

**TABLE 310.4(2)** Thickness of Insulation for Nonshielded Types RHH and RHW Solid Dielectric Insulated Conductors Rated 2000 Volts

Conductor Size (AWG or kcmil)	Column A <sup>1</sup>		Column B <sup>2</sup>	
	mm	mils	mm	mils
14–10	2.03	80	1.52	60
8	2.03	80	1.78	70
6–2	2.41	95	1.78	70
1–2/0	2.79	110	2.29	90
3/0–4/0	2.79	110	2.29	90
213–500	3.18	125	2.67	105
501–1000	3.56	140	3.05	120
1001–2000	3.56	140	3.56	140

<sup>1</sup>Column A insulations shall be limited to natural, SBR, and butyl rubbers.

<sup>2</sup>Column B insulations shall be materials such as cross-linked polyethylene, ethylene propylene rubber, and composites thereof.

### 310.6 Conductor Identification.

**(A) Grounded Conductors.** Insulated or covered grounded conductors shall be identified in accordance with 200.6.

**(B) Equipment Grounding Conductors.** Equipment grounding conductors shall be identified in accordance with 250.119.

**Δ (C) Ungrounded Conductors.** Conductors that are intended for use as ungrounded conductors, whether used as a single conductor or in multiconductor cables, shall be finished to be clearly distinguishable from grounded conductors and equipment grounding conductors. Distinguishing markings shall not conflict in any manner with the surface markings required by 310.8(B) (1). Branch-circuit ungrounded conductors shall be identified in accordance with 210.5(C). Feeders shall be identified in accordance with 215.12(C)

*Exception: Conductor identification shall be permitted in accordance with 200.7.*

Ungrounded conductors with white or gray insulation are permitted if the conductors are permanently reidentified at termination points and are visible and accessible. Common methods of reidentification include colored tape, tagging, or paint. Other applications where white conductors are permitted include flexible cords and circuits less than 50 volts. A white conductor used in single-pole, 3-way and 4-way switch loops also requires reidentification (a color other than white, gray, or green) if it is used as an ungrounded conductor.

#### See also

**200.7(C)(2)** for further information about reidentification of grounded conductors

### 310.8 Marking.

**(A) Required Information.** All conductors and cables shall be marked to indicate the following information, using the applicable method described in 310.8(B):

- (1) The maximum rated voltage.
- (2) The proper type letter or letters for the type of wire or cable as specified elsewhere in this *Code*.
- (3) The manufacturer's name, trademark, or other distinctive marking by which the organization responsible for the product can be readily identified.
- (4) The AWG size or circular mil area.

Informational Note: See Chapter 9, Table 8, Conductor Properties, for conductor area expressed in SI units for conductor sizes specified in AWG or circular mil area.

- (5) Cable assemblies where the neutral conductor is smaller than the ungrounded conductors shall be so marked.

#### (B) Method of Marking.

**(1) Surface Marking.** The following conductors and cables shall be durably marked on the surface:

- (1) Single-conductor and multiconductor thermoset and thermoplastic-insulated wire and cable
- (2) Nonmetallic-sheathed cable
- (3) Service-entrance cable
- (4) Underground feeder and branch-circuit cable
- (5) Tray cable
- (6) Irrigation cable
- (7) Power-limited tray cable
- (8) Instrumentation tray cable

The AWG size or circular mil area shall be repeated at intervals not exceeding 610 mm (24 in.). All other markings shall be repeated at intervals not exceeding 1.0 m (40 in.).

**Δ (2) Marker Tape.** Metal-covered multiconductor cables shall employ a marker tape located within the cable and running for its complete length.

*Exception No. 1: Type MI cable shall not require a marker tape.*

*Exception No. 2: Type AC cable shall not require a marker tape.*