

NOTICE

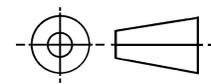
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THIRD ANGLE PROJECTION



ISSUED 2001-07 REAFFIRMED 2007-11

AS22759/21

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PREPARED BY SAE SUBCOMMITTEE AE-8D



AEROSPACE STANDARD

WIRE, ELECTRIC, FLUOROPOLYMER-INSULATED,
EXTRUDED TFE, NICKEL-COATED HIGH STRENGTH
COPPER ALLOY CONDUCTOR, 1000-VOLT

AS22759/21
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.

AS22759/21

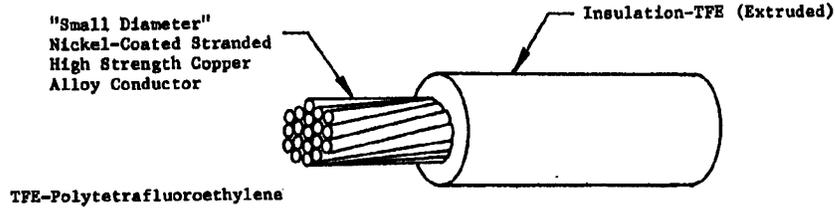


TABLE I. CONSTRUCTION DETAILS

Part No. 1/	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)	Diameter (inches)	Weight (lbs/1000 ft) (max)
M22759/21-28-*	28	7 X 36	.014	0.016	79.0	.043 ±.002	1.93
M22759/21-26-*	26	19 X 38	.018	0.020	49.4	.048 ±.002	2.60
M22759/21-24-*	24	19 X 36	.023	0.025	30.1	.053 ±.002	3.38
M22759/21-22-*	22	19 X 34	.029	0.031	18.6	.060 ±.002	4.61
M22759/21-20-*	20	19 X 32	.037	0.040	11.4	.068 ±.002	6.43

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 - M22759/21-20-9; white with orange stripe - M22759/21-20-93.

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AS22759/21

TABLE II. PERFORMANCE DETAILS

Part No.	Abrasion resistance (Procedure II)				Bend testing			
	Resistance (inches of tape) (min) (initial condition)	Weight support bracket	Weight (lbs)	Tension load (lbs)	Mandrel diameter (inches) (+3%)		Test load (lbs) (+3%)	
					Life cycle (oven & bend tests) <u>1/</u>	Cold bend test	Life cycle (oven & bend tests) <u>1/</u>	Cold bend test
M22759/21-28-*	24	A	.50	1.0	.125	.250	.50	
M22759/21-26-*	24	A	.50	1.0	.125	.250	.50	
M22759/21-24-*	30	A	.50	1.0	.125	.250	.50	
M22759/21-22-*	30	A	.50	1.0	.250	.375	.75	
M22759/21-20-*	30	A	.50	1.0	.250	.375	.75	

1/ Also for bend tests after immersion.

WIRE RATINGS AND ADDITIONAL REQUIREMENTS

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

VOLTAGE RATING: 1000 volts (rms) at sea level

ABRASION RESISTANCE AFTER IMMERSION: No requirement

ACID RESISTANCE:

Required

Dielectric test, 5000 volts (rms), 60 Hz

BLOCKING: 260 ±2°C (500 ±3.6°F)

COLOR: In accordance with MIL-STD-104, Class 1; white preferred

COLOR STRIPING OR BANDING DURABILITY: 250 cycles (500 strokes) (min), 500 grams weight

DIELECTRIC TEST AFTER IMMERSION: 5000 volts (rms), 60 Hz

FLAMMABILITY: Post-flame dielectric test not required

HUMIDITY RESISTANCE: No requirement

IDENTIFICATION DURABILITY: 125 cycles (250 strokes) (min), 500 grams weight

IMPULSE DIELECTRIC TEST: 9.5 kilovolts (peak), 100% test

INSULATION RESISTANCE: 50,000 megohms for 1000 ft (min)

LIFE CYCLE:

Oven temperature, 275 ±2°C (527 ±3.6°F)

Dielectric test, 5000 volts (rms), 60 Hz

LOW TEMPERATURE (COLD BEND):

Bend temperature: -65 ±2°C (-85 ±3.6°F)

Dielectric test, 5000 volts (rms), 60 Hz

SHRINKAGE: 0.03 inch max at 290 ±2°C (554 ±3.6°F)

SMOKE: 290°C (554°F)

SPARK TEST OF PRIMARY INSULATION: Not required

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SHEET 3 OF 4