SPECIFICATION CONTROL DRAWING

82A0811

TITLE	Date	Revision
WIRE, RADIATION-CROSSLINKED, MODIFIED FLEXIBLE ETFE-INSULATED, NORMAL WEIGHT, GENERAL PURPOSE, 600 VOLT	11-5-13	F

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

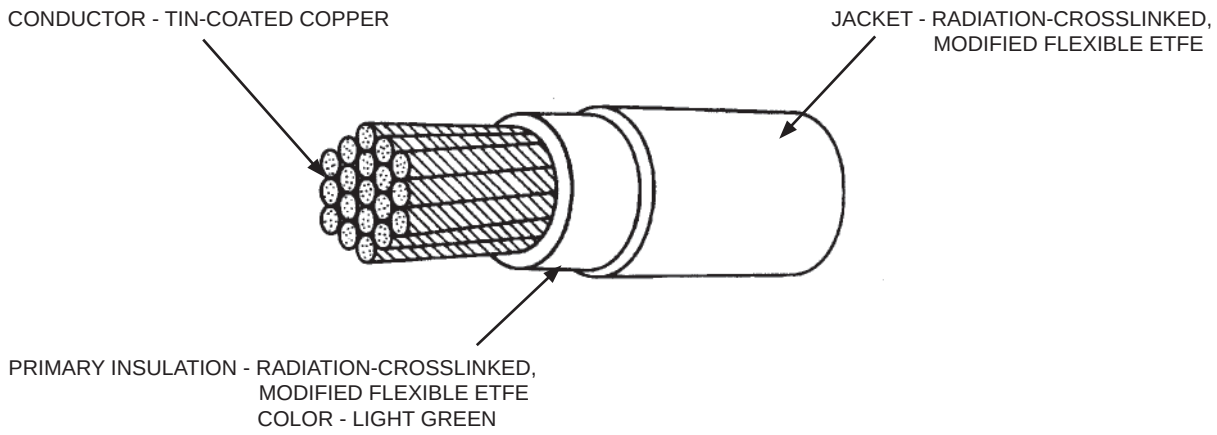


TABLE I. CONSTRUCTION DETAILS

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.)
82A0811-24-*	24	105 x 44	.023	.027	28.2	.044 ± .003	2.5
82A0811-22-*	22	154 x 44	.029	.033	19.2	.054 ± .003	3.7
82A0811-20-*	20	154 x 42	.037	.043	11.7	.064 ± .004	5.2
82A0811-18-*	18	259 x 42	.047	.053	7.14	.076 ± .004	8.0
82A0811-16-*	16	259 x 40	.061	.067	4.53	.092 ± .005	11.9
82A0811-14-*	14	665 x 42	.078	.086	2.96	.116 ± .005	19.3
82A0811-12-*	12	665 x 40	.096	.106	1.89	.137 ± .006	27.9
82A0811-10-*	10	665 x 38	.126	.140	1.12	.187 ± .008	50.0
82A0811-8-*	8	665 x 36	.157	.173	.714	.230 ± .008	77.3
82A0811-6-*	6	1045 x 36	.192	.208	.490	.277 ± .010	118.
82A0811-4-*	4	1665 x 36	.265	.285	.326	.359 ± .010	189.
82A0811-2-*	2	1665 x 34	.325	.345	.204	.433 ± .016	282.
82A0811-1-*	1	2109 x 34	.370	.400	.163	.488 ± .016	348.
82A0811-0-*	0	2660 x 34	.435	.465	.133	.558 ± .016	442.
82A0811-00-*	00	3325 x 34	.485	.515	.102	.612 ± .016	544.
82A0811-000-*	000	4123 x 34	.540	.575	.087	.678 ± .016	668.
82A0811-0000-*	0000	5320 x 34	.615	.655	.066	.771 ± .022	863.

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

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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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TABLE II. PERFORMANCE DETAILS		
PART NUMBER 1/	BEND TESTING	
	MANDREL DIAMETER (inch) (± 3%)	WEIGHT (lbs) (± 3%)
	CROSSLINKING PROOF TEST	CROSSLINKING PROOF TEST
82A0811-24-*	.500	.750
82A0811-22-*	.500	1.00
82A0811-20-*	.500	1.50
82A0811-18-*	.750	2.00
82A0811-16-*	1.00	2.00
82A0811-14-*	1.00	3.00
82A0811-12-*	1.50	3.00
82A0811-10-*	2.00	3.00
82A0811-8-*	3.00	4.00
82A0811-6-*	4.00	4.00
82A0811-4-*	5.00	4.00
82A0811-2-*	6.00	6.00
82A0811-1-*	8.00	6.00
82A0811-0-*	8.00	6.00
82A0811-00-*	10.0	8.00
82A0811-000-*	10.0	8.00
82A0811-0000-*	10.0	8.00

WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 150°C
Maximum continuous conductor temperature
VOLTAGE RATING: 600 volts (rms) at sea level
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 8-0000: Elongation, 125% (minimum)
Tensile Strength, 3000 lbf/in² (minimum)
INSULATION FLAWS:
Primary Insulation,
Spark Test, 1.5 kV (rms) at 3 kHz
Impulse Dielectric Test, 6.0 kV (peak)
Finished Wire,
Spark Test, 3.0 kV (rms) at 3 kHz
Impulse Dielectric Test, 8.0 kV (peak)

INSULATION THICKNESS:
AWG 24-18: .004 in. (minimum) for primary insulation
.004 in. (minimum) for outer jacket
AWG 16-10: .005 in. (minimum) for primary insulation
.005 in. (minimum) for outer jacket
AWG 8-4: .008 in. (minimum) for primary insulation
.012 in. (minimum) for outer jacket
AWG 2-0000: .010 in. (minimum) for primary insulation
.015 in. (minimum) for outer jacket
JACKET COLOR: White preferred
SECANT MODULUS (Test per ASTM D 882):
AWG 24-10: 5.0×10^4 lbf/in² (maximum)
AWG 8-0000: 4.0×10^4 lbf/in² (maximum)
2% strain, 2 inch jaw separation, 0.2 inch/minute
SHRINKAGE: 150 ± 3°C for 6 hours,
AWG 24-10: 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: 82A0811-12-9
AWG 12, white with a black stripe: 82A0811-12-90

1/ See footer section on page 1