



REGULATORY INFORMATION REPORT

An assessment of solid timber wall and ceiling linings in accordance with AS5637.1:2015

Report Sponsor:

EWFA Report No: RIR 45980.10

Forest and Wood Products Australia Ltd.

Level 11, 10-16 Queen Street,

Melbourne,

VIC – 3000.

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Contact Information

Warringtonfire Aus Pty Ltd - ABN 81 050 241 524

NATA Registered Laboratory

Unit 2, 409-411 Hammond Road
Dandenong Victoria 3175
Australia

T: +61 (0)3 9767 1000
F: +61 (0)3 9767 1001

New South Wales

Suite 802, Level 8
383 Kent Street
Sydney NSW 2000
Australia

T: +61 (0)2 9211 4333

Perth

Unit 22
22 Railway Road
Subiaco WA 6008
Australia

T: +61 (0)8 9382 3844

Victoria

Unit 2, 409-411 Hammond Road
Dandenong Victoria 3175
Australia

T: +61 (0)3 9767 1000
F: +61 (0)3 9767 1001

Queensland

T6. L12
133 Mary Street
Brisbane QLD 4000
Australia

T: +61 (0)7 3238 1700
F: +61 (0)7 3211 4833

Canberra

2/11 Murray Cres
Griffith ACT 2603
Australia

T: +61 (0)2 6260 8488

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1 Introduction

This report contains the minimum information sufficient for regulatory compliance and refers to the Assessment report EWFA 45980.10.

The referenced assessment report supersedes the previous edition of EWFA 45980.9

The referenced report is an assessment of the fire hazard properties of various timber species for use as wall and ceiling linings in accordance with requirements of AS5637.1:2015. The objective of this standard is to provide means for the determination of a group number, smoke growth rate index (SMOGR_{RC}) and average specific extinction area (ASEA) for internal wall and ceiling linings, as required by the NCC 2016 (Volume One).

The tested prototypes described in Section 0 of this report, when subjected to the proposed variations described in Section 3 and tested in accordance with the relevant standards described in Section 4, are assessed to achieve performance as summarised in Section 0.

The validity of this assessment is conditional on compliance with Sections 6, 7, 8 and 9 of this report.

2 Tested prototypes

The referenced assessment is based on reports summarised in Table 1, being tests on various timber species in accordance AS/NZS 3837:1998. Group numbers for each species were determined using the prediction method described in AS5637.1:2015 (Clause 8). Natural timber is an essentially homogeneous material and satisfies all prerequisites of AS5637.1:2015 (clause 4.4, 5.3.3 and 9) to determine group numbers based on the prediction method.

Table 1 – Referenced Test Reports

WFRA 499163j	WFRA 499163f	WFRA 499163t	WFRA 499140f
WFRA 499163b	WFRA 499163k	WFRA 499182l	WFRA 499163q
WFRA 499240d	WFRA 499140d	WFRA 499163r	WFRA 499182k
WFRA 499163i	WFRA 499163s	WFRA 499163d	WFRA 499182e
WFRA 499240b	WFRA 499182n	WFRA 499163p	WFRA 499163n
WFRA 499163h	WFRA 499163e	WFRA 499182j	WFRA 499182h
WFRA 499140a	WFRA 499240c	WFRA 499182b	WFRA 499240n
WFRA 499163l	WFRA 499163c	WFRA 499163u	WFRA 499240a
WFRA 499163v	WFRA 499163g	WFRA 499182m	WFRA 499182i
WFRA 499140e	WFRA 499182c	WFRA 499182d	FH4384
WFRA 499182f	WFRA 499140b	WFRA 499163a	FH4385
WFRA 499182g	WFRA 499163o	WFRA 499140c	FH4389
FH4391	FH4392	FH4393	FH4394

Each of the tests in the above mentioned reports consisted of three specimens comprising two sections and included a tongue and groove joint with specimen size nominally 100mm by 100mm. The specimen thicknesses were nominally 9mm, 10mm, 12mm or 19mm and the finish on the timber was smooth milled.

The referenced reports were issued by Warrington Fire Research Pty Ltd and sponsored by Forest and Wood Products Australia Limited, who has granted permission for reference of the test data in this report.

3 Variation to tested prototypes

3.1 Variation to the Thickness of Wall and Ceiling Linings

It is proposed that the timber species referenced in the test reports in Section 2 may be used at a minimum thickness of 9mm for wall and ceiling linings.

