

SPECIFICATION CONTROL DRAWING

44A0112

Title

WIRE ELECTRIC, RADIATION-CROSSLINKED POLYALKENE INSULATED,
SILVER-COATED COPPER, LIGHTWEIGHT, GENERAL PURPOSE, 600 VOLT

Date

05-20-03

Revision

C

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

CONDUCTOR – SILVER-COATED COPPER

PRIMARY INSULATION – RADIATION-CROSSLINKED
EXTRUDED POLYALKENE

JACKET – RADIATION-CROSSLINKED
MODIFIED PVF2
Thickness .003 ± .001 in.

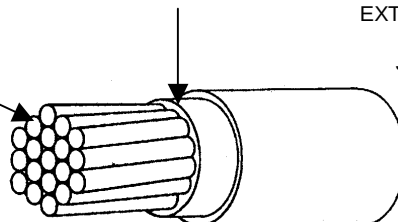


TABLE I. CONSTRUCTION DETAILS

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 (lb/1000 ft)
44A0112-26-*	26	19 x 38	.018	.020	38.4	.034 ± .002	1.4
44A0112-24-*	24	19 x 36	.023	.025	24.3	.040 ± .002	2.1
44A0112-22-*	22	19 x 34	.029	.032	15.1	.047 ± .002	3.1
44A0112-20-*	20	19 x 32	.037	.040	9.19	.055 ± .002	4.6
44A0112-18-*	18	19 x 30	.046	.050	5.79	.065 ± .002	7.0
44A0112-16-*	16	19 x 29	.052	.057	4.52	.072 ± .003	8.9
44A0112-14-*	14	19 x 27	.065	.072	2.88	.089 ± .004	13.9
44A0112-12-*	12	37 x 28	.084	.089	1.90	.108 ± .004	21.7

TABLE II. PERFORMANCE DETAILS

PART NUMBER 1/	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
44A0112-26-*	.500	.500	.250	.250	.500
44A0112-24-*	.500	.500	.250	.375	.500
44A0112-22-*	.750	.750	.250	.375	1.00
44A0112-20-*	.750	.750	.250	.375	1.00
44A0112-18-*	1.00	1.00	.375	.500	1.00
44A0112-16-*	1.00	1.00	.375	.500	1.00
44A0112-14-*	1.50	1.50	.500	1.00	3.00
44A0112-12-*	2.00	2.00	.500	1.00	3.00

Users should evaluate the suitability of this product for their application. Specifications are subject to change without notice.

Tyco Electronics also reserves the right to make changes in materials or processing, which do not affect compliance with any specification, without notification to Buyer.

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.

Page 1 of 2

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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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
 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/in² (minimum)
 INSULATION FLAWS:
 Primary Insulation,
 Spark test, 1.5 kV (rms) at 60 Hz
 High Frequency Spark Test, 4.2 kV (rms) at 3.0 kHz
 Impulse Dielectric test, 6.0 kV (peak)
 Finished Wire,
 High Frequency Spark Test, 5.7 kV (rms) at 3.0 kHz
 Impulse Dielectric test, 8.0 kV (peak)
 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
 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 20, white: 44A0112-20-9

AWG 20, white with a black stripe: 44A0112-20-90

1/ See Footer section on page 1