

SPECIFICATION CONTROL DRAWING

44A7422

WIRE, RADIATION-CROSSLINKED, POLYALKENE-INSULATED,
MEDIUM WEIGHT, 600 VOLT

7-28-11

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This specification sheet forms a part of the latest issue of Raychem Specification 44.

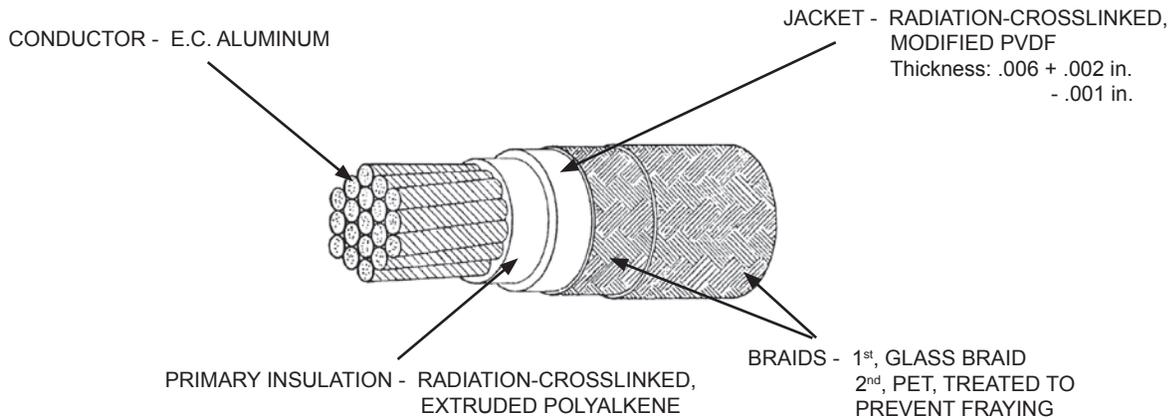


TABLE I. CONSTRUCTION DETAILS

| PART NUMBER 1/ | WIRE SIZE (AWG) | CONDUCTOR STRANDING (number x AWG) | DIAMETER OF STRANDED CONDUCTOR (in.) | FINISHED WIRE | | |
|-------------------|--------------------|---------------------------------------|---|--|-------------------|----------------------------------|
| | | | | MAXIMUM RESISTANCE AT 20°C (ohms/1000 ft) | DIAMETER (in.) | MAXIMUM WEIGHT (lbs/1000 ft.) |
| 44A7422-8-** | 8 | 41 x 24 | .155 ± .005 | 1.09 | .217 ± .010 | 28.0 |
| 44A7422-6-** | 6 | 70 x 24 | .206 ± .005 | .641 | .275 ± .012 | 44.9 |
| 44A7422-4-** | 4 | 107 x 24 | .255 ± .007 | .427 | .327 ± .012 | 63.9 |
| 44A7422-2-** | 2 | 168 x 24 | .320 ± .010 | .268 | .400 ± .015 | 94.6 |
| 44A7422-1-** | 1 | 219 x 24 | .358 ± .010 | .214 | .440 ± .015 | 120. |
| 44A7422-0-** | 0 | 259 x 24 | .408 ± .012 | .169 | .490 ± .015 | 142. |
| 44A7422-00-** | 00 | 334 x 24 | .466 ± .012 | .133 | .560 ± .018 | 183. |
| 44A7422-000-** | 000 | 427 x 24 | .523 ± .012 | .109 | .620 ± .020 | 223. |
| 44A7422-0000-** | 0000 | 523 x 24 | .575 ± .012 | .085 | .680 ± .022 | 269. |

Users should evaluate the suitability of this product for their application. Specifications are subject to change without notice. Tyco Electronics Corporation also reserves the right to make changes in materials or processing, which do not affect compliance with any specification, without notification to Buyer.

1/ COLORS AND COLOR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH MIL-STD-681. OTHER CODES AND SUFFIXES MAY BE ADDED TO THE PART NUMBER. AS NECESSARY, TO CAPTURE ANY ADDITIONAL REQUIREMENTS IMPOSED BY THE PURCHASE ORDER.

