

AS 1530.8.1:2018
Methods for fire tests on building materials, components and structures
Part 8.1: Tests on elements of construction for buildings exposed to
simulated bushfire attack — Radiant heat and small flaming sources

Amendment No. 1

Revised text amendment

Publishing and Approval Dates

Council of Standards Australia Approval: 4 June 2024

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Summary

This Amendment applies to the following elements:

- Clauses 7, 12.3 and B1
- Bibliography

Amendment Details

AS 1530.8.1:2018 is amended as follows. The amendments should be inserted in the locations as instructed.

Element	Instruction/New text
Global change	1 <i>Delete</i> all instances of “TIGRA _{0.2MJ} ” and <i>replace</i> with “FIGRA _{CM} ” across the entire document.
	2 <i>Delete</i> all instances of “MAHRE” and <i>replace</i> with “MARHE”.
CI 7	1 <i>Add</i> the following term and definition: 7.101 fire growth rate FIGRA_{CM} ratio of the maximum heat release rate/elapsed time, with CM subscript indicating the calculation using cone calorimeter test results with threshold values and calculation procedures and expressed in W/m ² s or J/m ² s ² Note 1 to entry: Refer to the AS 1530.8 series.
	2 <i>Add</i> the following term and definition: 7.102 maximum average rate of heat emission MARHE maximum value of the average rate of heat emission and expressed in kW/m ²
CI 12.3	<i>Delete</i> Item (c) and <i>replace</i> with the following: (c) Tests undertaken in accordance with Appendix B produce a performance ratio for FIGRA _{CM} and MARHE between 0.8 and 1.2.
CI B1	<i>Delete</i> the table in Clause B1 and <i>replace</i> with the following:

Parameter	Reference standard for the calculation	Sample A	Sample B	Performance Ratio (PR)
FIGRA _{CM}	EN 13823 ^a	FIGRA _{CM} A	FIGRA _{CM} B	FIGRA _{CM} A/FIGRA _{CM} B
MARHE	EN 45545-2	MARHE A	MARHE B	MARHE A/MARHE B

^a This document uses the FIGRA_{CM} value to compare the performance of samples with applied coatings or chemical treatments using the AS/NZS 3837 test methods, before and after accelerated weathering. The FIGRA_{CM} values calculated above have no relevance to the FIGRA values derived from EN 13823 or related classification methods and are therefore identified as referring to the cone method using the subscript CM.

FIGRA_{CM} is calculated based on the EN 13823 calculation procedure for FIGRA_{0.2MJ} with the following modifications required for the use of cone calorimeter data for application to AS 1530.8.1:

(a)

A Total Heat Release (THR) threshold of 0.2 MJ/m² and an Average Heat Release Rate (HRR_(av)) threshold of 10 kW/m² shall be applied.

(b)

FIGRA_{CM} = 1 000 × max [HRR_(av)(t)/t] where HRR_(av)(t) is the 30 s average HRR at time t in kW/m², where t is time in seconds measured from start of test.

(c)

The 30 s average HRR shall be calculated over a time period of 30 s (i.e. t – 15 s to t + 15 s). Where a time interval of 2 s or 4 s is used, the readings may be averaged over a period of 32 s (i.e. t – 16 s to t + 16 s)

(d)

The same calculation method and time interval shall be used for Specimen A and Specimen B.

Biblio

1

Add “AS 1530.8 (all parts), *Methods for fire tests on building materials, components and structures*”.

2

Add “EN 13823, *Reaction to fire tests for building products – Building products excluding floorings exposed to the thermal attack by a single burning item*”.

3

Add “EN 45545-2, *Railway applications – Fire protection on railway vehicles Requirements for fire behavior of materials and components*”.