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SAE AS81822/1

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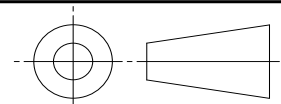
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THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8D

SAE Aerospace
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AEROSPACE STANDARD

WIRE, ELECTRICAL, SOLDERLESS WRAP, POLYETHYLENE
TEREPHTHALATE-POLYESTER LAMINATED TAPE
INSULATION, SILVER COATED SOLID CONDUCTOR

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ISSUED 1998-07 REAFFIRMED 2004-06 STABILIZED 2011-07

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 An SAE International Group	AEROSPACE STANDARD	SAE AS81822/1 SHEET 2 OF 4	REV. A
	WIRE, ELECTRICAL, SOLDERLESS WRAP, POLYETHYLENE TEREPHTHALATE-POLYESTER LAMINATED TAPE INSULATION, SILVER COATED SOLID CONDUCTOR		

THE COMPLETE REQUIREMENTS FOR ACQUIRING THE WIRE DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION AND THE ISSUE IN EFFECT OF SPECIFICATION MIL-W-81822.

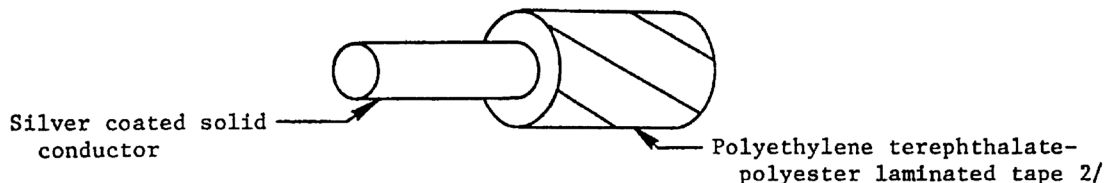


TABLE I. Construction and performance details.

Part no. <u>1/</u>	Wire size (AWG)	Finished wire diameter (inches)	Finished weight (lb/1,000 ft) (max)	Cut-through load (grams)	Bend testing			Insulation pull-off (lbs)
					Mandrel diameter (ins.)		Tension load (lbs)	
					Heat resistance	Cold bend	Cold bend	
M81822/1-X30-*	30	0.0195 ± .0010	0.48	1400	1/16	1.0	0.25	0.4 to 2.5
M81822/1-X30V*	30	0.0180 ± .0010	0.45	1400	1/16	1.0	0.25	0.4 to 2.5
M81822/1-X28-*	28	0.0265 ± .0015	0.83	1800	5/64	1.0	0.50	0.5 to 2.5
M81822/1-X28V*	28	0.0255 ± .0015	0.80	1800	5/64	1.0	0.50	0.5 to 2.5
M81822/1-X26-*	26	0.0295 ± .0015	1.17	2200	3/32	1.0	0.50	1 to 4
M81822/1-X26V*	26	0.0265 ± .0015	1.08	2200	3/32	1.0	0.50	1 to 4
M81822/1-X24-*	24	0.0340 ± .0015	1.73	2600	7/64	1.0	0.50	1 to 4
M81822/1-X22-*	22	0.0390 ± .0020	2.58	2800	1/8	1.0	0.75	1 to 6
M81822/1-X20-*	20	0.0460 ± .0020	3.92	2900	9/64	1.0	0.75	1 to 6
M81822/1-X18-*	18	0.0540 ± .0030	6.00	3000	11/64	1.0	1.00	1 to 6

1/ PART NUMBER: The "X" in the generalized part numbers of table I shall be replaced by the designator for the conductor type and the asterisk shall be replaced by the code designator for the insulation color. Example: Size 24 wire with type A (soft annealed copper) conductor and white insulation - M81822/1-A24-9.

2/ Polyvinyl chloride laminant is not permitted.

WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 105°C (221°F) MAX CONDUCTOR TEMPERATURE.

VOLTAGE RATING: 300 VOLTS (RMS).

INSULATION TENSILE STRENGTH: 2,500 PSI (MIN).

INSULATION ELONGATION: WIRE SIZES 30 AND 28 - 35 PERCENT (MIN).
WIRE SIZES 26 THROUGH 18 - 50 PERCENT (MIN).

COLOR: MIL-STD-104, CLASS 1, COLOR AS SPECIFIED IN CONTRACT OR ORDER. (ALL MIL-STD-104, CLASS 1, COLORS ARE AVAILABLE.)

SPARK TEST: 2,000 VOLTS (RMS).

INSULATION RESISTANCE: 500 MEGOHMS-1,000 FT (MIN).

WET DIELECTRIC TEST: 1,000 VOLTS (RMS), 60 Hz.

COLD BEND CONDITIONING: 4 HRS AT -54° ± 2°C (-65.2° ± 3.6°F).

DIELECTRIC TEST FOR CUT-THROUGH: 500 VOLTS (RMS), 60 Hz.

INSULATION HEAT RESISTANCE:
CONDITIONING, 48 HRS AT 150° ± 2°C (302° ± 3.6°F).
SHRINKAGE, 0.250 INCH (MAX).

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	WIRE, ELECTRICAL, SOLDERLESS WRAP, POLYETHYLENE TEREPHTHALATE-POLYESTER LAMINATED TAPE INSULATION, SILVER COATED SOLID CONDUCTOR		