

# SPECIFICATION CONTROL DRAWING

**44A0214**TITLE WIRE, ELECTRIC, RADIATION-CROSSLINKED POLYALKENE, INSULATED, SILVER-COATED  
HIGH STRENGTH COPPER ALLOY, LIGHTWEIGHT, GENERAL PURPOSE, 1000 VOLTDate  
8-11-92Revision  
B

This specification sheet forms a part of the latest issue of Raychem Specification 44 and MIL-W-81044 as applicable.

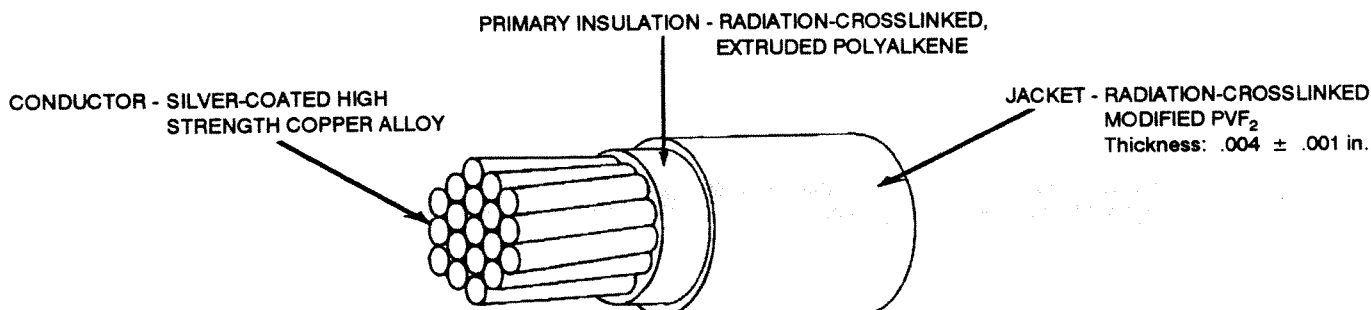


TABLE I. CONSTRUCTION DETAILS

| PART NUMBER  | WIRE<br>SIZE<br>(AWG) | CONDUCTOR<br>STRANDING<br>(number x AWG) | MAXIMUM<br>DIAMETER OF<br>STRANDED<br>CONDUCTOR<br>(in.) | FINISHED WIRE                                      |                   |                                    |
|--------------|-----------------------|------------------------------------------|----------------------------------------------------------|----------------------------------------------------|-------------------|------------------------------------|
|              |                       |                                          |                                                          | MAXIMUM<br>RESISTANCE AT<br>20°C<br>(ohms/1000ft.) | DIAMETER<br>(in.) | MAXIMUM<br>WEIGHT<br>(lbs/1000 ft) |
| 44A0214-26-* | 26                    | 19 X 38                                  | .021                                                     | 44.4                                               | .040 ± .002       | 1.6                                |
| 44A0214-24-* | 24                    | 19 x 36                                  | .026                                                     | 28.1                                               | .046 ± .002       | 2.4                                |
| 44A0214-22-* | 22                    | 19 x 34                                  | .033                                                     | 17.6                                               | .054 ± .002       | 3.5                                |
| 44A0214-20-* | 20                    | 19 x 32                                  | .041                                                     | 10.9                                               | .062 ± .002       | 5.1                                |

TABLE II. PERFORMANCE DETAILS

| PART NUMBER  | BEND TESTING                                      |              |      |                                                   |              |
|--------------|---------------------------------------------------|--------------|------|---------------------------------------------------|--------------|
|              | MANDREL DIAMETER<br>(inch) (± 3%)                 |              |      | WEIGHT<br>(lb) (± 3%)                             |              |
|              | IMMERSION,<br>LIFE CYCLE AND<br>ACCELERATED AGING | COLD<br>BEND | WRAP | IMMERSION,<br>LIFE CYCLE AND<br>ACCELERATED AGING | COLD<br>BEND |
| 44A0214-26-* | .500                                              | .750         | .250 | .380                                              | 1.00         |
| 44A0214-24-* | .500                                              | 1.00         | .250 | .380                                              | 2.00         |
| 44A0214-22-* | .750                                              | 1.00         | .250 | .380                                              | 2.00         |
| 44A0214-20-* | .750                                              | 1.00         | .250 | .500                                              | 3.00         |

COLORS AND COLOR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH MIL-STD-881.

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.**Raychem**Raychem Corporation  
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**WIRE RATINGS AND ADDITIONAL REQUIREMENTS**

- TEMPERATURE RATING: 150°C,  
Maximum continuous conductor temperature  
VOLTAGE RATING: 1000 volts (rms)  
ACCELERATED AGING: 300 ± 2°C for 6 hours  
Identification legibility, 225 ± 2°C for 6 hours  
\* BLOCKING: 150 ± 2°C for 24 hours  
COLOR: white preferred  
FLAMMABILITY: 30 seconds (maximum); 3 in. (maximum);  
no flaming of facial tissue  
\* HUMIDITY RESISTANCE: Insulation Resistance,  
5000 megohms for 1000 ft (minimum)  
IDENTIFICATION, STRIPING OR BAND 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,  
Tensile strength, 2500 lbf/in<sup>2</sup> (minimum)  
Elongation, 150% (minimum)  
INSULATION FLAWS:  
Primary Insulation,  
Spark test, 2.0 kV (rms), 60 Hz, 100% test  
Impulse Dielectric test, 6.0 kV (peak), 100% test  
Finished Wire,  
Impulse Dielectric test, 8.0 kV (peak), 100% test  
INSULATION RESISTANCE: 5000 megohms for 1000 ft (minimum)  
\* 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 TEST (POST ENVIRONMENTAL): 3000 volts (rms), 60 Hz, 5 minutes  
WICKING: 2.25 in. (maximum)

**PART NUMBER:**

The "\*" in the part numbers on page 1 shall be replaced by a color code designator

Example: AWG 20, White: 44A0214-20-9

AWG 20, White with black stripe: 44A0214-20-90

\* Qualification Test

# Mouser Electronics

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