SPECIFICATION CONTROL DRAWING

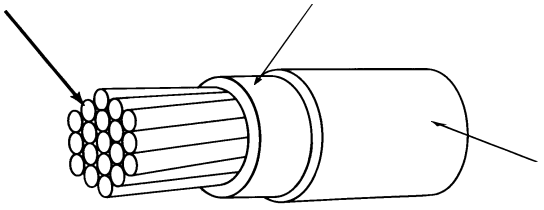
55A0811

TITLE	Date	Revision
RADIATION-CROSSLINKED, MODIFIED ETFE, TIN-COATED COPPER, NORMAL WEIGHT	06-22-04	W

This specification sheet forms a part of the latest issue of Raychem Specification 55A.

CONDUCTOR - TIN-COATED COPPER

PRIMARY INSULATION - RADIATION-CROSSLINKED MODIFIED ETFE. Primary insualtion shall be of a contrasting pigmentation to that of the jacket.



JACKET - RADIATION-CROSSLINKED, MODIFIED ETFE

TABLE I. CONSTRUCTION DETAILS

PART NUMBER 1/	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)
55A0811-26-*	26	19 x 38	.018	.020	41.3	.040 ± .002	1.7
55A0811-24-*	24	19 x 36	.023	.025	26.2	.045 ± .002	2.3
55A0811-22-*	22	19 x 34	.029	.031	16.2	.050 ± .002	3.2
55A0811-20-*	20	19 x 32	.037	.039	9.88	.058 ± .002	4.7
55A0811-18-*	18	19 x 30	.046	.049	6.23	.070 ± .003	7.2
55A0811-16-*	16	19 x 29	.052	.055	4.81	.077 ± .003	9.0
55A0811-14-*	14	19 x 27	.065	.069	3.06	.094 ± .003	13.8
55A0811-12-*	12	37 x 28	.084	.089	2.02	.111 ± .003	20.5
55A0811-10-*	10	37 x 26	.106	.113	1.26	.134 ± .004	32.4
55A0811- 8-*	8	133 x 29	.158	.173	.701	.195 ± .008	60.3
55A0811- 6-*	6	133 x 27	.198	.217	.445	.241 ± .010	94.5
55A0811- 4-*	4	133 x 25	.250	.274	.280	.310 ± .010	150.
55A0811- 2-*	2	665 x 30	.320	.340	.183	.408 ± .012	249.
55A0811- 1-*	1	817 x 30	.360	.380	.149	.470 ± .012	325.
55A0811- 0-*	0	1045 x 30	.395	.425	.116	.510 ± .016	383.
55A0811-00-*	00	1330 x 30	.440	.475	.091	.570 ± .016	500.
55A0811-000-*	000	1665 x 30	.500	.540	.071	.610 ± .016	596.
55A0811-0000-*	0000	2109 x 30	.565	.605	.056	.675 ± .022	753.

TABLE II. PERFORMANCE DETAILS

PART NUMBER 1/	BEND TESTING			
	MANDREL DIAMETER (inch) (± 3%)		WEIGHT (lb) (± 3%)	
	IMMERSION, LIFE CYCLE AND ACCELERATED AGING	COLD BEND	IMMERSION, LIFE CYCLE AND ACCELERATED AGING	COLD BEND
55A0811-26-*	.375	1.00	.500	3.00
55A0811-24-*	.500	1.00	.750	3.00
55A0811-22-*	.500	1.00	1.00	3.00
55A0811-20-*	.500	1.00	1.50	4.00
55A0811-18-*	.750	1.50	2.00	4.00
55A0811-16-*	1.00	1.50	2.00	5.00
55A0811-14-*	1.00	2.00	3.00	5.00
55A0811-12-*	1.50	2.00	3.00	5.00
55A0811-10-*	2.00	3.00	3.00	5.00
55A0811- 8-*	3.00	4.00	4.00	6.00
55A0811- 6-*	4.00	5.00	4.00	10.0
55A0811- 4-*	5.00	6.00	4.00	10.0
55A0811- 2-*	6.00	8.00	6.00	15.0
55A0811- 1-*	8.00	10.0	6.00	15.0
55A0811- 0-*	8.00	10.0	6.00	15.0
55A0811-00-*	10.0	12.0	8.00	20.0
55A0811-000-*	10.0	12.0	8.00	20.0
55A0811-0000-*	10.0	12.0	8.00	20.0

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.

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.

tyco Electronics

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WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 150°C,
Maximum continuous conductor temperature
VOLTAGE RATING: 600 volts (rms) at sea level
ACCELERATED AGING (CROSSLIINKING PROOF):300 ± 3°C for 7 hours
BLOCKING: 200 ± 3°C for 24 hours
COLOR: white preferred
CONCENTRICITY: 70% (minimum)
FLAMMABILITY: Procedure 1, 3 seconds (maximum); 3 in. (maximum); no flaming of facial tissue.
HUMIDITY RESISTANCE: Insulation Resistance,
5000 megohms for 1000 ft. (minimum) for AWG 26 -10,
3000 megohms for 1000 ft. (minimum) for AWG 8 - 0000
IDENTIFICATION, COLOR STRIPING AND BAND DURABILITY:
125 cycles (250 strokes) (minimum), 500 g weight
IMMERSION: Diameter increase 5% (maximum); no cracking, no dielectric breakdown
INSULATION ELONGATION AND TENSILE STRENGTH:
Tensile strength, 5000 lbf/in² (minimum) for primary insulation
5000 lbf/in² (minimum) for total insulation (primary insulation & jacket)
Elongation, 125% (minimum) for primary insulation (for AWG's 26 - 10)
75% (minimum) for total insulation (primary insulation and jacket)
INSULATION FLAWS:
Primary Insulation,
Spark test, 1.5 kV (rms) at 60 Hz
4.2 kV (rms) at 3 kHz
Finished Wire,
Spark test, 5.7 kV (rms) at 3 kHz
Impulse Dielectric Test, 8.0 kV (peak)
INSULATION RESISTANCE:
5000 megohms for 1000 ft (minimum), for AWG 26 -10
3000 megohms for 1000 ft.(minimum), for AWG 8 - 0000
INSULATION THICKNESS: 0.003 in. (minimum), for primary insulation
0.004 in. (minimum) for outer jacket
0.009 in. (minimum) for total insulation
LIFE CYCLE: 200 ± 3°C for 500 hours
LOW TEMPERATURE-COLD BEND: -65 ± 3°C for 4 hours
SHRINKAGE: 200 ± 3°C, for 6 hours, 0.125 in. (maximum) in 12 in.
SMOKE TEST: 200 ± 2°C, No visible smoke
SOLDERABILITY: Per MIL-STD-202, Method 208, except without steam aging, N/A for AWG 8 and larger
SURFACE RESISTANCE: 500 megohms-in. (minimum), both readings
THERMAL SHOCK RESISTANCE: 150 ± 3°C,
0.060 in. (maximum) for AWG 26 - 12
0.100 in. (maximum) for AWG 10 - 8
0.125 in. (maximum) for AWG 6 - 0000
VOLTAGE WITHSTAND TEST (POST ENVIRONMENTAL): 2500 volts (rms), 60 Hz
WICKING: 2.25 in. (maximum)
WRAP TEST: 200 ± 3°C for 2 hours

PART NUMBER:
The "*" in the part numbers on page 1 shall be replaced by a color code designator.
1/ Example: AWG 22, white: 55A0811-22-9