



Canadian Standards Association
Mississauga, Ontario
To the Part I Committee

Subject No. 3124

Chair: R.E. Edwards

Date: March 4, 2005

Title: Identification of Insulated Neutrals, Rule 4-028(1)

Submitted by: Ted Olechna of Electrical Safety Authority on June 18, 2003.

Proposal: Add the following words specifically in Subrule (1) or by three continuous white stripes along its entire length;

**4-028 Identification of Insulated Neutral Conductors Up to and Including No. 2 AWG
Copper or Aluminum**

- (1) Except as permitted in Subrules (2), (3), and (4), all insulated neutral conductors in the following situations shall be identified by a white or natural grey covering, or by three continuous white stripes along its entire length;

Reasons for Request: At the Part I meeting on June 18, 2003 there was acceptance to the Appendix B note which identified the three stripes on the conductor. In order to clear up any confusion as to the meaning of the term covering, which is interpreted as the complete covering.

There was support at the Part I meeting to go forward include this in the rule as the NEC has as well

Chair's Comments: This subject contains all the elements of Subject 3051, which was approved by the Part I Committee by letter ballot last year, with the difference that this proposal would amend the appropriate code rule, rather than rely on the explanatory note in Appendix B. Given the unanimous approval for Subject 3051, there is clearly wide support for the concept. The members of Section 4 Subcommittee may want to consider whether or not the proposed amendment to the rule would be superior to the Appendix B note in its effect. There was some verbal support for the idea at Part I.

The proposal is specific as to the number of stripes permissible. Should the proposal address other variations on this theme, e.g. two stripes, four or more stripes, or is the current wording of the proposal acceptable? The forthcoming tri-national draft of CSA standard C22.2.No.38 presently would require at least three stripes.

If the subcommittee favours a rule amendment, would it still be appropriate to keep the Appendix B note, or should it be removed? By amending the rule through the addition of the last phrase, after “covering....” there is a strong implication that stripes are not a covering, although the approved interpretation afforded by the revision to Appendix B takes the position that the combined effect of the stripes provides a covering.

Subcommittee Deliberation/Chair’s Comments (Second Round)

After the first round of balloting, there are 5 members in favour of the proposal without comment, and one in favour with comments. There is one negative ballot. A member, in addition, made comments which could support the proposal with editorial changes. The submitter is also amenable to changes which could result in the removal of Appendix B note. This was consistent with one of the comments from the negative ballot.

A further comment from the negative ballot indicated a preference for a reference to black insulation. This appears to me to be none germane, as the supporting argument is based on the need for sunlight resistance, in addition to the need for white identification. In the first instance, sunlight resistance is an issue which is addressed elsewhere. Secondly, the supporting comments claim that sunlight resistance is needed because the proposal addresses services, where the insulation can become exposed to UV. In fact the scope of the subrule goes beyond services, and could be considered in the context of indoor wiring, in feeders or branch services. Sunlight resistance would not be required in such cases.

A further comment from the negative ballot extends the subject of sunlight resistance, which does not appear to be germane, as indicated. Furthermore, the comments appear to relate to Part II matters rather than Part I.

Consequently, the issue resolves itself to one decision that the subcommittee should address. That is, whether the Appendix B Note should be removed, to accompany the original proposal. One member does not favour this, unless the original proposal is reworded to carry the word “covering” in the rewording of the rule. This would carry over the sense of the Appendix B Note, in that the three stripes constitute a covering in the context of this rule.

Accordingly, I propose that the amendment be reworded, and resubmitted to the members, in accordance with the member’s suggestion, as follows:-

4-028(1), or by a covering consisting of three continuous white stripes along its entire length.

Delete the Appendix B Note.

Subcommittee Deliberation:

There are six members in favour of the proposal, and none against. There is consensus in favour, accordingly, the proposal should proceed to Part I letter ballot. It was suggested to the submitter prior to circulation of the comments of the Chair that one further option would be the removal of the Appendix B comments approved earlier under Subject 3051. This provides the interpretation that stripes are to be considered as a covering. He was in agreement. One balloter indicated that his affirmative position would be dependent on removal of this interpretation. No member expressed a position favouring the retention of the Appendix B note.

Subcommittee Recommendation: Accept the proposal as it stands, with the one change to remove the existing Appendix B note approved under Subject 3051.