

AS81822/5

FEDERAL SUPPLY CLASS
6145

NOTICE

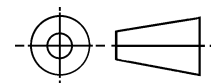
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THIRD ANGLE PROJECTION



ISSUED 1998-07 REAFFIRMED 2004-06

PREPARED BY SUBCOMMITTEE AE-8D

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

WIRE, ELECTRICAL, SOLDERLESS WRAP, FLUOROCARBON
POLYIMIDE TAPE AND POLYTETRAFLUOROETHYLENE (PTFE)
INSULATION, SILVER COATED SOLID CONDUCTOR

AS81822/5
SHEET 1 OF 3

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

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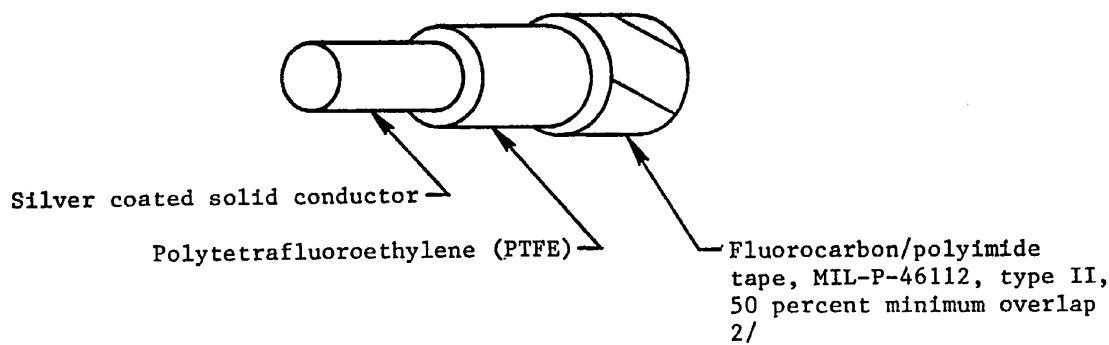


TABLE I. Construction and performance details.

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	
M81822/5-X30-*	30	0.0195 ± .0010	0.52	550	1/16	1.0	0.25	0.15 to 2.5
M81822/5-X28-*	28	0.0265 ± .0015	0.92	700	5/64	1.0	0.50	0.15 to 2.5
M81822/5-X26-*	26	0.0295 ± .0015	1.27	800	3/32	1.0	0.50	0.25 to 4
M81822/5-X24-*	24	0.0340 ± .0015	1.85	900	7/64	1.0	0.50	0.5 to 4
M81822/5-X22-*	22	0.0390 ± .0020	2.73	1000	1/8	1.0	0.75	0.5 to 6
M81822/5-X20-*	20	0.0460 ± .0020	4.11	1150	9/64	1.0	0.75	0.5 to 6
M81822/5-X18-*	18	0.0540 ± .0030	6.25	1250	11/64	1.0	1.00	0.5 to 6

1/ PART NO.: 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 22 wire with type A (soft annealed copper) conductor and black insulation - M81822/5-A22-0.

2/ Type II, grade B tape of 0.1 mil FEP/1 mil polyimide film/0.1 mil FEP construction, not listed in current MIL-P-46112 issue, is also permitted.
NOTE: FEP = Fluorinated Ethylene Propylene Fluorocarbon.

WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 200°C (392°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: BLACK, GREEN, BROWN, RED, YELLOW OR ORANGE, AS SPECIFIED IN CONTRACT OR ORDER (MIL-STD-104 IS NOT APPLICABLE TO WIRE OF THIS SPECIFICATION SHEET.)

SPARK TEST: 2,000 VOLTS (RMS).

INSULATION RESISTANCE: 2,500 MEGOHMS-1,000 FT (MIN).

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

COLD BEND CONDITIONING: 4 HRS AT -65° ± 2°C (-85° ± 3.6°F).