

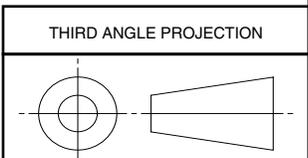
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CUSTODIAN: SAE AE-8/AE-8D

PROCUREMENT SPECIFICATION: MIL-C-85485



AEROSPACE STANDARD

CABLE, ELECTRIC, FILTER LINE, COMPONENT WIRE,
SILVER-COATED HIGH STRENGTH COPPER ALLOY CONDUCTOR,
RADIO FREQUENCY ABSORPTIVE, 150°C, 600-VOLT

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SHEET 1 OF 4

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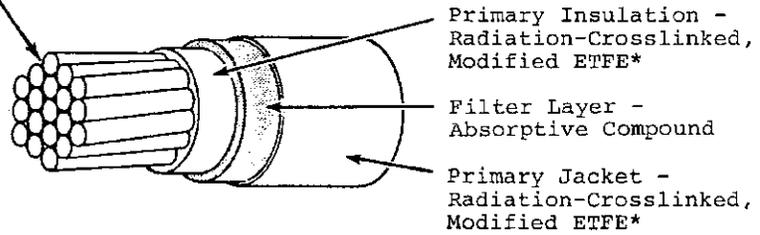
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Conductor - Silver-Coated
High Strength Copper Alloy,
"General Purpose" Diameter



*ETFE - Ethylene-Tetrafluoroethylene Copolymer

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)		Finished wire		
			(min)	(max)	Resistance at 20°C (68°F) (ohms/1000 ft) (max)	Diameter (inches)	Weight (lbs/1000 ft) (max)
M85485/6-24-*	24	19 X 36	.023	.025	28.4	.052 ± .002	3.9

1/ PART NO.: The asterisks in the part number column, Tables I, II, and III, shall be replaced by color code designators in accordance with MIL-C-85485.

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
M85485/6-24-*	.500	1.00	.625	3.00

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RATINGS:

TEMPERATURE RATING: 150°C (302°F) MAX CONTINUOUS CONDUCTOR TEMPERATURE
VOLTAGE RATING: 600 VOLTS (RMS) AT SEA LEVEL

ADDITIONAL REQUIREMENTS:

ATTENUATION (INSERTION LOSS): THE WIRE OF THIS SPECIFICATION SHEET, WHEN SHIELDED IN ACCORDANCE WITH M85485/8-***1*, SHALL MEET THE ATTENUATION REQUIREMENTS OF TABLE III AS SPECIFIED FOR THE APPLICABLE SIZE OF WIRE.

BLOCKING: 200° ±3°C (392° ±5°F) FOR 6 HOURS

COLOR: PRIMARY INSULATION - WHITE
FILTER LAYER - BLACK
PRIMARY JACKET - LIGHT VIOLET

COLOR STRIPING DURABILITY: 125 CYCLES (250 STROKES) (MIN), 500 GRAMS WEIGHT

CONCENTRICITY: PRIMARY INSULATION - 50% (MIN); FINISHED WIRE - 70% (MIN)

CROSSLINKING PROOF TEST: 7 HOURS AT 300° ±3°C (572° ±5°F)

FLAMMABILITY: 3 SECONDS (MAX); 3 INCHES (MAX)

HUMIDITY RESISTANCE: INSULATION RESISTANCE, 5000 MEGOHMS FOR 1000 FEET (MIN)

IDENTIFICATION DURABILITY: 125 CYCLES (250 STROKES) (MIN), 500 GRAMS WEIGHT

IMMERSION: DIAMETER INCREASE 5% (MAX); NO CRACKING, NO DIELECTRIC BREAKDOWN

INSULATION ELONGATION AND TENSILE STRENGTH: PRIMARY INSULATION, FILTER LAYER AND PRIMARY JACKET PULLED TOGETHER
ELONGATION, 50% (MIN)
TENSILE STRENGTH, 3000 LBF/IN² (MIN)

INSULATION FLAWS: PRIMARY INSULATION ONLY
SPARK TEST; 2.5 KILOVOLTS (RMS), 60 HZ
IMPULSE DIELECTRIC TEST; 6.0 KILOVOLTS (PEAK)
FINISHED WIRE
SPARK TEST; 3.0 KILOVOLTS (RMS), 60 HZ
IMPULSE DIELECTRIC TEST; 8.0 KILOVOLTS (PEAK)

INSULATION RESISTANCE: 5000 MEGOHMS FOR 1000 FEET (MIN)

INSULATION THICKNESS: PRIMARY INSULATION; 0.003 INCH (MIN)
FILTER LAYER; AVERAGE 0.003 INCH (MIN)
PRIMARY JACKET; 0.0035 INCH (MIN)

LIFE CYCLE: 168 HOURS AT 200° ±3°C (392° ±5°F)

LOW TEMPERATURE-COLD BEND: -65° ±2°C (-85° ±4°F) FOR 4 HOURS

SHRINKAGE: 0.125 INCH (MAX) AT 200° ±3°C (392° ±5°F)

SMOKE: 200° ±2°C (392° ±4°F), NO VISIBLE SMOKE

SURFACE RESISTANCE: 500 MEGOHM - INCHES (MIN), INITIAL AND FINAL READINGS

THERMAL SHOCK RESISTANCE: OVEN TEMPERATURE, 150° ±3°C (302° ±5°F)
MAX CHANGE IN MEASUREMENTS, 0.060 INCH

THERMAL STABILITY: 1250 HOURS AT 180° ±3°C (356° ±5°F). THE WIRE OF THIS SPECIFICATION SHEET, WHEN SHIELDED IN ACCORDANCE WITH M85485/8-***1*, SHALL MEET THE VOLTAGE WITHSTAND (DIELECTRIC) OF 1500 VOLTS (RMS) 60 HZ AND THE STOP BAND ATTENUATION REQUIREMENTS FOR THE APPLICABLE SIZE OF WIRE AS SPECIFIED IN TABLE III.