

# SPECIFICATION CONTROL DRAWING

**CMC-0554**

Title **WIRE, ELECTRIC, RADIATION-CROSSLINKED, MODIFIED  
ETFE-INSULATED, NICKEL-COATED COPPER**

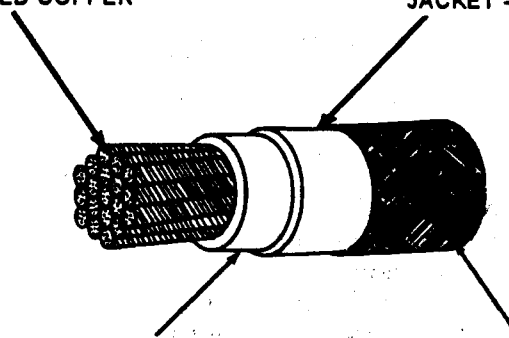
Date **9-29-98**

Revision **G**

This specification sheet forms a part of the latest issue of Raychem Specification 80.

CONDUCTOR - NICKEL-COATED COPPER

JACKET - RADIATION-CROSSLINKED,  
MODIFIED, FLEXIBLE ETFE



PRIMARY INSULATION - RADIATION-CROSSLINKED,  
MODIFIED, FLEXIBLE ETFE  
COLOR - LIGHT GREEN

BRAID - NOMEX BRAID TREATED  
TO PREVENT FRAYING

**W & C DESIGN**  
RED STAMP - CONTROL COPY  
BLACK STAMP - CHECK FOR  
LATEST ISSUE

**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/1000 ft.)	DIAMETER (in.)	MAXIMUM WEIGHT (lbs/1000 ft.)
CMC-0554-10-*	10	37 x 26	.106	.113	1.24	.106 ± .006	38.2
CMC-0554- 8-*	8	133 x 29	.158	.173	.694	.231 ± .008	73.8
CMC-0554- 6-*	6	133 x 27	.198	.217	.436	.282 ± .010	111.
CMC-0554- 4-*	4	133 x 25	.250	.274	.275	.340 ± .010	175.
CMC-0554- 2-*	2	665 x 30	.320	.340	.177	.422 ± .016	267.
CMC-0554- 0-*	0	1045 x 30	.395	.425	.113	.519 ± .016	436.
CMC-0554- 00-*	00	1330 x 30	.440	.475	.089	.569 ± .016	538.
CMC-0554-000-*	000	1665 x 30	.500	.540	.071	.645 ± .016	642.

**TABLE II. PERFORMANCE DETAILS**

PART NUMBER	BEND TESTING	
	MANDREL DIAMETER (in.) (±3%)	WEIGHT (lb) (±3%)
	CROSSLINKING PROOF TEST	CROSSLINKING PROOF TEST
CMC-0554-10-*	2.00	3.00
CMC-0554- 8-*	3.00	4.00
CMC-0554- 6-*	4.00	4.00
CMC-0554- 4-*	5.00	4.00
CMC-0554- 2-*	6.00	6.00
CMC-0554- 0-*	8.00	6.00
CMC-0554- 00-*	10.0	6.00
CMC-0554-000-*	10.0	8.00

COLORS AND COLOR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH MIL-STD-881.

DIMENSIONS ARE IN INCHES, AND UNLESS OTHERWISE DESIGNATED ARE NOMINAL.

**Raychem**

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**WIRE RATINGS AND ADDITIONAL REQUIREMENTS****W & C DESIGN**

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**TEMPERATURE RATING: 200°C**

Maximum continuous conductor temperature

**VOLTAGE RATING: 600 volts (rms)**

COLOR: White, or dark green with Munsell color limits 5Y 3/2 and 5B 2/0.5

**CONCENTRICITY: 70% (minimum)****+ CROSSLINKING PROOF TEST: 300 ± 3°C for 7 hours****INSULATION ELONGATION AND TENSILE STRENGTH:**

(Both layers - pulled individually or together)

Elongation, 150% (minimum)

Tensile Strength, 3000 lbf/in<sup>2</sup> (minimum)**INSULATION FLAWS:**

Primary Insulation,

Impulse Dielectric Test, 8.0 kV (peak)

Finished Wire,

Impulse Dielectric Test, 8.0 kV (peak)

**INSULATION THICKNESS:**

For AWG 2 and larger: 0.010 in. (minimum) for primary insulation

0.015 in. (minimum) for outer jacket

For AWG 8-4: 0.008 in. (minimum) for primary insulation

0.012 in. (minimum) for outer jacket

For AWG 10: 0.005 in. (minimum) for primary insulation

0.005 in. (minimum) for outer jacket

**SHRINKAGE: 200 ± 3°C for 8 hours, 0.250 in. (maximum) in 12 in.****VOLTAGE WITHSTAND TEST (POST ENVIRONMENTAL): 2500 volts (rms), 60 Hz****+ Test performed prior to application of braid.****PART NUMBER:**

The \*\*\* in the part numbers on page 1 shall be replaced by color code designators, except that green shall be dark green and the designator shall be 5D.

Example: \*AWG 2, white: CMC-0554-2-9

\*AWG 2, dark green: CMC-0554-2-5D

**PRODUCT IDENTIFICATION: Mark outer braid in a contrasting color at 12 inch (nominal) intervals with the following: "CMC-0554-AWG-08090"**

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