

# SPECIFICATION CONTROL DRAWING

44A9673

TITLE WIRE, ELECTRIC, RADIATION-CROSSLINKED, TIN-COATED COPPER, LIGHTWEIGHT, GENERAL PURPOSE, 600 VOLT

Date 2-26-97

Revision

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

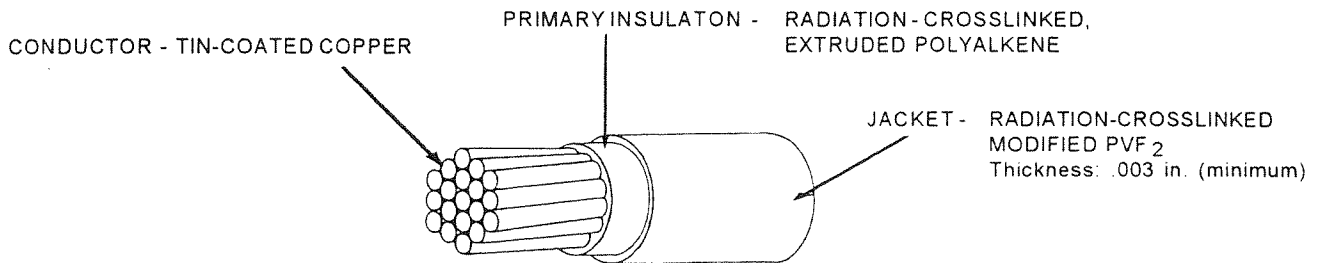


TABLE I. CONSTRUCTION DETAILS

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 (lbs/1000 ft.)
44A9673-24-*	24	19 x 36	.023	.026	26.2	.042 ± .002	2.1
44A9673-22-*	22	19 x 34	.029	.033	16.2	.049 ± .002	3.0
44A9673-20-*	20	19 x 32	.037	.041	9.88	.057 ± .002	4.5
44A9673-18-*	18	19 x 30	.046	.051	6.23	.067 ± .002	6.8

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
44A9673-24-*	.500	.500	.250	.375	.500
44A9673-22-*	.750	.750	.250	.375	1.00
44A9673-20-*	.750	.750	.250	.375	1.00
44A9673-18-*	1.00	1.00	.375	.500	1.00

### 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,  
Elongation, 150% (minimum)  
Tensile Strength, 2500 lbf/in<sup>2</sup> (minimum)

**INSULATION FLAWS:**

Primary Insulation,  
Spark Test, 1.5 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 TEST: 200 ± 2°C, no visible smoke**

**SOLDERABILITY (95% minimum coverage): Per MIL-STD-202, Method 208, except without steam aging, Type RMA Flux**

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

**THERMAL SHOCK RESISTANCE: 150 ± 2°C, 0.060 in. (maximum)**

**VOLTAGE WITHSTAND (POST ENVIRONMENTAL):**

2500 volts (rms), 60 Hz, 5 minutes

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

**PART NUMBER:**

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

Example: AWG 20, white: 44A9673-20-9

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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