

NOTICE

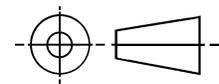
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THIRD ANGLE PROJECTION



ISSUED 2000-09 REAFFIRMED 20007-11

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PREPARED BY SAE SUBCOMMITTEE AE-8D



AEROSPACE STANDARD

WIRE, ELECTRIC, FLUOROPOLYMER-INSULATED,
TFE-GLASS-TFE, MEDIUM WEIGHT, NICKEL-COATED
COPPER CONDUCTOR, 600-VOLT

AS22759/3
SHEET 1 OF 4

THE COMPLETE REQUIREMENTS FOR PROCURING THE WIRE DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE ISSUE IN EFFECT OF SPECIFICATION MIL-W-22759.

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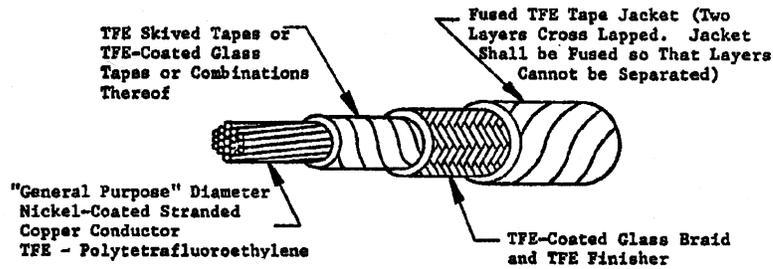


TABLE I. CONSTRUCTION DETAILS.

Part No. <u>1/</u>	Wire size	Stranding (Number of strands X AWG gage of strands)	Diameter of stranded conductor (inches)		Finished wire			
			(min)	(max)	Resistance at 20°C (68°F) (ohms/1000 ft) (max)	Thickness of TFE jacket (inches)	Diameter (inches)	Weight (lbs/1000 ft) (max)
M22759/3-22-*	22	19 X 34	.029	.033	16.0	.009 ±.002	.074 ±.003	5.90
M22759/3-20-*	20	19 X 32	.037	.041	9.77	.009 ±.002	.082 ±.003	7.90
M22759/3-18-*	18	19 X 30	.046	.051	6.10	.010 ±.002	.095 ±.003	11.0
M22759/3-16-*	16	19 X 29	.052	.058	4.76	.010 ±.002	.103 ±.004	13.6
M22759/3-14-*	14	19 X 27	.065	.073	3.00	.010 ±.002	.116 ±.004	18.5
M22759/3-12-*	12	37 X 28	.084	.090	1.98	.010 ±.002	.133 ±.004	26.6
M22759/3-10-*	10	37 X 26	.106	.114	1.24	.010 ±.002	.164 ±.006	41.5
M22759/3-8-*	8	133 X 29	.158	.173	.694	.010 ±.002	.235 ±.007	77.4
M22759/3-6-*	6	133 X 27	.198	.217	.436	.010 ±.002	.282 ±.010	115.
M22759/3-4-*	4	133 X 25	.250	.274	.275	.012 ±.003	.351 ±.015	184.
M22759/3-2-*	2	665 X 30	.320	.340	.177	.012 ±.003	.430 ±.015	281.
M22759/3-1-*	1	817 X 30	.360	.380	.144	.014 ±.004	.480 ±.015	358.
M22759/3-01-*	0	1045 X 30	.395	.425	.113	.014 ±.004	.525 ±.025	436.
M22759/3-02-*	00	1330 X 30	.440	.475	.089	.014 ±.004	.585 ±.025	554.

1/ PART NO.: The asterisks in the part number column, Tables I and II, shall be replaced by color code designators in accordance with MIL-STD-681. Examples: Size 20, white - M22759/3-20-9; white with orange stripe - M22759/3-20-93.

TABLE II. PERFORMANCE DETAILS.

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Part No.	Abrasion resistance (Procedure I)				Bend testing					
	Resistance (inches of tape) (min)		Weight support bracket	Weight (lbs)	Tension load (lbs)	Mandrel diameter (inches) (+3%)			Test load (lbs) (+3%)	
	Initial	After immer- sion <u>1/</u>				Life cycle (oven & bend tests) <u>2/</u>	Cold bend test	Wrap test	Life cycle (oven & bend tests) <u>2/</u>	Cold bend test
M22759/3-22-*	18	13	A	1.0	1.0	.375	.50	.250	.75	2.0
M22759/3-20-*	18	13	A	1.0	1.0	.375	.50	.250	.75	2.0
M22759/3-18-*	24	17	A	1.0	1.0	.50	.75	.375	1.0	2.0
M22759/3-16-*	30	21	A	1.0	2.0	.50	.75	.375	1.0	3.0
M22759/3-14-*	12	8	B	3.0	2.0	.50	1.00	.50	1.0	3.0
M22759/3-12-*	12	8	B	3.0	2.0	.75	2.00	.50	3.0	3.0
M22759/3-10-*	18	13	B	3.0	2.0	1.00	3.00	.75	3.0	5.0
M22759/3-8-*	24	17	B	3.0	2.0	1.50	3.00	1.00	3.0	5.0
M22759/3-6-*	30	21	C	3.0	2.0	2.00	4.00	1.25	6.0	10.0
M22759/3-4-*	36	25	C	4.25	2.0	3.00	6.00	1.50	6.0	10.0
M22759/3-2-*	40	28	C	4.25	2.0	4.00	6.00	2.00	6.0	15.0
M22759/3-1-*	40	28	C	4.25	2.0	6.50	10.00	2.50	6.0	15.0
M22759/3-01-*	48	34	C	4.25	2.0	10.00	10.00	3.00	10.0	20.0
M22759/3-02-*	48	34	C	4.25	2.0	10.00	18.00	4.00	10.0	25.0

1/ Qualification test only.

2/ Also for bend tests after immersion.

ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 260°C (500°F) max conductor temperature

VOLTAGE RATING: 600 volts (rms) at sea level

SPARK TEST OF PRIMARY INSULATION: Not required

IMPULSE DIELECTRIC TEST: 8.0 kilovolts (peak), 100% test

INSULATION RESISTANCE: 5000 megohms for 1000 ft (min)

WRAP TEST:

Mandrel wrap test required; no cracking
Dielectric test after mandrel wrap, 2500 volts (rms), 60Hz

BLOCKING: 260 ±2°C (500 ±3.6°F)

SHRINKAGE: 0.125 inch max at 260 ±2°C (500 ±3.6°F)

WICKING:

Sizes 22 through 12 - Procedure II; 2.0% (max) weight increase, 0.250 inch (max) dye travel
Sizes 10 through 00 - No requirement

LOW TEMPERATURE (COLD BEND):

Bend temperature: -65 ±2°C (-85 ±3.6°F)
Dielectric test, 2500 volts (rms), 60Hz

THERMAL SHOCK:

Oven temperature, 260 ±2°C (500 ±3.6°F)
Max change in measurement
Sizes 22 through 12: 0.060 inch
Sizes 10 through 8: 0.100 inch
Sizes 6 through 00: 0.125 inch