SPECIFICATION CONTROL DRAWING

55A0111

TITLE	Date	Revision
WIRE, RADIATION-CROSSLINKED, MODIFIED, ETFE-INSULATED, TIN-COATED COPPER, LIGHTWEIGHT	24MAR11	R

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

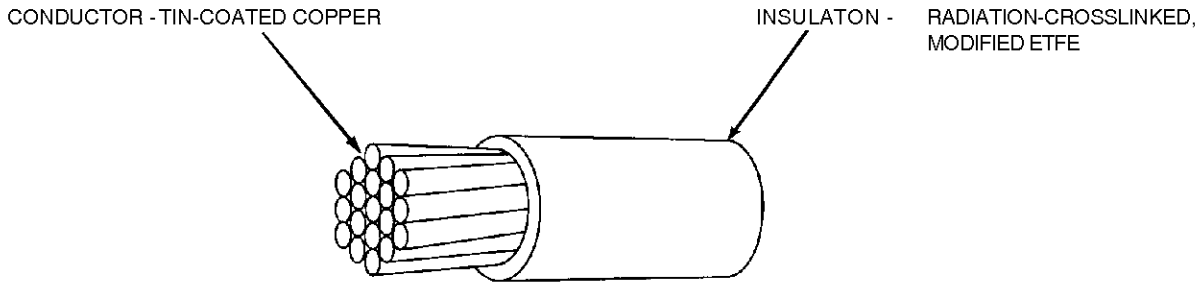

TABLE I. CONSTRUCTION DETAILS

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.)
55A0111-30-*	30	7 x 38	.011	.013	108.4	.024 ± .002	.66
55A0111-28-*	28	7 x 36	.014	.016	68.6	.027 ± .002	.91
55A0111-26-*	26	19 x 38	.018	.020	41.3	.032 ± .002	1.4
55A0111-24-*	24	19 x 36	.023	.025	26.2	.037 ± .002	2.0
55A0111-22-*	22	19 x 34	.029	.031	16.2	.043 ± .002	2.8
55A0111-20-*	20	19 x 32	.037	.039	9.88	.050 ± .002	4.3
55A0111-18-*	18	19 x 30	.046	.049	6.23	.060 ± .002	6.5
55A0111-16-*	16	19 x 29	.052	.055	4.81	.068 ± .002	8.3
55A0111-14-*	14	19 x 27	.065	.069	3.06	.085 ± .003	13.0
55A0111-12-*	12	37 x 28	.084	.089	2.02	.103 ± .003	19.7
55A0111-10-*	10	37 x 26	.106	.113	1.26	.128 ± .006	31.8
55A0111- 8-*	8	133 x 29	.158	.173	.701	.188 ± .008	58.8

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
55A0111-30-*	.250	.375	.125	.500
55A0111-28-*	.250	.375	.125	.500
55A0111-26-*	.375	.500	.125	.500
55A0111-24-*	.375	.500	.250	1.00
55A0111-22-*	.500	.750	.375	1.00
55A0111-20-*	.500	.750	.500	1.00
55A0111-18-*	.500	1.00	.500	1.00
55A0111-16-*	.750	1.00	.750	1.00
55A0111-14-*	1.00	1.50	1.00	3.00
55A0111-12-*	1.50	2.00	1.50	3.00
55A0111-10-*	2.00	3.00	1.50	3.00
55A0111- 8-*	3.00	4.00	4.00	6.00

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

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

TE Connectivity
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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 (CROSSLINKING 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 30 - 10
3000 megohms for 1000 ft. (minimum) for AWG 8
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:
Elongation, 75% (minimum)
Tensile strength, 5000 lbf/in² (minimum)
INSULATION FLAWS:
Spark test, 5.7 kV (rms) at 3 kHz
Impulse DielectricTest, 8.0 kV (peak)
INSULATION RESISTANCE:
5000 megohms for 1000 ft. (minimum) for AWG 30 - 10
3000 megohms for 1000 ft. (minimum) for AWG 8
INSULATION THICKNESS: 0.005 in. (minimum)
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.
SOLDERABILITY: Per MIL-STD-202, Method 208, without steam aging
N/A for AWG 10 and 8
SMOKE TEST: 200 ± 2°C. No visible smoke
SURFACE RESISTANCE: 500 megohms-in. (minimum), both readings
THERMAL SHOCK RESISTANCE: 150 ± 3°C, 0.060 in. (maximum)
VOLTAGE WITHSTAND TEST (Post Environmental): 2500 volts (rms), 60 Hz
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: 55A0111-22-9
AWG 22, white with black stripe: 55A0111-22-90

1/ See footer section on page 1