

# SPECIFICATION CONTROL DRAWING

**44A9550**

TITLE WIRE, RADIATION-CROSSLINKED, POLYALKENE INSULATED,  
TIN-COATED COPPER FOR INTERNAL WIRING OF BUSINESS MACHINES

Date 7-15-05

Revision B

The complete requirements for procuring the wire described herein shall consist of this document and the issue in effect of Raychem Specification 44, Specification MIL-W-81044 and UL Subject 758, Style 1385, File E38136 and carries UL labels to this effect.

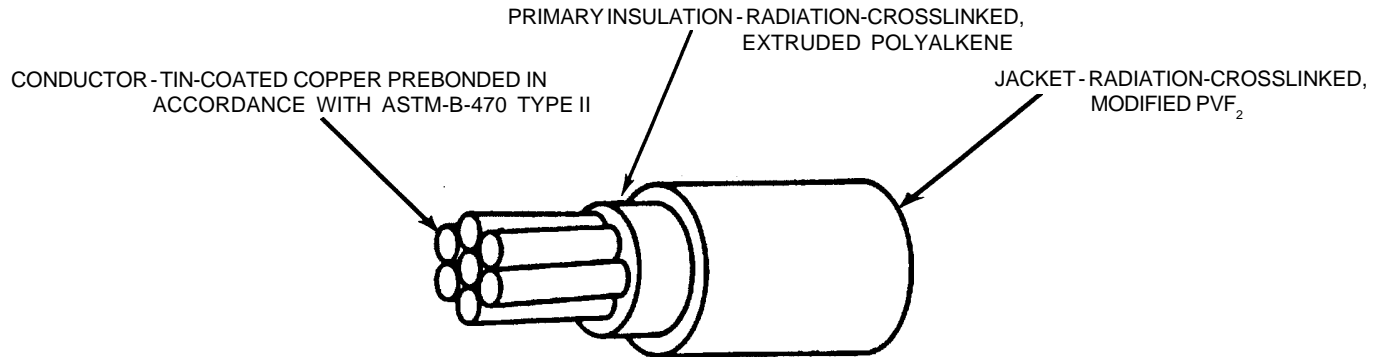


TABLE I. CONSTRUCTION DETAILS

PARTNUMBER 1/	WIRE SIZE (AWG)	CONDUCTOR STRANDING (number x AWG)	NOMINAL DIAMETER STRANDED CONDUCTOR (in.)	FINISHED WIRE		
				MAXIMUM RESISTANCE AT 20°C (ohms/1000ft.)	DIAMETER (in.)	MAXIMUM WEIGHT (lbs/1000 ft.)
44A9550-20-*	20	7 x 28	.038	11.2	.055 ± .002	4.6
44A9550-18-*	18	7 x 26	.046	7.06	.065 ± .002	6.5

TABLE II. PERFORMANCE DETAILS

PARTNUMBER 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
44A9550-20-*	.750	.750	.375	.375	1.00
44A9550-18-*	1.00	1.00	.500	.500	1.00

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.

**tyco**  
Electronics

**Raychem** Wire & Cable  
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Phone: 1-800-227-8816  
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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.

## WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 125°C

Maximum continuous conductor temperature

VOLTAGE RATING: No Voltage Rating

ACCELERATED AGING: 225 ± 3°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, 500 megohms for 1000 ft. (minimum)

IDENTIFICATION AND STRIPING DURABILITY:

125 cycles (250 strokes) (minimum), 500 g weight

INSULATION ELONGATION AND TENSILE STRENGTH:

Primary Insulation,

Elongation, 150% (minimum)

Tensile Strength, 3000 lbf/in<sup>2</sup> (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)

Impulse Dielectric Test, 8.0 kV (peak)

INSULATION RESISTANCE: 500 megohms for 1000 ft. (minimum)

INSULATION THICKNESS:

Primary Insulation, .0025 in. (minimum)

Primary Jacket, .0025 in. (minimum), .004 in. (maximum)

LIFE CYCLE: 185 ± 3°C for 168 hours

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

SHRINKAGE: 225 ± 3°C, 0.125 in. (maximum) in 12 in.

SMOKE: 165 ± 2°C, No visible smoke

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

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  
color code designators.

1/ Example: AWG 20, white: 44A9550-20-9

1/ See footer section on page 1