



Report Sponsor	Issue Date	Expiry Date
Briggs Veneers Pty Ltd, 409 Victoria Street, Wetherill Park, NSW 2164	8/12/2015	31/10/2020

Review

The original Assessment Report EWFA 23766-00b.1, issued on 17th August 2009, which was reviewed on 2nd October 2015. It is confirmed that the assessed performance is considered valid subject to the requirements in referenced Assessment Review EWFA 37881500.

Introduction

This is an assessment of the fire hazard properties of “fire retardant treated FR MDF”, named Briggs FLAMEBLOCK™ FR MDF in accordance with AS/NZS 3837:1998 - *Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter* and Specification A2.4 of the Building Code of Australia.

For the verification of fire hazard properties the Building Code of Australia 2006 (BCA) Specification C1.10 requires testing to ISO 9705 “Fire tests – Full scale room test for surface products” or AS/NZS 3837:1998 “Method of test for heat and smoke release rates for material and products using an oxygen consumption calorimeter”. ISO 9705 is commonly referred to as the “ISO room fire test”, whilst AS/NZS 3837 is better known as the “Cone calorimeter test”.

As an alternative to an ISO 9705 test the BCA permits testing to AS/NZS 3837:1998 “Method of test for heat and smoke release rates for material and products using an oxygen consumption calorimeter” in conjunction with the prediction method outlined in Specification A2.4 of the BCA.

The main outcome from these tests is a material’s “group number”. The materials group number is an indication of its ‘time to flashover’ in the ISO room fire test. The group number may be gained directly from testing a material in the above mentioned ISO room fire test, or alternatively be predicted using data obtained from testing of the material in the cone calorimeter.

Referenced Test Report	Reference Date	Test Standard	Test Sponsor
EWA 23766-00a.1	17/08/09	AS/NZS 3837-1998	Brigg Veneers Pty Ltd.

TESTING AUTHORITY	Exova Warringtonfire Aus Pty Ltd	
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Authorisation	Prepared By: K. Nicholls	Reviewed By: D. Nicholson

Description of Assessed Specimen

The three specimens tested in the referenced report were 99.6mm by 99.6mm by nominally 12.2mm thick samples of fire retardant treated FR MDF. The samples had a density of 772.4 kg/m³. The test specimens were supplied fully prepared for testing by the test sponsor and EWFA personnel were not involved with either the selection or preparation of these test specimens. Prior to testing, the specimens were conditioned in accordance with BSEN 13238-2001 at a temperature of 23 +/- 2 deg C and relative humidity of 50 +/- 5% for a continuous period of more than 48 hours. This assessment includes consideration of the tested specimens and proposed specimens that are 12mm and thicker.

Relevance of Results

Specimens That Do not Ignite

For a material to be classified as Group 1 in accordance with Specification A2.4, I_{Q1} must be less than or equal to $I_{Q,10min}$ and I_{Q2} must be less than or equal to $I_{Q,12min}$. If a material does not reach a heat release rate of 50 kW/m² then it is deemed to have not ignited which can obstruct the calculation of a group number. It is proposed in this assessment to apply a conservative approach by considering for the purpose of calculation that the specimen ignited at the end of the test.

Therefore the ignitability index will be $I_{ig} = 60/3600$ and the integral limits will be $I_{Q,10min} = 6791$ and $I_{Q,12min} = 1647.25$. In addition it is considered conservative to include the heat released from the beginning of the test and compare with I_{Q2} . If it is less than ($I_{Q2} = 1647.25$) then the material may be classified as a Group 1 material in general accordance with the calculation procedure of BCA specification A2.4.

Surface Characteristics

The exposed specimen surfaces were flat with uniformly distributed irregularity and it is confirmed that more than 50 % of the upper surface of the specimen was with 10mm of the plane taken across the highest points. No more than 30 % of the upper surface was comprised of cracks fissures or holes.

Asymmetric Products

It is confirmed that the specimen was Asymmetric in its construction and was tested with its faced surface exposed to the irradiance.

Thin Products

Products that are very thin can burn very quickly and provide insufficient data for accurate analysis of results. Upon inspection of the results of the referenced test it is considered that enough data has been collected for accurate analysis.

Joints

The specimen did not incorporate joints.

Melting and Dripping of Specimen

Results from products prone to melting dripping and collapsing may not be suitable for detailed mathematical analysis. It is confirmed that the referenced test material was not prone to such behaviour.

Mounting Methods

As the specimen was thicker than 6mm it is appropriate to use the standard mounting method in AS/NZS3837-1998 as was done in this test.

Time Interval for Results

The time interval for results in the referenced test was 5 seconds or less.

Relevance to BCA Specification A2.4

Based on the above discussion it is confirmed that the test specimen met the requirements for test specimens of AS/NZS 3837-1998 and Specification A2.4 of the BCA. In addition the time interval for results collection met the requirements of Specification A2.4 of the BCA. Therefore it is considered that the referenced test data is suitable for calculation of the Group Number and the Average Specific Extinction Area in accordance with Specification A2.4 of Building Code of Australia.

Specimens of Greater Thickness

It is proposed that the test results discussed above apply to specimens with a thicker substrate base of the same material. The key aspect of this proposal is that the retention of fire retardant be the same for the proposed thicker MDF as it was for the tested base on a pro rata basis based on the volume of the finished product. If the fire retardant retention for the thicker MDF is similar to that of the 12mm tested MDF, it is expected that thicker specimens would exhibit similar or better performance to that of the 12mm MDF tested in EWA 23766-00a.1.

Assessment Conclusion

Parameter	Specimen 1	Specimen 2	Specimen 3	Assessed Result
Group Number	1	1	1	1
Average Specific Extinction Area (m²/kg)	124.4	117.8	118.4	120.2m²/kg

Conditions / Applicability

This assessment report does not provide an endorsement by Exova Warringtonfire Aus Pty Ltd of the actual products supplied. The conclusions of this assessment may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions. The assessment can therefore relate only to the actual prototype test specimens, testing conditions, and methodology described in the supporting data, and does not imply any performance abilities of constructions of subsequent manufacture.

This assessment is based on information and experience available at the time of preparation. The published procedures for the conduct of tests and the assessment of test results are the subject of constant review and improvement and it is recommended that this report be reviewed on or, before, the stated expiry date. The assessment is valid provided no modifications are made to the systems detailed in this report. This report may only be reproduced in full without modifications by the report sponsor. Copies, extracts or abridgments of this report in any form shall not be published by other organisations or individuals without the permission of Exova Warringtonfire Aus.