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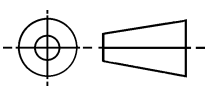
ISSUED 2001-07 REAFFIRMED 2007-11

THIRD ANGLE PROJECTION



PREPARED BY SAE SUBCOMMITTEE AE-8D

SAE Aerospace
An SAE International Group

# AEROSPACE STANDARD

WIRE, ELECTRIC, FLUOROPOLYMER-INSULATED, EXTRUDED TFE, POLYIMIDE COATED, SILVER-COATED HIGH STRENGTH COPPER ALLOY CONDUCTOR, 600-VOLT

**AS22759/30**
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.

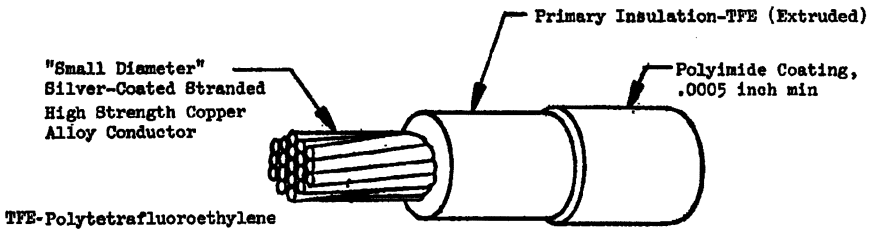



TABLE I. CONSTRUCTION DETAILS

| 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) |
| M22759/30-28-* | 28 | 7 X 36 | .014 | 0.015 | 74.4 | .034 ±.002 | 1.35 |
| M22759/30-26-* | 26 | 19 X 38 | .018 | 0.020 | 44.8 | .039 ±.002 | 1.93 |
| M22759/30-24-* | 24 | 19 X 36 | .023 | 0.024 | 28.4 | .044 ±.002 | 2.63 |
| M22759/30-22-* | 22 | 19 X 34 | .029 | 0.031 | 17.5 | .050 ±.002 | 3.68 |
| M22759/30-20-* | 20 | 19 X 32 | .037 | 0.039 | 10.7 | .059 ±.002 | 5.45 |

1/ PART NUMBERS AND AVAILABLE INSULATION COLORS: The asterisks in the part number column, Tables I and II, shall be replaced by numerical color designators in accordance with the following:

| | | | |
|---|---|---|---|
| Black | 0 | Orange | 3 |
| Brown | 1 | Yellow | 4 |
| Red | 2 | Green | 5 |

The wires of this specification sheet are presently available in the above-listed solid colors only. Insulation colors blue, violet, gray, and white are not available. See also “COLOR” under “ADDITIONAL REQUIREMENTS”, page 3 of this specification sheet.

TABLE II. PERFORMANCE DETAILS

| Part No. | Abrasion resistance (Procedure II) | | | | Bend testing | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Mandrel diameter (inches) (±3%) | | Test load (lbs) (±3%) | |
| | Resistance (inches of tape) (min) (initial condition) | Weight support bracket | Weight (lbs) | Tension load (lbs) | Life cycle (oven & bend tests) 1/ | Cold bend test | Life cycle (oven & bend tests) 1/ | Cold bend test |
| M22759/30-28-* | 15 | A | .50 | 1.0 | .125 | .250 | .50 | |
| M22759/30-26-* | 21 | A | .50 | 1.0 | .125 | .250 | .50 | |
| M22759/30-24-* | 21 | A | .50 | 1.0 | .125 | .250 | .50 | |
| M22759/30-22-* | 27 | A | .50 | 1.0 | .250 | .375 | .75 | |
| M22759/30-20-* | 27 | A | .50 | 1.0 | .250 | .375 | .75 | |

1/ Also for bend tests after immersion.

WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 200°C (392°F) max conductor temperature

VOLTAGE RATING: 600 volts (rms) at sea level

ABRASION RESISTANCE AFTER IMMERSION: No requirement

ACID RESISTANCE: Dielectric test, 3000 volts (rms), 60 Hz

BLOCKING: 260 ±2°C (500 ±3.6°F)

COLOR: The color limits of MIL-STD-104 are not applicable to the insulation colors of this specification sheet.

DIELECTRIC TEST AFTER IMMERSION: 3000 volts (rms), 60 Hz

FLAMMABILITY: Post-flame dielectric test not required

HUMIDITY RESISTANCE: No requirement

IDENTIFICATION OF PRODUCT: White print preferred to provide greater contrast with inherent dark colors of this wire

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

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

INSULATION RESISTANCE: 2500 megohms for 1000 ft (min)

LIFE CYCLE:
Oven temperature, 275 ±2°C (527 ±3.6°F)
Dielectric test, 3000 volts (rms), 60 Hz

LOW TEMPERATURE (COLD BEND):
Bend temperature: -65 ±2°C (-85 ±3.6°F)
Dielectric test, 3000 volts (rms), 60 Hz

POLYIMIDE CURE TEST: Required. This polyimide coating shall not crack when tested by the procedure shown on page 4 of this specification sheet. For wires of this specification sheet, the polyimide cure test shall be part of the Group II tests of the MIL-W-22759 Quality Conformance Inspection and shall be subject to the inspection level and acceptable quality level specified for the Group II tests.

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

SMOKE: 290°C (554°F)