

Bushfire-Resisting Timber - AS 3959-2018, Appendix F Construction of Buildings in Bushfire Prone Areas

AS 3959-2018 specifies the Bushfire Attack Level (BAL) as “a means of measuring the severity of a building’s potential exposure to ember attack, radiant heat and direct flame contact...”

“Bushfire-resisting timber is timber that is in solid, laminated or reconstituted form and has been tested and is deemed to be acceptable to withstand exposure up to a BAL-29 condition.”

This test method is applicable to wood products, such as solid timber, engineered plywood, HDF, MDF, particle board.

Appendix F – Bushfire-Resisting Timber, details the test parameters, and specifies acceptable levels for heat release after exposure to an irradiance level of 25 kW/m²



To satisfy the requirements as a bushfire-resisting timber, it must be tested in accordance with AS/NZS 3837 and meet the following requirements:

- (a) The maximum heat release rate shall not be greater than 100 kW/m², and
- (b) The average heat release rate for 10 minutes following ignition shall not be greater than 60 kW/m² when exposed to an irradiance level of 25 kW/m².

Timber that has been altered by chemicals must be subjected to accelerated weathering prior to testing, unless where it is protected from the weather, (as described in the AS 1684 series).

Wood Plastic Composite materials can be tested to the set requirements of the specification, but do not meet satisfy the definition of reconstituted timber, thus a statement of compliance or otherwise cannot be provided.

AS/NZS 3837 Cone Calorimeter Testing

In AS/NZS 3837, a 100mm x 100mm specimen is irradiated at 25 kW/m² by a conical heater and any gasses evolved are ignited by a spark igniter.

The products of combustion are collected in a flue and transported to an oxygen meter, which is used to assess the amount of oxygen used in the combustion process.

From this and other data collected by the apparatus, the Heat Release Rate of the product is calculated, and the amount of smoke evolved in the testing is also measured.

This information is used to determine whether the bushfire-resisting properties will satisfy the requirements for use in structures up to a BAL 29 level in accordance with AS 3959.



NOTE: THIS TEST DOES NOT GENERATE A GROUP NUMBER IN ACCORDANCE WITH AS 5637.1-2015

Delivery Address	Further information
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IMPORTANT NOTE: That by submitting samples for testing **YOU AGREE** that the resulting testing shall be performed under our terms and conditions for testing and consulting services: www.awtaproducttesting.com.au/index.php/about/terms-and-conditions