

# SPECIFICATION CONTROL DRAWING

55A6000

TITLE WIRE, ELECTRIC, RADIATION-CROSSLINKED, MODIFIED, ETFE-INSULATED, TIN-COATED COPPER, NORMALWEIGHT

Date 8-29-97

Revision D

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

CONDUCTOR - TIN-COATED COPPER

INSULATOR - RADIATION-CROSSLINKED, MODIFIED ETFE

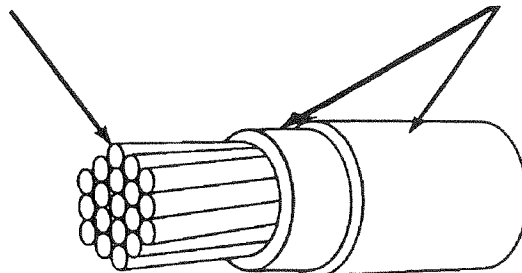


TABLE I. CONSTRUCTION DETAILS

PART NUMBER	WIRE SIZE (AWG)	CONDUCTOR STRANDING (number x AWG)	MAXIMUM DIAMETER OF STRANDED CONDUCTOR (in.)	FINISHED WIRE		
				MAXIMUM RESISTANCE AT 20°C (ohms/1000 ft.)	DIAMETER (in.)	MAXIMUM WEIGHT (lbs/1000 ft.)
55A6000-24-*	24	19 x 36	.024	26.2	.072 ± .004	4.7
55A6000-22-*	22	19 x 34	.033	16.2	.078 ± .004	5.6
55A6000-20-*	20	19 x 32	.041	9.88	.086 ± .004	7.4
55A6000-18-*	18	19 x 30	.051	6.23	.095 ± .004	9.9
55A6000-16-*	16	19 x 29	.058	4.81	.101 ± .004	11.8
55A6000-14-*	14	19 x 27	.073	3.06	.116 ± .004	16.8
55A6000-12-*	12	37 x 28	.090	2.02	.132 ± .006	23.9
55A6000-10-*	10	37 x 26	.114	1.26	.153 ± .007	36.2
55A6000- 8-*	8	133 x 29	.173	.701	.202 ± .008	61.7
55A6000- 6-*	6	133 x 27	.217	.445	.242 ± .010	94.1
55A6000- 4-*	4	133 x 25	.262	.280	.310 ± .010	150.

TABLE II. PERFORMANCE DETAILS

PART NUMBER	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
55A6000-24-*	.500	1.00	.750	3.00
55A6000-22-*	1.00	1.50	1.50	4.00
55A6000-20-*	1.00	2.00	2.00	5.00
55A6000-18-*	1.00	2.00	2.00	5.00
55A6000-16-*	1.50	2.00	3.00	5.00
55A6000-14-*	1.50	2.00	3.00	5.00
55A6000-12-*	2.00	3.00	4.00	6.00
55A6000-10-*	2.00	3.00	4.00	6.00
55A6000- 8-*	3.00	4.00	4.00	6.00
55A6000- 6-*	4.00	5.00	4.00	10.0
55A6000- 4-*	5.00	6.00	4.00	10.0

COLORS AND COLOR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH MIL-STD-681.

DIMENSIONS ARE IN INCHES, AND UNLESS OTHERWISE DESIGNATED ARE NOMINAL.

**Raychem**

Raychem Corporation  
300 Constitution Drive, Menlo Park, California 94025  
1-800-2-Raychem Fax: 1-650-361-6297

THIS SPECIFICATION SHEET TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BID.

## WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 150°C;

Maximum continuous conductor temperature

VOLTAGE RATING: 600 volts (rms)

ACCELERATED AGING: 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.

Procedure 2, 3 seconds (maximum); 3 in. (maximum), AWG 24-10

HUMIDITY RESISTANCE: Insulation Resistance,

5000 megohms for 1000 ft (minimum) for AWG 24 - 10

1000 megohms for 1000 ft. (minimum) for AWG 8 - 4

IDENTIFICATION AND COLOR STRIPING DURABILITY: 125 cycles (250 strokes)  
(minimum), 500 g weight

INSULATION ELONGATION AND TENSILE STRENGTH:

Tensile strength, 5000 lbf/in<sup>2</sup> (minimum)

Elongation, 50% (minimum)

INSULATION FLAWS:

Primary Insulation,

Spark test, 1.5 kV (rms), 60 Hz

Impulse Dielectric Test, 6.0 kV (peak)

Finished Wire,

Spark Test, 3.0 kV (rms), 60 Hz

Impulse Dielectric Test, 8.0 kV (peak)

INSULATION RESISTANCE:

5000 Megohms for 1000 ft. (minimum) AWG 24 - 10

1000 megohms for 1000 ft. (minimum) AWG 8 - 4

INSULATION THICKNESS: 0.015 in. (minimum)

LIFE CYCLE: 200 ± 3°C for 168 hours

LOW TEMPERATURE-COLD BEND: -65 ± 3°C for 4 hours

NOTCH SENSITIVITY: 0.004 in.

SHRINKAGE: 200 ± 3°C, for 6 hours, 0.125 in. (maximum) AWG 24 - 10

0.250 in. (maximum) AWG 8 - 4

SMOKE TEST: 250 ± 5°C. No visible smoke

SURFACE RESISTANCE: 500 Megohms-in. (minimum), both readings

THERMAL SHOCK RESISTANCE: 150 ± 3°C,

0.060 in. (maximum) for AWG 24 - 12

0.100 in. (maximum) for AWG 10 - 8

0.125 in. (maximum) for AWG 6 - 4

VOLTAGE WITHSTAND TEST (POST ENVIRONMENTAL): 2500 volts (rms)

WICKING: 2.25 in. (maximum)

PART NUMBER:

The "\*" in the part numbers on page 1 shall be replaced by a color code designator.

Example: AWG 22, white: 55A6000-22-9

AWG 22, white with black stripe: 55A6000-22-90