

# SPECIFICATION CONTROL DRAWING

82A0111

TITLE WIRE, RADIATION-CROSSLINKED, MODIFIED ETFE-INSULATED, TIN-COATED COPPER, LIGHTWEIGHT, FLEXIBLE

Date 25APR11

Revision S1

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

CONDUCTOR - TIN-COATED COPPER

INSULATION - RADIATION-CROSSLINKED, MODIFIED FLEXIBLE ETFE

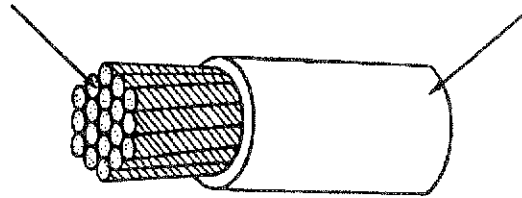


TABLE I. CONSTRUCTION DETAILS

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 (inches)	MAXIMUM WEIGHT (lb/1000 ft)
82A0111-28-*	28	42 X 44	.013	.017	71.4	.029 ± .003	1.0
82A0111-26-*	26	63 X 44	.017	.021	43.5	.033 ± .003	1.4
82A0111-24-*	24	105 X 44	.023	.027	28.2	.037 ± .003	2.1
82A0111-22-*	22	154 X 44	.029	.033	18.8	.043 ± .003	2.9
82A0111-20-*	20	154 X 42	.037	.043	11.7	.053 ± .004	4.2
82A0111-18-*	18	259 X 42	.047	.053	7.14	.064 ± .004	6.7
82A0111-16-*	16	259 X 40	.061	.067	4.53	.079 ± .004	10.2
82A0111-14-*	14	665 X 42	.078	.086	2.96	.099 ± .005	16.5
82A0111-12-*	12	665 X 40	.096	.106	1.89	.121 ± .006	24.8
82A0111-10-*	10	665 X 38	.126	.140	1.12	.157 ± .009	42.2
82A0111- 8-*	8	665 X 36	.157	.173	.714	.195 ± .010	66.3
82A0111- 6-*	6	1045 X 36	.192	.208	.490	.236 ± .011	102
82A0111- 4-*	4	1665 X 36	.265	.285	.326	.318 ± .013	169
82A0111- 2-*	2	1665 X 34	.325	.345	.204	.385 ± .014	252
82A0111- 1-*	1	2109 X 34	.370	.400	.163	.445 ± .019	317
82A0111- 0-*	0	2660 X 34	.435	.465	.133	.516 ± .020	407
82A0111-00-*	00	3325 X 34	.485	.515	.102	.566 ± .020	502

TABLE II. PERFORMANCE DETAILS

PART NUMBER	BEND TESTING	
	MANDREL DIAMETER (in.) (±3%)	WEIGHT (lb) (±3%)
	CROSSLINKING PROOF	CROSSLINKING PROOF
82A0111-28-*	.250	.125
82A0111-26-*	.375	.125
82A0111-24-*	.375	.250
82A0111-22-*	.500	.375
82A0111-20-*	.500	.500
82A0111-18-*	.500	.500
82A0111-16-*	.750	.750
82A0111-14-*	1.00	1.00
82A0111-12-*	1.50	1.50
82A0111-10-*	2.00	1.50
82A0111- 8-*	3.00	2.00
82A0111- 6-*	3.00	2.00
82A0111- 4-*	4.00	2.50
82A0111- 2-*	6.00	3.00
82A0111- 1-*	8.00	4.00
82A0111- 0-*	8.00	4.00
82A0111-00-*	8.00	4.00

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.



TE Connectivity

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## WIRE RATINGS AND ADDITIONAL REQUIREMENTS

**TEMPERATURE RATING:** 150°C

Maximum continuous conductor temperature

**VOLTAGE RATING:** 600 volts (rms)

**CONCENTRICITY:** 70% (minimum)

**COLOR:** White preferred

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

**IDENTIFICATION AND COLOR STRIPING DURABILITY:**

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

**INSULATION ELONGATION AND TENSILE STRENGTH:**

AWG 28 - 26, Elongation, 75% (minimum)

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

AWG 24 - 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 28 - 16, .004 in. (minimum)

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

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

**PRODUCT IDENTIFICATION:** AWG's 28 - 10, black ink only,

AWG's 8 and larger, black ink preferred

**SHRINKAGE:** 150 ± 3°C for 6 hours,

AWG 28 - 10, 0.13 inch (maximum) in 12 inches

AWG 8 and larger, 0.25 inch (maximum) in 12 inches

**VOLTAGE WITHSTAND (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 22, white: 82A0111-22-9

AWG 22, white with black stripe: 82A0111-22-90