

SPECIFICATION CONTROL DRAWING

CMC-0553

TITLE WIRE, RADIATION-CROSSLINKED, MODIFIED FLEXIBLE ETFE-INSULATED,
NORMAL WEIGHT, GENERAL PURPOSE, 600 VOLT

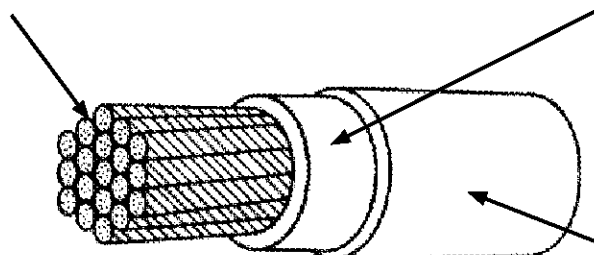
Date 28-Mar-11

Revision N1

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

CONDUCTOR - NICKEL-COATED COPPER

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



JACKET - RADIATION-CROSSLINKED,
MODIFIED FLEXIBLE ETFE

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.) |
| CMC-0553-8-* | 8 | 133 x 29 | .158 | .173 | .694 | .216 ± .008 | 70.8 |
| CMC-0553-6-* | 6 | 133 x 27 | .198 | .217 | .436 | .267 ± .010 | 107. |
| CMC-0553-4-* | 4 | 133 x 25 | .250 | .274 | .275 | .325 ± .010 | 170. |
| CMC-0553-2-* | 2 | 665 x 30 | .320 | .340 | .177 | .407 ± .016 | 261. |
| CMC-0553-1-* | 1 | 817 x 30 | .360 | .380 | .144 | .453 ± .016 | 309. |
| CMC-0553-0-* | 0 | 1045 x 30 | .395 | .425 | .113 | .504 ± .016 | 429. |
| CMC-0553-00-* | 00 | 1330 x 30 | .440 | .475 | .089 | .553 ± .016 | 530. |
| CMC-0553-000-* | 000 | 1665 x 30 | .500 | .540 | .071 | .630 ± .016 | 634. |
| CMC-0553-0000-* | 0000 | 2109 x 30 | .565 | .605 | .056 | .698 ± .016 | 765. |

TABLE II. PERFORMANCE DETAILS

| PART NUMBER 1/ | BEND TESTING | |
|-------------------|-----------------------------------|-------------------------|
| | MANDREL DIAMETER (inch) (± 3%) | WEIGHT (lb) (± 3%) |
| | CROSSLINKING PROOF TEST | CROSSLINKING PROOF TEST |
| CMC-0553-8-* | 3.00 | 4.00 |
| CMC-0553-6-* | 4.00 | 4.00 |
| CMC-0553-4-* | 5.00 | 4.00 |
| CMC-0553-2-* | 6.00 | 6.00 |
| CMC-0553-1-* | 8.00 | 6.00 |
| CMC-0553-0-* | 8.00 | 6.00 |
| CMC-0553-00-* | 10.0 | 8.00 |
| CMC-0553-000-* | 10.0 | 8.00 |
| CMC-0553-0000-* | 10.0 | 8.00 |

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



TE Connectivity Wire & Cable
501 Oakside Avenue
Redwood City, CA 94063-3800
Phone: 1-800-227-8816
Fax: 1-650-361-6297

WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 200°C

Maximum continuous conductor temperature

VOLTAGE RATING: 600 volts (rms) at sea level

CONCENTRICITY: 70% (minimum)

CROSSLINKING PROOF TEST: 300 ± 3°C for 7 hours

IDENTIFICATION AND COLOR STRIPING DURABILITY:

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

INSULATION ELONGATION AND TENSILE STRENGTH:

Elongation, 125% (minimum)

Tensile Strength, 3000 lbf/in² (minimum)

INSULATION FLAWS:

Primary Insulation,

Spark Test, 1.5 kV (rms) at 3 kHz

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 THICKNESS:

AWG 8 - 4, .008 inch (minimum) for primary insulation

.012 inch (minimum) for outer jacket

AWG 2 - 0000, .010 inch (minimum) for primary insulation

.015 inch (minimum) for outer jacket

JACKET COLOR: White preferred

SECANT MODULUS: (Test per ASTM D 882) 4.0 x 10⁴ lbf/in² (maximum)

2% strain, 2 inch jaw separation, 0.2 inch/minute

SHRINKAGE: 200 ± 3°C for 6 hours, .25 inch (maximum) in 12 inches

VOLTAGE WITHSTAND (Post Environmental): 2500 volts (rms), 60 Hz

PART NUMBER:

The “**” in the part numbers on page 1 shall be replaced by a color code designator.

1/ Example: AWG 2, white: CMC-0553-2-9

PRODUCT IDENTIFICATION: Mark outer jacket in a contrasting color

at 12 inch (nominal) intervals with the following: " CMC-0553-AWG-06090 "

1/ See footer section on page 1