

# SPECIFICATION CONTROL DRAWING

**81A0112**

TITLE **WIRE, ELECTRIC, RADIATION-CROSSLINKED, MODIFIED, FLEXIBLE ETFE-INSULATED, LIGHTWEIGHT**

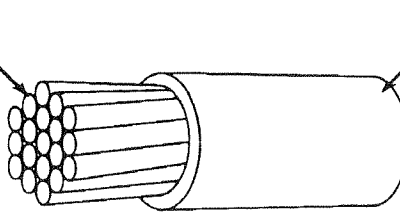
Date **12-4-96**

Revision **E**

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

CONDUCTOR - SILVER-COATED COPPER

INSULATION - 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 (lbs/1000 ft.)
81A0112-26-*	26	19 x 38	.018	.019	38.4	.031 ± .002	1.4
81A0112-24-*	24	19 x 36	.023	.024	24.3	.036 ± .002	2.0
81A0112-22-*	22	19 x 34	.029	.030	15.1	.042 ± .002	2.8
81A0112-20-*	20	19 x 32	.037	.038	9.19	.051 ± .002	4.5
81A0112-18-*	18	19 x 30	.046	.047	5.79	.061 ± .003	6.8
81A0112-16-*	16	19 x 29	.052	.053	4.52	.068 ± .003	8.6
81A0112-14-*	14	19 x 27	.065	.067	2.88	.083 ± .004	13.3
81A0112-12-*	12	37 x 28	.084	.086	1.94	.105 ± .004	20.5
81A0112-10-*	10	37 x 26	.106	.108	1.21	.131 ± .005	32.9
81A0112- 8-*	8	133 x 29	.158	.162	.671	.190 ± .008	60.8
81A0112- 6-*	6	133 x 27	.198	.204	.426	.237 ± .010	95.7
81A0112- 4-*	4	133 x 25	.250	.257	.269	.297 ± .014	149.
81A0112- 2-*	2	665 x 30	.320	.331	.173	.375 ± .014	243.
81A0112- 1-*	1	817 x 30	.360	.372	.142	.425 ± .016	291.
81A0112- 0-*	0	1045 x 30	.405	.418	.110	.477 ± .016	378.
81A0112- 00-*	00	1330 x 30	.450	.464	.087	.523 ± .016	468.

**TABLE II. PERFORMANCE DETAILS**

PART NUMBER	BEND TESTING	
	MANDREL DIAMETER (inch) (±3%)	WEIGHT (lb) (± 3%)
	CROSSLINKING PROOF TEST	CROSSLINKING PROOF TEST
81A0112-26-*	375	.125
81A0112-24-*	375	.250
81A0112-22-*	500	.375
81A0112-20-*	500	.500
81A0112-18-*	500	.500
81A0112-16-*	750	.750
81A0112-14-*	1.00	1.00
81A0112-12-*	1.50	1.50
81A0112-10-*	2.00	1.50
81A0112- 8-*	3.00	2.00
81A0112- 6-*	3.00	2.00
81A0112- 4-*	4.00	2.50
81A0112- 2-*	6.00	3.00
81A0112- 1-*	8.00	4.00
81A0112- 0-*	8.00	4.00
81A0112- 00-*	8.00	4.00

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

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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## 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,

30 minutes for AWG 26 - 14, 1 hour for AWG 12 and larger

IDENTIFICATION AND COLOR STRIPING DURABILITY:

125 cycles (250 strokes)(minimum), 500 g weight

INSULATION ELONGATION AND TENSILE STRENGTH:

AWG 26 - 10, Elongation, 75% (minimum)

Tensile Strength, 3500 lbf/in<sup>2</sup> (minimum)

AWG 8 - 00, Elongation, 125% (minimum)

Tensile Strength, 3000 lbf/in<sup>2</sup> (minimum)

INSULATION FLAWS: Impulse Dielectric Test, 6.0 kV (peak)

INSULATION THICKNESS:

AWG 26 - 16, .004 in. (minimum)

AWG 14 - 10, .006 in. (minimum)

AWG 8 - 00, .012 in. (minimum)

PRODUCT IDENTIFICATION: AWG 26 - 10, black ink only

AWG 8 - 00, black ink preferred

SHRINKAGE: 150 ± 3°C for 6 hours,

AWG 26 - 10, 0.13 inch (maximum) in 12 inches,

AWG 8 - 00, .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 14, white: 81A0112-14-9

AWG 14, white with black stripe: 81A0112-14-90