

Determination of Burning Behaviour using a Critical Radiant Heat Source

AS ISO 9239.1:2003

This test method is applicable to all flooring systems. It is used to provide data on the Critical Radiant Flux and Smoke evolution as required in the Building Code of Australia.

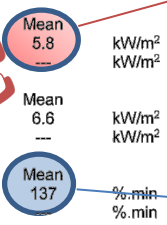
A specimen of flooring system is subjected to a graded heat along its length with a radiant panel located at one end. The specimen is then ignited at the hot end and the distance that the specimen burns under the influence of the heat load is measured. The heat flux at the point of extinction is recorded together with the total amount of smoke generated in the test.

One specimen is tested in each of the machine and cross directions. Two additional specimens are then tested in the worst performing direction.

AS ISO 9239.1-2003 Reaction to Fire Tests for Floorings. Determination of the Burning Behaviour using a Radiant Heat Source

| | | | |
|---------------------------------------|------------|-----|-----|
| Date of Sample Arrival | 27/08/2018 | | |
| Date Tested | 15/09/2018 | | |
| CHF Value | 1 | 2 | 3 |
| Length direction | 5.8 | 5.4 | 6.1 |
| Width direction | 6.2 | --- | --- |
| HF-30 Value | 1 | 2 | 3 |
| Length direction | 6.5 | 6.4 | 6.9 |
| Width direction | 7.9 | --- | --- |
| Smoke Value | 1 | 2 | 3 |
| Length direction | 129 | 145 | 142 |
| Width direction | 130 | --- | --- |
| Transitory flaming | Yes | | |
| Melting | Yes | | |
| Blistering | Yes | | |
| Penetration of flame to the substrate | Yes | | |
| Glowing | --- | | |
| Smouldering | --- | | |

The mean CHF (CRF) Value in the worst performing direction is compared with the requirements of the relevant Building Code.



The mean Smoke Value in a building not protected by a sprinkler system complying with Specification E1.5 (other than an FPAA101D or FPAA101H system) is specified at a maximum value of 750 %min.

Table S7C3: Critical radiant flux (CHF in kW/m²) of floor linings and floor coverings

| Class of building | Building not fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 | Building fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 | Fire-isolated exits and fire control rooms |
|--|--|--|--|
| Class 2, 3, 5, 6, 7, 8 or 9b, excluding Class 3 accommodation for the aged and Class 9b as specified below | 2.2 kW/m ² | 1.2 kW/m ² | 2.2 kW/m ² |
| Class 3 accommodation for the aged | 4.5 kW/m ² | 2.2 kW/m ² | 4.5 kW/m ² |
| Class 9a patient care areas | 4.5 kW/m ² | 2.2 kW/m ² | 4.5 kW/m ² |
| Class 9a areas other than patient care areas | 2.2 kW/m ² | 1.2 kW/m ² | 4.5 kW/m ² |
| Class 9b auditorium or audience seating area used mainly for indoor swimming or ice skating | 1.2 kW/m ² | 1.2 kW/m ² | 2.2 kW/m ² |
| Class 9b auditorium or audience seating area used mainly for other sports or multi-purpose functions | 2.2 kW/m ² | 1.2 kW/m ² | 2.2 kW/m ² |
| Class 9c resident use area | N/A | 2.2 kW/m ² | 4.5 kW/m ² |
| Class 9c areas other than resident use areas | N/A | 1.2 kW/m ² | 4.5 kW/m ² |

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