

SPECIFICATION CONTROL DRAWING

44A0814

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

Date 2-4-91

Revision B

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

CONDUCTOR - SILVER-COATED
HIGH STRENGTH
COPPER ALLOY

PRIMARY INSULATION - RADIATION-CROSSLINKED
EXTRUDED POLYALKENE

JACKET - RADIATION-CROSSLINKED
EXTRUDED POLYVINYLDENE
FLUORIDE,
Thickness .005 ± .001 in.

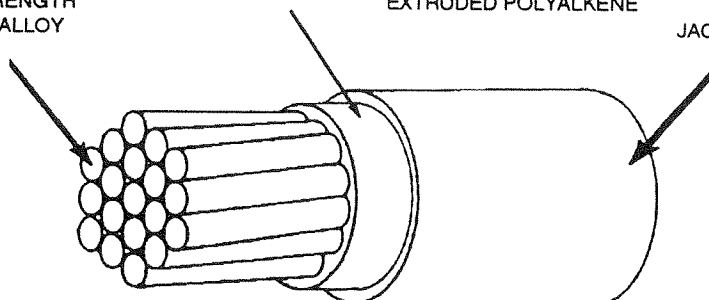


TABLE I. CONSTRUCTION DETAILS

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)
44A0814-26-*	26	19 x 38	.018	.020	44.8	.048 ± .002	1.9
44A0814-24-*	24	19 x 36	.023	.025	28.4	.054 ± .002	2.7
44A0814-22-*	22	19 x 34	.029	.032	17.5	.062 ± .003	3.9
44A0814-20-*	20	19 x 32	.037	.040	10.7	.070 ± .003	5.5

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
44A0814-26-*	.500	1.00	250	0.50	3.00
44A0814-24-*	.500	1.00	250	0.50	3.00
44A0814-22-*	.750	1.00	250	1.50	3.00
44A0814-20-*	.750	1.00	250	2.00	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

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: 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/in² (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 and**

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: 44A0814-20-9

AWG 20, white with black stripe: 44A0814-20-90