200% - Maximum 450%		350%
	Aged	400 h 100°C	Maximum change 35%		3.4%
Softening Temperature		C-96/23/50	Min. 75°C	Min. 70°C	88°C
Lengthwise Shrinkage		2 h 100°C	Maximum 10%		2.6%
Flexibility		200 h 100°C	No cracks after 180° bend around 1/2" mandrel		Conforms
Ultra-violet Resistance		120 h under S-1 Lamp	Not Required	No cracks after 180° bend	Conforms
Cold Brittleness		2.5 Minutes	-30°C	-46°C	-57°C
Flame Resistance		None	Maximum 15 sec		0 sec
Oil Resistance		High Swelling Oil 200 h at 50°C	No cracks, no oil penetration Max. 10% increase in diameter		Conforms +0.5% increase
Corrosion Resistance		720 h 70°C High Humidity	No corrosion of conductor 2% Max. increase in resistance of conductor		Conforms +1.2% increase
Fungus Resistance		12 mos. 23°C 50% RH in fungus culture	No fungus growth		Conforms
Bursting Strength (increasing pressure)		C-96/23/50	Min. 29 psi to 96 psi		Exceeds all requirements by 96%
Bursting strength (continuous pressure)		C-96/23/50	Min. 15 psi to 48 psi		96%

*All Atkins & Pearce coated insulation solutions are REACH and RoHS compliant.



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Ordering Information

Product	Grade	Size	Color	Packing Code
86 = Astra 701	0 = No Electrical Grade	0024 = AWG #24	01 = Black	1 = Spool
		0022 = AWG #22	12 = Clear	Y = Cut Piece
		0020 = AWG #20		
		0019 = AWG #19		
		0018 = AWG #18		
		0017 = AWG #17		
		0016 = AWG #16		
		0015 = AWG #15		
		0014 = AWG #14		
		0013 = AWG #13		
		0012 = AWG #12		
		0011 = AWG #11		
		0010 = AWG #10		
		0009 = AWG #9		
		0008 = AWG #8		
		0007 = AWG #7		
		0006 = AWG #6		
		0005 = AWG #5		
		0004 = AWG #4		
		0003 = AWG #3		
		0002 = AWG #2		
		0001 = AWG #1		
		0000 = AWG #0		
		0313 = 5/16"		
		0375 = 3/8"		
		0438 = 7/16"		
		0500 = 1/2"		
		0625 = 5/8"		
		0750 = 3/4"		
		0875 = 7/8"		
		1000 = 1"		
		1250 = 1 - 1/4"		
		1500 = 1 - 1/2"		
		1750 = 1 - 3/4"		
		2000 = 2"		
		2250 = 2 - 1/4"		
		2500 = 2 - 1/2"		

Example: 8600004011 (Astra 701, 4, Black, Spool)

