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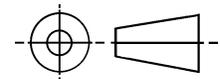
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THIRD ANGLE PROJECTION



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PREPARED BY SAE SUBCOMMITTEE AE-8D

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AEROSPACE STANDARD

WIRE, ELECTRICAL, FLUOROPOLYMER-INSULATED, CROSS-LINKED MODIFIED ETFE, NORMAL WEIGHT, SILVER-COATED COPPER, 200°C, 600 VOLT

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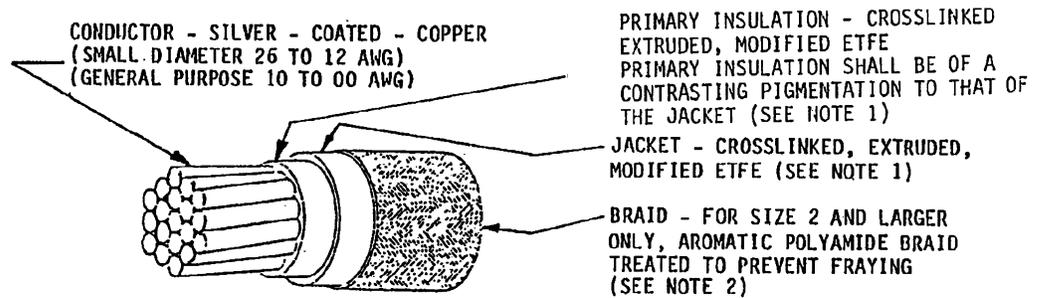
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THE REQUIREMENTS FOR ACQUIRING THE WIRE DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION AND THE LATEST ISSUE OF MIL-W-22759.



NOTES:

1. ETFE - Ethylene-tetrafluoroethylene copolymer.
2. Braid (sizes 2 and larger): Bright aromatic polyamide yarn, 200 denier, 100 filaments, tightly formed, uniform in appearance, treated with a clear finisher coating. The finisher coating shall be compatible with the temperature rating and performance requirements of the insulated wire.

FIGURE 1. GENERAL CONFIGURATION.

TABLE I. CONSTRUCTION DETAILS.

Part no. <u>1/</u>	Wire size	Stranding (number of strands x AWG gauge of strands)	Diameter of stranded conductor (inches)		Resistance at 20°C (68°F) (ohms/1000 ft) (max)	Finished wire	
			(min)	(max)		Diameter (inches)	Weight (lbs/1000 ft) (max)
M22759/43-26-*	26	19 x 38	.018	.019	38.4	.040 ±.002	1.7
M22759/43-24-*	24	19 x 36	.023	.025	24.3	.045 ±.002	2.3
M22759/43-22-*	22	19 x 34	.029	.031	15.1	.050 ±.002	3.2
M22759/43-20-*	20	19 x 32	.037	.039	9.19	.058 ±.002	4.7
M22759/43-18-*	18	19 x 30	.046	.048	5.79	.070 ±.003	7.2
M22759/43-16-*	16	19 x 29	.052	.054	4.52	.077 ±.003	9.0
M22759/43-14-*	14	19 x 27	.065	.068	2.88	.094 ±.003	13.8
M22759/43-12-*	12	37 x 28	.084	.087	1.90	.111 ±.003	20.5
M22759/43-10-*	10	37 x 26	.106	.112	1.19	.134 ±.004	32.4
M22759/43- 8-*	8	133 x 29	.158	.169	.658	.195 ±.008	61.9
M22759/43- 6-*	6	133 x 27	.198	.213	.418	.241 ±.010	94.5
M22759/43- 4-*	4	133 x 25	.250	.268	.264	.310 ±.010	158.
M22759/43- 2-*	2	665 x 30	.320	.340	.170	.405 ±.016	239.
M22759/43- 1-*	1	817 x 30	.360	.380	.139	.445 ±.106	305.
M22759/43-01-*	0 <u>2/</u>	1045 x 30	.395	.425	.108	.485 ±.016	385.
M22759/43-02-*	00 <u>2/</u>	1330 x 30	.440	.475	.085	.545 ±.016	487.

1/ Part number: The asterisks in the part number column, tables I and II, shall be replaced by color code designators in accordance with MIL-STD-681 except that for size 2 and larger the braid color shall be dark green and the designator shall be 5D. Examples: Size 20, white with orange stripe - M22759/43-20-93; size 2, dark green - M22759/43-20-5D. Printing of color code designator on surface of wire insulation is not required.

2/ Wire sizes 0 and 00 have been superseded by -01 and -02 respectively.

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TABLE II. PERFORMANCE DETAILS.

Part no.	Bend testing			
	Mandrel diameter (inches) (+3%)		Test load (lbs) (+3%)	
	Crosslinking proof, immersion and life cycle tests	Cold bend test	Crosslinking proof, immersion and life cycle tests	Cold bend test
M22759/43-26-*	.375	1.00	.500	3.00
M22759/43-24-*	.500	1.00	.750	3.00
M22759/43-22-*	.500	1.00	1.00	3.00
M22759/43-20-*	.500	1.00	1.50	4.00
M22759/43-18-*	.750	1.50	2.00	4.00
M22759/43-16-*	1.00	1.50	2.00	5.00
M22759/43-14-*	1.00	2.00	3.00	5.00
M22759/43-12-*	1.50	2.00	3.00	5.00
M22759/43-10-*	2.00	3.00	3.00	5.00
M22759/43- 8-*	3.00	4.00	4.00	6.00
M22759/43- 6-*	4.00	5.00	4.00	10.0
M22759/43- 4-*	5.00	6.00	4.00	10.0
M22759/43- 2-*	6.00	8.00	6.00	15.0
M22759/43- 1-*	8.00	10.0	6.00	15.0
M22759/43-01-*	8.00	10.0	6.00	15.0
M22759/43-02-*	10.0	12.0	8.00	20.0

RATINGS:

Temperature rating: 200°C (392°F) maximum continuous conductor temperature.

Voltage rating: 600 volts (rms) at sea level.

ADDITIONAL REQUIREMENTS:

Acid resistance: No requirement.

Blocking: 230°C ±3°C (446°F ± 5.4°F).

Color: In accordance with MIL-STD-104, class 1; white preferred. For braided constructions, color shall be dark green within Munsell color limits of 5Y 3/2 and 5B 2/0.5. Conformity of color to the limits of MIL-STD-104 shall not be required after crosslinking proof test or life cycle oven exposure.

Color striping or banding durability: 125 cycles (250 strokes) (min), 500 grams weight. Not required for sizes 2 and larger.

Crosslinking proof test: 7 hours at 300°C ±3°C (572°F ±5.4°F). Quality conformance test, group II. Requirements and procedures as for life cycle except for time and temperature.

Dielectric test after immersion: 2,500 volts (rms), 60 Hz.

Flammability: Quality conformance test, group II. For requirements and procedures see below.

Humidity resistance: After humidity exposure, wire shall meet the requirements for initial insulation resistance.

Identification of product: Not required for size 24 and smaller. Color code designator not required.

Identification durability: 125 cycles (250 strokes) (min), 500 grams weight. Not required for sizes 2 and larger.

Immersion: For procedure see below.

Impulse dielectric test: 8.0 kilovolts (peak), 100 percent test.

Insulation resistance, initial:

Sizes 26 through 10, 5,000 megohms for 1,000 feet (min).

Sizes 8 through 00, 3,000 megohms for 1,000 feet (min).

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