

Fire Hazard Properties of Floors, Walls and Ceilings

Electronic Blueprint and ENVIROSPEC provide building specifications and training, on safe and sustainable buildings, for architects, engineers and builders. Addressing questions relating to CodeMark (third-party certification against the BCA [Building Code of Australia]) and Fire Hazard Properties, Rod Johnston stated the following:

Fire hazard properties for Floors, Walls and Ceilings in Class 2 to 9 buildings are covered by BCA Volume 1. The performance requirements derive from BCA Parts C 3 (for patient care and aged-care facilities) and C4 for other Class 2 to 9 buildings. Specification C1.10 Fire Hazard Properties - General applies to materials and assemblies other than (a) floor materials and floor coverings; and (b) wall and ceiling linings. It covers such materials as sarking and the like.

The comments below deal principally with wall and ceiling linings, which are covered by Specification C1.10a. This specification provides a Deemed-to-Satisfy solution for providing suitable performance in respect of fire hazard properties. In the absence of clear quantified performance requirements of fire hazard properties, Specification C1.10a becomes the de-facto definition of fire hazard performance requirements for floor materials, floor coverings, wall and ceiling linings. The principal thrust of Specification C1.10a is to define Critical Radiant Flux for floor materials and floor coverings and Group Number for walls and ceilings. The Group Number is derived from physical testing to AS ISO 9705; or prediction in accordance with Clause 3 of Specification A2.4. This requires testing to AS/NZS 3837. Testing of assemblies is covered by AS/NZS 1530.3 and AS 1530.4.



The conclusions are:

- The BCA clauses rely heavily on performance against Australian test standards.
- There is no clear correlation between American Standards and Australian Standards (except AS 1530.4)
- It would be advisable to seek early advice from the ABCB (Australian Building Codes Board) in respect of Fire Hazard Properties, before basing any CodeMark certification (or claim for certification) on opinions of various testing authorities or other organisations.

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