



Canadian Standards Association
Mississauga, Ontario
To the Part I Committee

Subject No. 3176 Chair: M.D. Gardener/S. Douglas Date: December 20, 2004
Title: FT Rating of Plenum Cables, Rules 12-010(4) and (5)

Submitted by: René Leduc, Technical Administrator, AB Municipal Affairs,
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Proposal:

1. Delete “Notwithstanding Subrule (3),” at the beginning of Subrule (4) of Rule 12-010
2. Delete Rule 12-010(5)

Reasons for Request:

The “notwithstanding” clause of Subrule (4) has the effect of relaxing the requirement for conductors in plenums to meet Rule 2-126, which refers to the Building Code. As a result, Subrule (4), as written, contradicts the requirements of the Building Code, which requires that all conductors in plenums be FT4 rated. Fire rating requirements for cables and conductors is the responsibility of the Building Code and it is inappropriate for the CE Code to suggest contradictory requirements. If a relaxation is required, then it should be addressed in the Building Code.

Subrule (5) of Rule 12-010, although doesn’t come right out and say it, implies that regular NMS cable (normally FT1 rated) could be permitted to pass through the return-air duct. Again this contradicts the NBC and if required should be addressed in the NBC.

(Note: Flexible cord and NMS cable can be obtained with an FT4 rating.)

Supporting Information:

See National Building Code Clause 3.6.4.3.(1), (Equipment and wiring within plenums). Which makes reference to Clause 4.11.4 (FT4) of CAN/CSA C22.2 No. 0.3 Test methods for Electrical Wires and Cables.

Chair’s Comments: I agree with the proposal.

Round one Deliberations: Seven members replied, six members disagreed with the following comments:

I do not possess a copy of the NBC so cannot comment on the accuracy of the submitters comments. When making such submissions, I suggest a copy of the appropriate document be submitted for us laymen.

On the face of it I must disagree.

On the one hand the length on non-FT rated conductor is limited in length and it seems to me something like this was acceptable in the building code.

The return air comprised of wooden members should not be an issue as the building code limits this to dwellings and similar small constructions.

Anyway, I would rather see concern first of all on the part of the NBC members before we take action.

The subrule 4 refers to the use of manufactured items such as pacpoles, emergency lighting units, and some manufactured light fixture products. It could be assumed that these products are tested and approved for use through other certification methods. This permits the same field wired method as manufactured method.

Subrule 5 is mostly for combustible construction and residential wiring. It would be a major change to restrict NMS cabling in this market. I disagree with the changes.

I echo Duncan Dunsire's comments. I do not have a copy of the NBC and think it would be helpful if a copy of the applicable part were included with the subject. I think the issue is not that clear i.e. is it one of jurisdiction NBC versus CEC or a contradiction in requirements. For me at least, the real problem is not clear.

I don't agree with the recommendation to delete or move this rule. It has been in the CEC for many editions and it is very helpful to the trade. I have never heard of a complaint from any building officials. I wonder why are we trying to get rid of good rules and give them to everyone else.

Thanks for the invitation to participate in the deliberation on this subject.

I'd like to comment in my capacity as Chair of the CEC/NBC liaison S/C.

I do not support the proposal. Word "Notwithstanding" in Subrule (4) was placed deliberately, in order to recognize the fact that portable cables are not tested in accordance with the CSA C22.2 No. 0.3 to vertical flame tests FT1 and FT4. Flexible cords referenced in Subrule (4) are tested only to FT5 requirements. Removal of the word "notwithstanding" will create confusion to the Code users, as there is no FT4 tested and marked portable cables/flexible cords on the market. Subrule (5) is also important to the code users, as this subrule recognizes the fact that air duct systems (including plenums) in Part 9 of the NBCC do not require conditions spelled out in Article 3.6.4.3.(1) of the NBCC for wires in cables located in plenums.

I disagree with the proposal as it would effectively mean all residential wiring be FT4. In most cases, it is not possible to determine where the return air ducts will be set up, and in many cases, most of the wiring in a residence will pass through a return air duct at some point.

In regards to the use of flexible cords in ceiling plenum spaces I know we have been down this road before and I believe we should have confirmation that Rule 12-010(4) is actually in conflict with the building code requirement before attempting this revision.

I agree with what Ken is saying. Before we proceed with removing these Subrules we should have an interpretation from the NBC stating that we are in fact in violation.

I think this requires some definitive action on the part of the building code people before we make any changes.

Subcommittee recommendation:
Reject this proposal and close the subject.