# CABLE, ELECTRIC, FILTER LINE - ELECTROLOSS™ COMPONENT WIRE

150°C

The complete requirements for testing the wire described herein shall consist of this document and the issue in effect of Raychem Specification 55F.

CONDUCTOR - SILVER-COATED HIGH STRENGTH COPPER ALLOY

FILTER LAYER - RADIATION-MODIFIED ABSORPTIVE COMPOUND

PRIMARY INSULATION - RADIATION-CROSSLINKED MODIFIED ETFE COLOR: WHITE

PRIMARY JACKET - RADIATION-CROSSLINKED MODIFIED ETFE

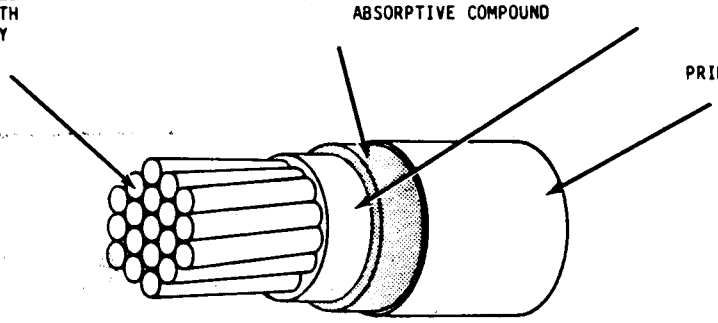

TABLE I. CONSTRUCTION DETAILS

| PART NUMBER | WIRE SIZE (AWG) | CONDUCTOR STRANDING (number x AWG) | DIAMETER OF STRANDED CONDUCTOR (in.) | | FINISHED WIRE | | |
|---|---|---|---|---|---|---|---|
| | | | MINIMUM | MAXIMUM | MAXIMUM RESISTANCE AT 20°C (Ω/1000 ft) | DIAMETER (in.) | MAXIMUM WEIGHT (lb/1000 ft) |
| 55FA0414-26-* | 26 | 19 x 38 | .018 | .020 | 44.8 | .050 ± .003 | 3.1 |
| 55FA0414-24-* | 24 | 19 x 36 | .023 | .025 | 28.4 | .052 ± .002 | 3.6 |

TABLE II. PERFORMANCE DETAILS

| PART NUMBER | BEND TESTING | | | |
|---|---|---|---|---|
| | MANDREL DIAMETER (in.) (±3%) | | WEIGHT (lb) (±3%) | |
| | LIFE CYCLE IMMERSION AND CROSSLINKING PROOF TEST | COLD BEND | LIFE CYCLE IMMERSION AND CROSSLINKING PROOF TEST | COLD BEND |
| 55FA0414-26-* | .500 | 1.00 | .500 | 3.00 |
| 55FA0414-24-* | .500 | 1.00 | .625 | 3.00 |

## WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 150°C;
Maximum continuous conductor temperature
VOLTAGE RATING: 600 volts (rms) at sea level
ATTENUATION (INSERTION LOSS): See Page 2
BLOCKING: 200 ± 3°C for 6 hours
COLOR: Light violet preferred
COLOR STRIPING DURABILITY: 125 cycles (250 strokes)(minimum), 500 g weight
CONCENTRICITY: Primary Insulation - 50% (minimum);
Finished Wire - 70% (minimum)
CROSSLINKING PROOF TEST (ACCELERATED AGING):
300 ± 3°C for 7 hours
FLAMMABILITY: 3 seconds (maximum);
3 in. (maximum); no flaming of facial tissue
HUMIDITY RESISTANCE: Insulation Resistance, 5000 MΩ for 1000 ft (minimum)
IDENTIFICATION DURABILITY: 125 cycles (250 strokes) (minimum), 500 g weight
IMMERSION: Diameter increase 5% (maximum); no cracking, no dielectric breakdown
INSULATION ELONGATION AND TENSILE STRENGTH:
Primary Insulation, Filter Layer and Primary Jacket pulled together
Elongation, 50% (minimum)
Tensile Strength, 3000 psi (minimum)
INSULATION FLAWS:
Primary Insulation only
Spark Test, 2.5 kV (rms), 60 Hz
Impulse Dielectric Test, 6.0 kV (peak)
Finished Wire
Spark Test, 3.0 kV (rms), 60 Hz
Impulse Dielectric Test, 8.0 kV (peak)
INSULATION RESISTANCE: 5000 MΩ for 1000 ft (minimum)
INSULATION THICKNESS:
Primary Insulation, .003 in. (minimum)
Filter Layer, average .003 in. (minimum)
Primary Jacket, .0035 in. (minimum)
LIFE CYCLE: 200 ± 3°C for 168 hours
LOW TEMPERATURE-COLD BEND: -65 ± 2°C for 4 hours
SHRINKAGE: 200 ± 3°C for 6 hours, 0.125 in. (maximum)
SMOKE: 200 ± 2°C, no visible smoke
SURFACE RESISTANCE: 500 MΩ-in. (minimum), initial and final readings
THERMAL-SHOCK RESISTANCE: 150 ± 3°C, .060 in. (maximum)
VOLTAGE WITHSTAND (POST-ENVIRONMENTAL): (After Crosslinking Proof Test, Immersion, Life Cycle, and Low Temperature-Cold Bend) 1500 volts (rms), 60 Hz
WRAP TEST: 6 hours at 200 ± 3°C, no cracking

