

SPECIFICATION CONTROL DRAWING

SCD

44/9142

Title WIRE, RADIATION-CROSSLINKED, POLYALKENE-INSULATED,
LIGHTWEIGHT, OUTER SPACE, 600 VOLT

Date 9-13-22

Revision B

This specification sheet forms a part of the latest issue of Raychem Specification 44.

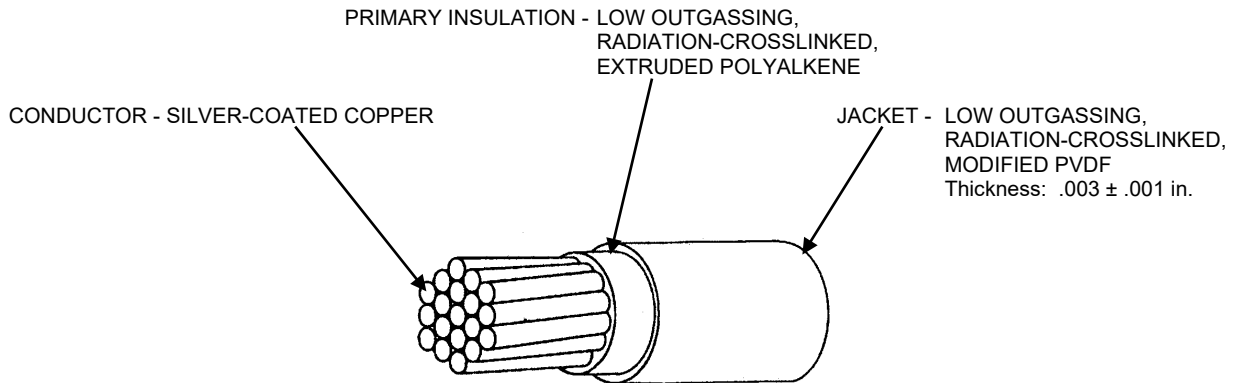


TABLE I. CONSTRUCTION DETAILS

PART NUMBER 1/	WIRE SIZE (AWG)	CONDUCTOR STRANDING (number x AWG)	MAXIMUM DIAMETER OF STRANDED CONDUCTOR (inch)	FINISHED WIRE		
				MAXIMUM RESISTANCE AT 20°C (ohms/1000 ft.)	DIAMETER (inch)	MAXIMUM WEIGHT (lbs/1000 ft.)
44/9142-26-*	26	19 x 38	.020	38.4	.033 ± .002	1.4
44/9142-24-*	24	19 x 36	.025	24.3	.056 ± .002	2.9
44/9142-22-*	22	19 x 34	.032	15.1	.068 ± .002	4.3

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	RADIATION RESISTANCE	IMMERSION, LIFE CYCLE, AND ACCELERATED AGING	COLD BEND
44/9142-26-*	.500	.500	.250	.750	.125	.500
44/9142-24-*	.500	.500	.250	1.00	.185	.500
44/9142-22-*	.750	.750	.375	1.00	.185	1.00

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

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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: 135°C

Maximum continuous conductor temperature

VOLTAGE RATING: 600 volts (rms) at sea level

ACCELERATED AGING: 225 ± 2°C for 6 hours

BLOCKING: 150 ± 2°C for 24 hours

COLOR: White preferred

FLAMMABILITY: 30 seconds (maximum); 3 inches (maximum);

no flaming of facial tissue

HUMIDITY RESISTANCE: Insulation Resistance,

5000 megohms for 1000 ft. (minimum)

IDENTIFICATION AND COLOR STRIPING 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)

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: 5000 megohms for 1000 ft. (minimum)

LIFE CYCLE: 200 ± 2°C for 120 hours

LOW TEMPERATURE-COLD BEND: -65 ± 2°C for 4 hours

RADIATION RESISTANCE: 500 megarads

SHRINKAGE: 225 ± 2°C, 0.125 in. (maximum) in 12 inches

SMOKE TEST: 165 ± 2°C, no visible smoke

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

THERMAL SHOCK RESISTANCE: 135 ± 2°C, 0.060 in. (maximum)

VACUUM STABILITY:

Total Mass Loss (TML), 1.00% (maximum)

Volatile Condensable Material (VCM), 0.10% (maximum)

VOLTAGE WITHSTAND (Post Environmental):

2500 volts (rms), 60 Hz, 5 minutes, except for the following:

Life Cycle only, 600 volts (rms), 60 Hz, 5 minutes

WICKING: 2.25 in. (maximum)

1/ PART NUMBER:

The "*" in the part numbers in Tables I and II shall be replaced by color code designators.

Example: AWG 26, white: 44/9142-26-9

AWG 26, white with a black stripe: 44/9142-26-90