

# SPECIFICATION CONTROL DRAWING

44A0714

TITLE WIRE, ELECTRIC, RADIATION-CROSSLINKED POLYALKENE INSULATED, SILVER-COATED  
HIGH-STRENGTH COPPER ALLOY, NORMAL WEIGHT, AIRFRAME, 600 VOLT

Date 2-1-91

Revision B

This specification sheet forms a part of the latest issue of Raychem Specification 44 and MIL-W-81044 as applicable

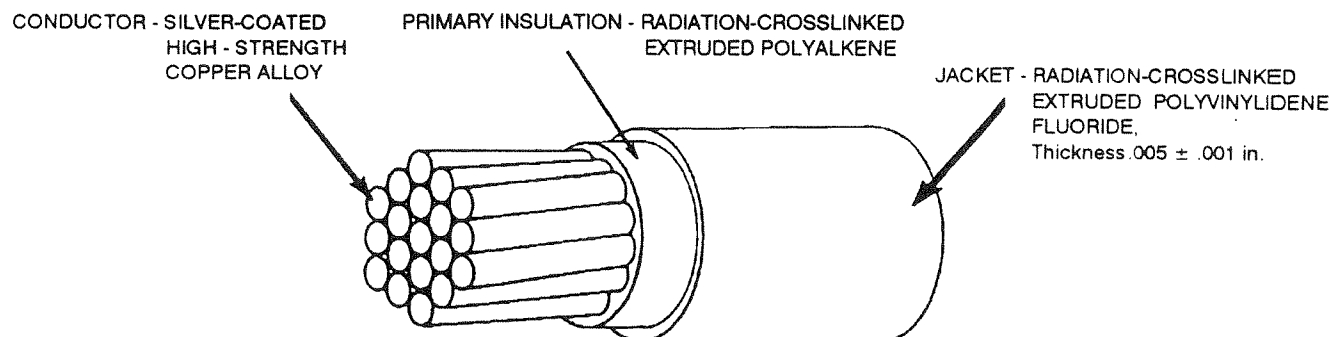


TABLE I. CONSTRUCTION DETAILS

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)
44A0714-26-*	26	19 x 38	.018	.020	44.8	.053 ± .002	2.2
44A0714-24-*	24	19 x 36	.023	.025	28.4	.057 ± .002	3.0
44A0714-22-*	22	19 x 34	.029	.032	17.5	.069 ± .003	4.3
44A0714-20-*	20	19 x 32	.037	.040	10.7	.078 ± .003	6.1

TABLE II. PERFORMANCE DETAILS

PART NUMBER	BEND TESTING				
	MANDREL DIAMETER (inch) (± 3%)			WEIGHT (lb) (± 3%)	
	IMMERSION, LIFE CYCLE AND ACCELERATED AGING	COLD BEND	WRAP	IMMERSION, LIFE CYCLE AND ACCELERATED AGING	COLD BEND
44A0714-26-*	.500	1.00	.250	1.00	3.00
44A0714-24-*	.500	1.00	.250	1.00	3.00
44A0714-22-*	.750	1.00	.250	3.00	3.00
44A0714-20-*	.750	1.00	.250	4.00	4.00

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

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

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**WIRE RATINGS AND ADDITIONAL REQUIREMENTS****TEMPERATURE RATING: 150°C**

Maximum continuous conductor temperature

**VOLTAGE RATING: 600 volts (rms)****ACCELERATED AGING: 300 ± 2°C for 6 hours**

Identification legibility, 225 ± 2°C for 6 hours

**BLOCKING: 150 ± 2°C for 24 hours****COLOR: White preferred****FLAMMABILITY: 30 seconds (maximum); 3 in. (maximum);**

no flaming of facial tissue

**HUMIDITY RESISTANCE: Insulation Resistance,**

5000 Megohms for 1000 ft. (minimum)

**IDENTIFICATION, STRIPING, OR 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:**

Primary Insulation,

Tensile Strength, 2500 lbf/in<sup>2</sup> (minimum)

Elongation, 150% (minimum)

**INSULATION FLAWS:**

Primary Insulation,

Spark Test, 3.0 kV (rms), 60 Hz, 100% test

Impulse Dielectric Test, 6.0 kV (peak), 100% test

Finished Wire;

Impulse Dielectric Test, 8.0 kV (peak), 100% test

**INSULATION RESISTANCE: 5000 Megohms for 1000 ft. (minimum)****LIFE CYCLE: 200 ± 2°C for 168 hours****LOW TEMPERATURE-COLD BEND: -65 ± 2°C for 4 hours****SHRINKAGE: 300 ± 2°C, 0.125 in. (maximum) in 12 in.****SMOKE: 200 ± 2°C. No visible smoke.****SURFACE RESISTANCE: 500 megohms-in. (minimum), both readings****THERMAL SHOCK: 150 ± 2°C, 0.060 in. (maximum)****VOLTAGE WITHSTAND TEST: (After Accelerated Aging, Immersion, Life Cycle,**

Low Temperature-Cold Bend) 2500 volts (rms), 60 Hz, 5 minutes

**WICKING: 2.25 in. (maximum)**

**PART NUMBER:** The \*\*\* in the part numbers on page 1 shall be replaced by color code designators.

Example: AWG 20, white: 44A0714-20-9

AWG 20, white with black stripe: 44A0714-20-90