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DIMENSIONS ARE IN INCHES, AND UNLESS OTHERWISE DESIGNATED ARE NOMINAL.

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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TABLE II. PERFORMANCE DETAILS

| PART NUMBER <u>1/</u> | BEND TESTING | | | | |
|--------------------------|--|--------------|------|--|--------------|
| | MANDREL DIAMETER (inch) (± 3%) | | | WEIGHT (lb) (± 3%) | |
| | IMMERSION LIFE CYCLE AND ACCELERATED AGING | COLD BEND | WRAP | IMMERSION LIFE CYCLE AND ACCELERATED AGING | COLD BEND |
| 44A7422-8-** | 3.00 | 6.00 | .750 | 3.00 | 6.00 |
| 44A7422-6-** | 4.00 | 8.00 | 1.00 | 3.00 | 10.0 |
| 44A7422-4-** | 5.00 | 10.0 | 1.25 | 3.00 | 10.0 |
| 44A7422-2-** | 6.00 | 12.0 | 3.00 | 4.00 | 15.0 |
| 44A7422-1-** | 7.00 | 13.0 | 4.00 | 4.00 | 15.0 |
| 44A7422-0-** | 8.00 | 14.0 | 4.00 | 4.00 | 15.0 |
| 44A7422-00-** | 9.00 | 16.0 | 5.00 | 4.00 | 15.0 |
| 44A7422-000-** | 10.0 | 18.0 | 6.00 | 4.00 | 15.0 |
| 44A7422-0000-** | 12.0 | 18.0 | 6.00 | 4.00 | 15.0 |

WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 150°C

Maximum continuous conductor temperature

VOLTAGE RATING: 600 volts (rms) at sea level

*ACCELERATED AGING: 300 ± 2°C for 7 hours

Identification legibility, 225 ± 2°C

*BLOCKING: 150 ± 2°C for 6 hours

BRAID (PET) COLOR: For tan only, Munsell Color Limits are per Table III. (Note: Due to the braid treatment, braids may include intermitten color variations such as smudges, spots or marks.)

FLAMMABILITY: 30 seconds (maximum); 3 in. (maximum);
no flaming of facial tissue

*HUMIDITY RESISTANCE: Insulation Resistance,
5000 megohms for 1000 ft. (minimum)

IMMERSION: Diameter increase 5% (maximum); no cracking,
no dielectric breakdown.

INSULATION ELONGATION AND TENSILE STRENGTH:

Primary Insulation,
Elongation, 150% (minimum)

Tensile Strength, 2000 lbf/in² (minimum)

INSULATION FLAWS:

Primary Insulation,
Spark Test, 3.0 kV (rms)
Impulse Dielectric Test, 6.0 kV (peak)

Finished Wire,

Spark Test, 5.0 kV (rms) at 3 kHz
Impulse Dielectric Test, 8.0 kV (peak)

INSULATION RESISTANCE: 5000 megohms for 1000 ft. (minimum)

JACKET COLOR: White

LIFE CYCLE: 200 ± 2°C for 168 hours

LOW TEMPERATURE-COLD BEND: -65 ± 2°C for 4 hours

SHRINKAGE: 300 ± 2°C, 0.125 in. (maximum) in 12 in.

SMOKE: 200 ± 2°C. No visible smoke.

*SURFACE RESISTANCE: 500 megohms-in. (minimum),
both readings

THERMAL SHOCK RESISTANCE: 150 ± 2°C, 0.060 in. (maximum)

VOLTAGE WITHSTAND (Post Environmental):
2500 volts (rms), 60 Hz, 5 minutes

* NOTE: These tests to be conducted prior to the application of the braids.

PART NUMBER: The "*" in the part numbers on pages 1 and 2 shall be replaced by color code designators.

1/ Example: AWG 8, tan; 44A7422-8-1L
AWG 8, white; 44A7422-8-9

| HUE | 5R - 5YR |
|--------|-----------|
| VALUE | 3.0 - 5.0 |
| CHROMA | 4.0 - 6.0 |

1/ See footer section on page 1

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