

# SPECIFICATION CONTROL DRAWING

55A7036

TITLE WIRE, ELECTRIC, FLUOROPOLYMER-INSULATED, RADIATION-CROSSLINKED, MODIFIED ETFE, NICKEL-COATED COPPER, NORMAL WEIGHT

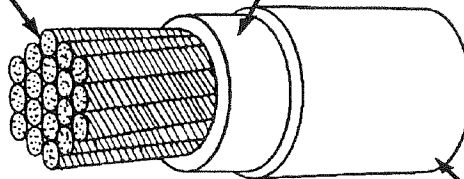
Date 1-18-96

Revision H

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

CONDUCTOR - NICKEL-COATED COPPER UNIDIRECTIONAL ROPE LAY

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



JACKET - RADIATION-CROSSLINKED, MODIFIED ETFE

TABLE I. CONSTRUCTION DETAILS

PART NUMBER	WIRE SIZE (AWG)	CONDUCTOR STRANDING (number x AWG)	DIAMETER OF STRANDED CONDUCTOR (in.)		FINISHED WIRE		
			MINIMUM	MAXIMUM	MAXIMUM RESISTANCE AT 20°C (ohms/1000ft)	DIAMETER (in.)	MAXIMUM WEIGHT (lb/1000 ft)
55A7036-8-*	8	133 x 29	.165	.173	.694	.195 ± .008	70.0
55A7036-6-*	6	133 x 27	.207	.217	.436	.241 ± .010	103.
55A7036-4-*	4	133 x 25	.262	.274	.275	.310 ± .010	179.

TABLE II. PERFORMANCE DETAILS

PART NUMBER	BEND TESTING			
	MANDREL DIAMETER (inch) (± 3%)		WEIGHT (lb) (± 3%)	
	LIFE CYCLE, IMMERSION AND ACCELERATED AGING	COLD BEND	LIFE CYCLE, IMMERSION AND ACCELERATED AGING	COLD BEND
55A7036-8-*	3.00	4.00	4.00	6.00
55A7036-6-*	4.00	5.00	4.00	10.0
55A7036-4-*	5.00	6.00	4.00	10.0

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

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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## WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 200°C;

maximum continuous temperature

VOLTAGE RATING: 600 volts (rms)

ACCELERATED AGING: 300 ± 3°C for 7 hours

BLOCKING: 230 ± 3°C for 24 hours

CONCENTRICITY: 70% (minimum)

FLAMMABILITY:

Procedure 1, 3 seconds (maximum); 3 in. (maximum);

no flaming of facial tissue

HUMIDITY RESISTANCE:

Insulation resistance, 3000 megohms for 1000 ft. (minimum)

IDENTIFICATION AND COLOR STRIPING 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/in<sup>2</sup> (minimum) for primary insulation

5000 lbf/in<sup>2</sup> (minimum) for total insulation

(primary insulation and jacket)

Elongation; 75% (minimum) for total insulation (primary insulation and jacket)

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: 3000 megohms for 1000 ft. (minimum)

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: 230 ± 3°C for 500 hours

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

SHRINKAGE: 230 ± 3°C for 6 hours, 0.125 in. (maximum) in 12 in.

SMOKE TEST: 250 ± 5°C, no visible smoke

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

THERMAL SHOCK RESISTANCE: 200 ± 3°C,

0.100 inch (maximum) AWG 8; 0.125 inch (maximum) AWG 6 - 4

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

WICKING: 2.25 in. (maximum)

WRAP TEST: 313 ± 3°C for 2 hours

PART NUMBER:

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

Example: AWG 6, white; 55A7036-6-9

AWG 6, white with black stripe; 55A7036-6-90