



# Fire Safety Regulations for Floor Coverings

Fire safety requirements for floor coverings are contained in Clause C1.10 of Part 1 of the Building Code of Australia (BCA) and reproduced in the Carpet Institute's publication titled Frequently Asked Questions on Testing to AS ISO 9239-1 for the Building Code of Australia, Version 1.2.

The Frequently Asked Questions document may be downloaded from the publications section of the CIAL website by clicking on the link: <https://www.carpetinstitute.com.au/wp-content/uploads/2014/02/Carpets082FAQBuildingCodev4.pdf>

The BCA fire safety provisions apply to class 2 – 9 buildings. Single detached dwellings and other Class 1 buildings are not covered by these provisions.

The BCA requires floor coverings to be tested using AS ISO 9239-1 'Reaction to fire tests for flooring – Part 1 Determination of the burning behaviour using a radiant heat source'. The test method reproduces the total flooring system including carpet, underlay, glues and substrate as appropriate.

The test sample is heated along its length using an inclined radiant panel. The sample is ignited at the hotter end and allowed to burn until the flame goes out. The heat energy measured at the point of extinction is the Critical Heat Flux (CHF) also called the Critical Radiant Flux in the Building Code of Australia. The Critical Radiant/Heat Flux is basically the lowest energy a fire requires to keep burning hence the higher the value the better.

The minimum required Critical Radiant Flux values as set out in the BCA are dependent on the class of building concerned, where in that building the floor covering is installed, and whether the building is fitted with a complying fire sprinkler system.

The test method also incorporates a smoke measurement component, referred to as the 'Smoke Development Rate'. This additional test is required for floor covering installations in class 2 – 9 buildings that do not have a complying fire sprinkler system.

## Further Information

Please refer to the BCA, contact a building certifier or ask the building approvals section of your local council for advice.

## About the Carpet Institute of Australia

The Carpet Institute of Australia Limited (CIAL) is the lead industry association of Australia's \$1.6 billion carpet industry. CIAL represents carpet manufacturer's accounting for 95% of Australian carpet production, as well as retailers and suppliers of goods and services to the industry.

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