

# SPECIFICATION CONTROL DRAWING

SCD Number

44A0811

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

Date 28-Mar-11

Revision P1

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

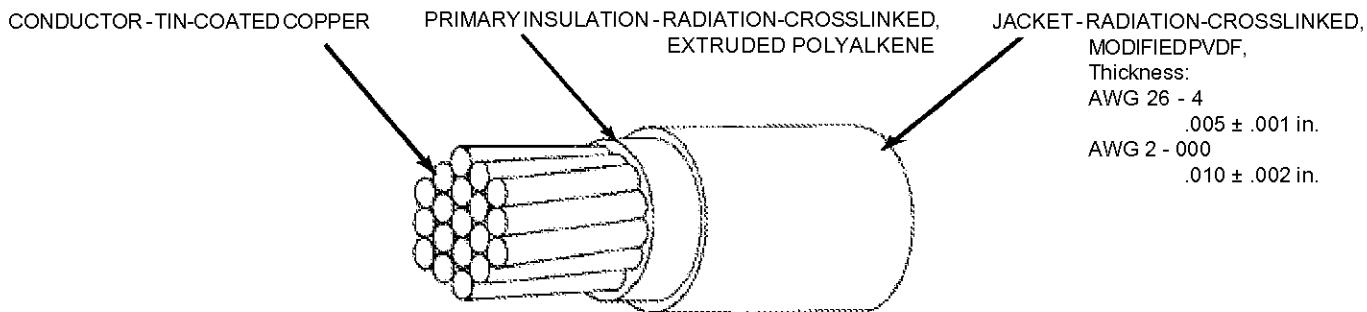


TABLE I. CONSTRUCTION DETAILS

PART NUMBER 1/	WIRE SIZE (AWG)	CONDUCTOR STRANDING (number x AWG)	DIAMETER OF STRANDED CONDUCTOR (in.)		MAXIMUM RESISTANCE AT 20°C (ohms/1000ft.)	FINISHED WIRE	
			MINIMUM	MAXIMUM		DIAMETER (in.)	MAXIMUM WEIGHT (lbs/1000 ft.)
44A0811-26-*	26	19 x 38	.018	.021	41.3	.048 ± .002	1.9
44A0811-24-*	24	19 x 36	.023	.026	26.2	.054 ± .002	2.6
44A0811-22-*	22	19 x 34	.029	.033	16.2	.062 ± .003	3.8
44A0811-20-*	20	19 x 32	.037	.041	9.88	.070 ± .003	5.4
44A0811-18-*	18	19 x 30	.046	.051	6.23	.080 ± .003	8.0
44A0811-16-*	16	19 x 29	.052	.058	4.81	.089 ± .004	9.9
44A0811-14-*	14	19 x 27	.065	.073	3.06	.108 ± .004	14.9
44A0811-12-*	12	37 x 28	.084	.090	2.02	.126 ± .004	21.9
44A0811-10-*	10	37 x 26	.106	.114	1.26	.155 ± .005	35.0
44A0811- 8-*	8	133 x 29	.158	.173	.701	.214 ± .006	62.8
44A0811- 6-*	6	133 x 27	.198	.217	445	.264 ± .007	99.3
44A0811- 4-*	4	133 x 25	.250	.274	280	.320 ± .008	153
44A0811- 2-*	2	665 x 30	.320	.340	.183	.400 ± .012	247
44A0811- 0-*	0	1045 x 30	.405	.425	.116	.490 ± .016	377
44A0811-00-*	00	1330 x 30	.450	.475	.091	.562 ± .016	498
44A0811-000-*	000	1665 x 30	.515	.540	.071	.634 ± .020	588

TABLE II. PERFORMANCE DETAILS

PART NUMBER 1/	BEND TESTING				WEIGHT (lb) (± 3%)	
	MANDREL DIAMETER (inch) (± 3%)			WRAP	IMMERSION, LIFE CYCLE AND ACCELERATED AGING	COLD BEND
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44A0811-26-*	.500	1.00	.250	.50	3.00	
44A0811-24-*	.500	1.00	.250	.50	3.00	
44A0811-22-*	.750	1.00	.250	1.50	3.00	
44A0811-20-*	.750	1.00	.250	2.00	4.00	
44A0811-18-*	1.00	1.50	.375	2.00	4.00	
44A0811-16-*	1.00	1.50	.375	2.00	5.00	
44A0811-14-*	1.50	2.00	.500	2.00	5.00	
44A0811-12-*	2.00	2.00	.500	2.00	5.00	
44A0811-10-*	3.00	3.00	.750	2.00	5.00	
44A0811- 8-*	3.00	4.00	.750	3.00	6.00	
44A0811- 6-*	4.00	5.00	1.00	3.00	10.0	
44A0811- 4-*	5.00	6.00	1.25	3.00	10.0	
44A0811- 2-*	6.00	8.00	3.00	4.00	15.0	
44A0811- 0-*	8.00	10.0	4.00	4.00	15.0	
44A0811-00-*	10.0	12.0	4.50	5.00	20.0	
44A0811-000-*	18.0	18.0	6.00	6.00	20.0	

Users should evaluate the suitability of this product for their application. Specifications are subject to change without notice.

TE Connectivity 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.

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

## 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 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 inches (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,

Elongation, 150% (minimum)

Tensile Strength, 2500 lbf/in<sup>2</sup> (minimum), AWG 26-12

2000 lbf/in<sup>2</sup> (minimum), AWG 10 & larger

### INSULATION FLAWS:

Primary Insulation,

SparkTest, 3.0 kV (rms) at 60 Hz

4.2 kV (rms) at 3 kHz

Impulse Dielectric Test, 6.0 kV (peak)

Finished Wire,

SparkTest, 5.7 kV (rms) at 3 kHz

Impulse Dielectric Test, 8.0 kV (peak)

### 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 inches, AWG 26-12

0.250 in. (maximum) in 12 inches, AWG 10 & larger

### SMOKE: 200 ± 2°C, no visible smoke.

### SOLDERABILITY: 95% minimum coverage.

Per MIL-STD-202, Method 208, except without steam aging, Type RMA Flux (for 10 AWG & smaller only)

### 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

### WICKING: 2.25 in. (maximum)

### PART NUMBER:

The "##" in the part numbers on page 1 shall be replaced by color code designators.

1/ Example: AWG 18, white: 44A0811-18-9

AWG 14, white with a black stripe: 44A0811-14-90

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