SPECIFICATION CONTROL DRAWING

44A9647

TITLE	Date	Revision
WIRE, ELECTRIC, RADIATION-CROSSLINKED, TIN-COATED COPPER, LIGHTWEIGHT, GENERAL PURPOSE	06-21-04	H

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

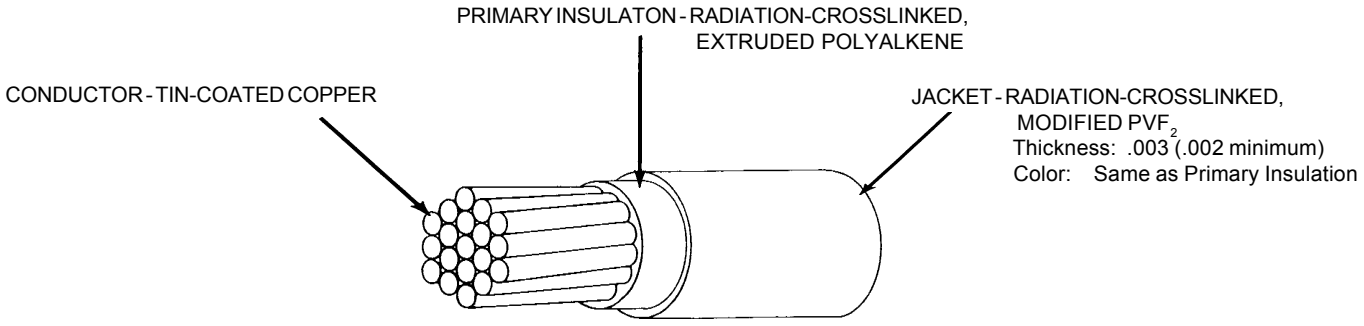

TABLE I. CONSTRUCTION DETAILS

PART NUMBER 1/	WIRE SIZE (AWG)	CONDUCTOR STRANDING (number x AWG)	DIAMETER OF STRANDED CONDUCTOR (in.)		FINISHED WIRE		
			MINIMUM	MAXIMUM	MAXIMUM RESISTANCE AT 20°C (ohms/1000 ft)	DIAMETER (in.)	MAXIMUM WEIGHT (lbs/1000 ft.)
44A9647-26-*	26	19 x 38	.018	.021	41.3	.034 ± .002	1.4
44A9647-24-*	24	19 x 36	.023	.026	26.2	.040 ± .002	2.0
44A9647-22-*	22	19 x 34	.029	.033	16.2	.047 ± .002	3.0
44A9647-20-*	20	19 x 32	.037	.041	9.88	.055 ± .002	4.5
44A9647-18-*	18	19 x 30	.046	.051	6.23	.065 ± .002	6.8
44A9647-16-*	16	19 x 29	.052	.058	4.81	.072 ± .003	8.6
44A9647-14-*	14	19 x 27	.065	.073	3.06	.089 ± .004	13.2
44A9647-12-*	12	37 x 28	.084	.090	2.02	.108 ± .004	20.2

TABLE II. PERFORMANCE DETAILS

PART NUMBER 1/	BEND TESTING				
	MANDREL DIAMETER (inch) (± 3%)			WEIGHT (lb) (± 3%)	
	LIFE CYCLE AND ACCELERATED AGING	COLD BEND	WRAP	LIFE CYCLE AND ACCELERATED AGING	COLD BEND
44A9647-26-*	.500	.500	.250	.250	.500
44A9647-24-*	.500	.500	.250	.375	.500
44A9647-22-*	.750	.750	.250	.375	1.00
44A9647-20-*	.750	.750	.250	.375	1.00
44A9647-18-*	1.00	1.00	.375	.500	1.00
44A9647-16-*	1.00	1.00	.375	.500	1.00
44A9647-14-*	1.50	1.50	.500	1.00	3.00
44A9647-12-*	2.00	2.00	.500	1.00	3.00

1/ COLORS AND COLOR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH MIL-STD-681. OTHER CODES AND SUFFIXES MAY BE ADDED TO THE PART NUMBER, AS NECESSARY, TO CAPTURE ANY ADDITIONAL REQUIREMENTS IMPOSED BY THE PURCHASE ORDER.

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.

tyco Electronics

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WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 150°C,
Maximum continuous conductor temperature
VOLTAGE RATING: 600 volts (rms) at sea level
ACCELERATED AGING: 300 ± 2°C for 6 hours
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), 150 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, 1.5 kV (rms)
Impulse Dielectric test, 6.0 kV (peak)
Finished Wire,
Spark test, 3.0 kV (rms) at 3 kHz
Impulse Dielectric test, 8.0 kV (peak)
INSULATION RESISTANCE (Qualification Test Only): 5000 Megohms for 1000 ft. (minimum)
LIFE CYCLE: 200 ± 2°C for 168 hours
LOW TEMPERATURE-COLD BEND (Qualification Test Only): -55 ± 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 TEST (POST ENVIRONMENTAL): 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 a color code designator.
1/ Example: AWG 18, white: 44A9647-18-9

JACKET IDENTIFICATION: Mark outer surface of jacket in contrasting color at 12 inch (nominal) intervals as follows:
For AWG 18 - "600V 44A AWG18 0.96mm2 Raychem Year of Manufacture"
For AWG 16 - "600V 44A AWG16 1.23mm2 Raychem Year of Manufacture"
For AWG 14 - "600V 44A AWG14 1.94mm2 Raychem Year of Manufacture"
For AWG 12 - "600V 44A AWG12 2.97mm2 Raychem Year of Manufacture"
(Marks for other AWG sizes will be added to SCD as required)

Example: AWG 16 manufactured in year 1995 will be marked as follows:
600V 44A AWG16 1.23mm2 Raychem 1995

1/ See footer section on page 1