

SPECIFICATION CONTROL DRAWING

81A0811

TITLE WIRE, ELECTRIC, RADIATION-CROSSLINKED, MODIFIED, FLEXIBLE ETFE-INSULATED, GENERAL PURPOSE

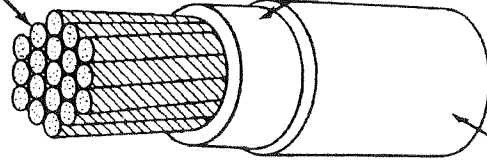
Date 1-14-98

Revision L

This specification sheet forms a part of the latest issue of Raychem Specification 80.

CONDUCTOR - TIN-COATED COPPER

PRIMARY INSULATION - RADIATION-CROSSLINKED, MODIFIED FLEXIBLE ETFE
COLOR - LIGHT GREEN



JACKET - RADIATION-CROSSLINKED, MODIFIED FLEXIBLE 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 (ohms/1000 ft)	DIAMETER (in.)	MAXIMUM WEIGHT (lb/1000 ft)
81A0811-24-*	24	19 x 36	.023	.025	26.2	.046 ± .002	2.6
81A0811-22-*	22	19 x 34	.029	.031	16.2	.052 ± .003	3.5
81A0811-20-*	20	19 x 32	.037	.039	9.88	.062 ± .003	5.3
81A0811-18-*	18	19 x 30	.046	.049	6.23	.072 ± .003	7.7
81A0811-16-*	16	19 x 29	.052	.055	4.81	.082 ± .004	9.9
81A0811-14-*	14	19 x 27	.065	.069	3.06	.100 ± .004	15.0
81A0811-12-*	12	37 x 28	.084	.089	2.02	.122 ± .005	22.9
81A0811-10-*	10	37 x 26	.106	.113	1.26	.151 ± .006	36.2
81A0811-8-*	8	133 x 29	.158	.173	.701	.216 ± .008	67.3
81A0811-6-*	6	133 x 27	.198	.217	.445	.267 ± .010	106
81A0811-4-*	4	133 x 25	.250	.274	.280	.325 ± .010	165
81A0811-2-*	2	665 x 30	.320	.340	.183	.407 ± .016	255
81A0811-0-*	0	1045 x 30	.395	.425	.116	.504 ± .016	402
81A0811-00-*	00	1330 x 30	.440	.475	.091	.553 ± .016	500
81A0811-000-*	000	1665 x 30	.500	.540	.070	.630 ± .016	614

TABLE II. PERFORMANCE DETAILS

PART NUMBER	BEND TESTING	
	MANDREL DIAMETER (inch) (±3%)	WEIGHT (lb) (± 3%)
	CROSSLINKING PROOF	CROSSLINKING PROOF
81A0811-24-*	500	750
81A0811-22-*	500	1.00
81A0811-20-*	500	1.50
81A0811-18-*	750	2.00
81A0811-16-*	1.00	2.00
81A0811-14-*	1.00	3.00
81A0811-12-*	1.50	3.00
81A0811-10-*	2.00	3.00
81A0811-8-*	3.00	4.00
81A0811-6-*	4.00	4.00
81A0811-4-*	5.00	4.00
81A0811-2-*	6.00	6.00
81A0811-0-*	8.00	6.00
81A0811-00-*	10.0	8.00
81A0811-000-*	10.0	8.00

COLORS AND COLOR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH MIL-STD-681.

DIMENSIONS ARE IN INCHES, AND UNLESS OTHERWISE DESIGNATED ARE NOMINAL

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WIRE RATINGS AND ADDITIONAL REQUIREMENTS**TEMPERATURE RATING: 150°C**

Maximum continuous conductor temperature

VOLTAGE RATING: 600 volts (rms)

COLOR: White preferred

CONCENTRICITY: 70% (minimum)

CROSSLINKING PROOF TEST: 300 ± 3°C for 7 hours

IDENTIFICATION AND COLOR STRIPING DURABILITY: 125 cycles (250 strokes)
(minimum); 500 g weight**INSULATION ELONGATION AND TENSILE STRENGTH:**

AWG 24 - 10, Elongation, 75% (minimum)

Tensile Strength, 3500 lbf/in² (minimum)

AWG 8 - 000, Elongation, 125% (minimum)

Tensile Strength, 3000 lbf/in² (minimum)**INSULATION FLAWS:**

Primary Insulation,

Impulse Dielectric Test, 6.0 kV (peak)

Finished Wire,

Impulse Dielectric Test, 8.0 kV (peak)

INSULATION THICKNESS:

For AWG 24 - 18, 0.004 in. (minimum) for primary insulation

0.004 in. (minimum) for outer jacket

For AWG 16 - 10, 0.005 in. (minimum) for primary insulation

0.005 in. (minimum) for outer jacket

For AWG 8 - 4, 0.008 in. (minimum) for primary insulation

0.012 in. (minimum) for outer jacket

For AWG 2 - 000, 0.010 in. (minimum) for primary insulation

0.015 in. (minimum) for outer jacket

PRODUCT IDENTIFICATION: AWG 24 - 10, black ink only

AWG 8 and larger, black ink preferred

SHRINKAGE: 150 ± 3°C for 6 hours,

AWG 24 - 10, 0.13 inch (maximum) in 12 inches

AWG 8 - 000, 0.25 inch (maximum) in 12 inches

VOLTAGE WITHSTAND TEST (POST ENVIRONMENTAL): 2500 volts (rms), 60 Hz

PART NUMBER:

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

Example: AWG 8, white: 81A0811-8-9

AWG 8, white with black stripe: 81A0811-8-90