PART NUMBER:
The "*" in the part numbers above shall be replaced by a color code designator in accordance with MIL-STD-681, except that violet shall be light violet and the designator shall be 7L.
Example:
AWG 24, light violet: 55FA0414-24-7L
AWG 24, light violet with blue stripe: 55FA0414-24-7L6.

THIS SPECIFICATION SHEET TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BID.

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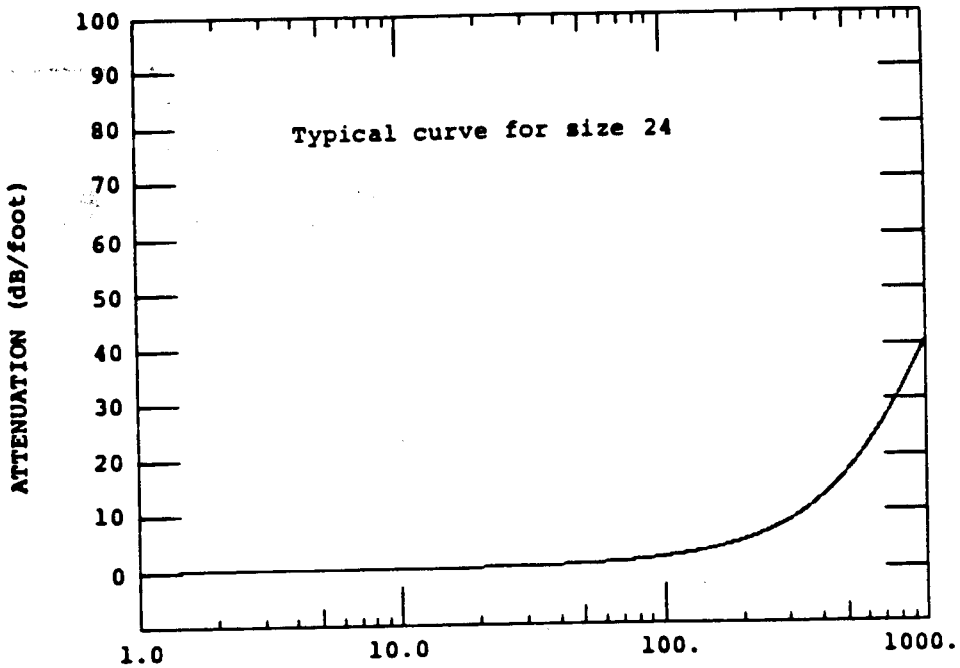


Attenuation (insertion loss)*

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| Part no. | Pass band (dB/ft) | | | Transition band (dB/ft) | | | Stop band (dB/ft) |
|---|---|---|---|---|---|---|---|
| | 1.0 Mllz | 10.0 Mllz | | 100 Mllz | 500 Mllz | 1000 Mllz | 1 to 12 Gllz |
| | (max) | (min) | (max) | (min) | (min) | (min) | (min) |
| 55FA0414-26 | .015 | .04 | 0.10 | 1.3 | 12 | 30 | 30 |
| 55FA0414-24 | .015 | .04 | 0.10 | 1.3 | 12 | 30 | 30 |

*THE PRIMARY WIRE OF THIS SPECIFICATION SHEET SHALL MEET THE ATTENUATION REQUIREMENTS SHOWN ABOVE ONLY WHEN USED AS A SINGLE COMPONENT IN A SHIELDED CABLE.