

# SPECIFICATION CONTROL DRAWING

55A7307

TITLE

WIRE, ELECTRIC, RADIATION-CROSSLINKED, MODIFIED, ETFE-INSULATED, SOLID SILVER-COATED COPPER, SPECIAL

Date

2-16-96

Revision

A

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

CONDUCTOR - SILVER-COATED COPPER  
SOLID

INSULATION - RADIATION-CROSSLINKED,  
MODIFIED ETFE

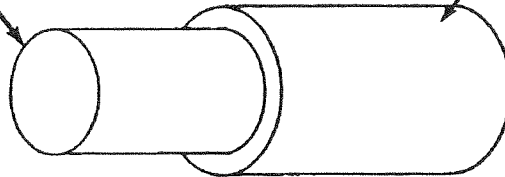


TABLE I. CONSTRUCTION DETAILS

PART NUMBER	WIRE SIZE (AWG)	NOMINAL CONDUCTOR DIAMETER (in.)	FINISHED WIRE			
			MAXIMUM RESISTANCE AT 20°C (ohms/1000 ft.)	DIAMETER (in.)		NOMINAL WEIGHT (lbs/1000 ft.)
				MINIMUM	MAXIMUM	
55A7307-30-*	30	.010	108.	.020	.024	.53
55A7307-28-*	28	.012	67.6	.023	.027	.75
55A7307-26-*	26	.016	42.9	.028	.032	1.2
55A7307-24-*	24	.020	26.7	.033	.037	1.7
55A7307-22-*	22	.025	16.9	.036	.040	2.4
55A7307-20-*	20	.032	10.5	.043	.047	3.7

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
55A7307-30-*	.250	.375	.063	.375
55A7307-28-*	.250	.375	.063	.375
55A7307-26-*	.375	.500	.125	.375
55A7307-24-*	.375	.500	.125	.500
55A7307-22-*	.500	.750	.250	.500
55A7307-20-*	.500	.750	.250	.500

COLORS AND COLOR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH MIL-STD-881.

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

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**WIRE RATINGS AND ADDITIONAL REQUIREMENTS**

**TEMPERATURE RATING:** 200°C,

Maximum continuous conductor temperature

**VOLTAGE RATING:** 600 volts (rms)

**ACCELERATED AGING:** 300 ± 3°C for 7 hours

**BLOCKING:** 230 ± 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); 5 in. (maximum); AWG 30-22

3 seconds (maximum); 3 in. (maximum); AWG 20

**HUMIDITY RESISTANCE:** Insulation Resistance, 5000 megohms for 1000 ft. (minimum)

**IDENTIFICATION AND COLOR STRIPING DURABILITY:** 125 cycles (250 strokes)

(minimum), 500 g weight (AWG 28 and 30 are not marked)

**INSULATION ELONGATION AND TENSILE STRENGTH:**

Elongation, 50% (minimum)

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

**INSULATION FLAWS:**

Spark Test, 3.0 kV (rms), 60 Hz

Impulse Dielectric Test, 8.0 kV (peak)

**INSULATION RESISTANCE:** 5000 megohms for 1000 ft. (minimum)

**INSULATION THICKNESS:** 0.005 in. (minimum)

**LIFE CYCLE:** 230 ± 3°C for 500 hours

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

**SHRINKAGE:** 230 ± 3°C, 0.125 inch (maximum)

**SMOKE TEST:** 250 ± 5°C, No visible smoke

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

**VOLTAGE WITHSTAND TEST (POST ENVIRONMENTAL):** 1500 volts (rms)

**PART NUMBER:**

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

Example: AWG 22, white: 55A7307-22-9

AWG 22, white with black stripe: 55A7307-22-90