SPECIFICATION CONTROL DRAWING

SCD **82A0111**

Title: WIRE, RADIATION-CROSSLINKED, MODIFIED FLEXIBLE ETFE-INSULATED, LIGHTWEIGHT, GENERAL PURPOSE, 600 VOLT

Date: 1-21-22

Revision: U

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

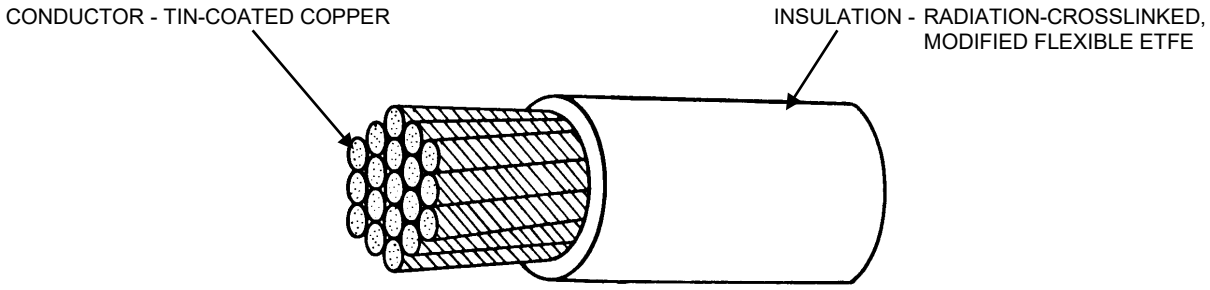


TABLE I. CONSTRUCTION DETAILS

PART NUMBER 1/	WIRE SIZE (AWG)	CONDUCTOR STRANDING (number x AWG)	DIAMETER OF STRANDED CONDUCTOR (inch)		FINISHED WIRE		
			MINIMUM	MAXIMUM	MAXIMUM RESISTANCE AT 20°C (ohms/1000 ft.)	DIAMETER (inch)	MAXIMUM WEIGHT (lbs/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	19.2	.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.
82A0111-000-*	000	4123 x 34	.540	.575	.087	.628 ± .020	619.
82A0111-0000-*	0000	5320 x 34	.615	.655	.066	.711 ± .020	795.

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

Raychem, TE Connectivity, TE connectivity (logo), and TE (logo) are trademarks.

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 Wire & Cable
501 Oakside Avenue
Redwood City, CA 94063-3800
Phone: 1-800-227-8816

© 2013-2022 TE Connectivity Ltd. family of companies. All rights reserved.

TABLE II. PERFORMANCE DETAILS		
PART NUMBER 1/	BEND TESTING	
	MANDREL DIAMETER (inch) (± 3%)	WEIGHT (lbs) (± 3%)
	CROSSLINKING PROOF TEST	CROSSLINKING PROOF TEST
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
82A0111-000-*	8.00	4.00
82A0111-0000-*	8.00	4.00

WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 150°C
Maximum continuous conductor temperature
VOLTAGE RATING: 600 volts (rms) at sea level
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 gram weight
INSULATION ELONGATION AND TENSILE STRENGTH:
AWG 28-26: Elongation, 75% (minimum)
Tensile Strength, 3000 lbf/in^2 (minimum)
AWG 24-10: Elongation, 75% (minimum)
Tensile Strength, 3500 lbf/in^2 (minimum)
AWG 8-0000: Elongation, 125% (minimum)
Tensile Strength, 3000 lbf/in^2 (minimum)
INSULATION FLAWS:
Spark Test, 1.5 kV (rms) at 3 kHz
Impulse Dielectric Test, 6.0 kV (peak)

INSULATION THICKNESS:
AWG 28-16: 0.004 in. (minimum)
AWG 14-10: 0.006 in. (minimum)
AWG 8-0000: 0.012 in. (minimum)
SECANT MODULUS (Test per ASTM D 882):
AWG 28-10: 5.0 x 10^4 lbf/in^2 (maximum)
AWG 8-0000: 4.0 x 10^4 lbf/in^2 (maximum)
2% strain, 2 inch jaw separation, 0.2 inch/minute
SHRINKAGE: 150 ± 3°C for 6 hours
AWG 28-10: 0.13 in. (maximum) in 12 inches
AWG 8-0000: 0.25 in. (maximum) in 12 inches
VOLTAGE WITHSTAND (Post Environmental):
2500 volts (rms), 60 Hz

1/ PART NUMBER:
The "*" in the part numbers on pages 1 and 2 shall be replaced by a color code designator.
Example: AWG 12, white; 82A0111-12-9
AWG 12, white with a black stripe; 82A0111-12-90

1/ See footer section on page 1