3.2 Inclusion of various joint profiles in Wall and Ceiling Linings

It is proposed that the timber species in the referenced tests reports described in Section 2 may be used to as wall and ceiling linings with various profiles

- V-Joint
- Ship lap profile
- Regency
- Or any other profiled lining nominally 9mm thick or greater and incorporating profile features leaving a minimum of 5mm thickness of timber at discrete locations across the lining board.

4 Referenced test standards

The referenced assessment report is prepared to comply with requirements of AS/NZS3837:1998 and AS5637.1:2015 for use as internal wall and ceiling linings, as per NCC 2016 (Volume 1).

5 Formal assessment summary

Based on the discussion presented in the referenced assessment report, it is the considered opinion of this testing authority that if the tested specimens described in Section 2 are configured as described in Section 3, they will achieve the performance stated in Table 2, if tested in accordance with the test method referenced in Section 4, subject to the requirements of Section 7.

Table 2 – Assessment Summary

Species	Minimum Thickness (mm)	Group No.	Average Specific Extinction Area (m ² /kg)
Ash, Alpine - <i>Eucalyptus delegatensis</i>	9	3	<250
Ash, Mountain – <i>Eucalyptus regnans</i>	9	3	<250
Ash, Silvertop - <i>Eucalyptus sieberi</i>	9	3	<250
Beech Myrtle - <i>Northofagus cunninghamii</i>	9	3	<250
Blackbutt - <i>Eucalyptus pilularis</i>	9	3	<250
Blackbutt, New England - <i>Eucalyptus andrewsii</i>	9	3	<250
Blackbutt, WA - <i>Eucalyptus patens</i>	9	3	<250
Blackwood - <i>Acacia melanoxylon</i>	9	3	<250
Bloodwood Red - <i>Corymbia gummifera</i>	9	3	<250
Box, Brush - <i>Lophostman confertus</i>	9	3	<250
Box, Grey – <i>Eucalyptus microcarpa</i>	9	3	<250

Species	Minimum Thickness (mm)	Group No.	Average Specific Extinction Area (m ² /kg)
Box, Grey, Coast – <i>Eucalyptus bosistoana</i>	9	3	<250
Brownbarrel - <i>Eucalyptus fastigata</i>	9	3	<250
Gum, Blue, Sydney - <i>Eucalyptus saligna</i>	9	3	<250
Gum, Blue, Southern (TAS) - <i>Eucalyptus globulus</i>	9	3	<250
Gum, Blue, Southern (VIC) - <i>Eucalyptus globulus</i>	9	3	<250
Gum, Manna - <i>Eucalyptus viminalis</i>	9	3	<250
Gum, Red, River - <i>Eucalyptus camaldulensis</i>	9	3	<250
Gum, Rose – <i>Eucalyptus grandis</i>	9	3	<250
Gum, Shining – <i>Eucalyptus nitens</i>	9	3	<250
Gum, Spotted - <i>Corymbia maculata</i>	9	3	<250
Gum, Sugar - <i>Eucalyptus cladocalyx</i>	9	3	<250
Gum, Yellow - <i>Eucalyptus leucoxylon</i>	9	3	<250
Ironbark, Grey – <i>Eucalyptus drepanophylla</i>	9	3	<250
Ironbark, Red - <i>Eucalyptus sideroxylon</i>	9	3	<250
Jarraah - <i>Eucalyptus marginata</i>	9	3	<250
Karri - <i>Eucalyptus diversicolor</i>	9	3	<250
Mahogany, Red - <i>Eucalyptus resinifera</i>	9	3	<250
Marri - <i>Eucalyptus callophylla</i>	9	3	<250
Merbau - <i>Instia bijuga</i>	9	3	<250
Messmate - <i>Eucalyptus oblique</i>	9	3	<250
Oak, American - <i>Quercus abla</i>	9	3	<250
Pine, Baltic - <i>Picea abies</i>	9	3	<250
Pine, Hoop - <i>Araucaria cunninghamii</i>	9	3	<250
Pine, Radiata – <i>Pinus radiata</i>	9	3	<250
Pine, Radiata – <i>Pinus radiata</i> . CCA treated	9	3	<250
Pine, White Cypress - <i>Callitris glaucophylla</i>	9	3	<250
Rosewood, Papua New Guinea - <i>Pterocarpus indicus</i>	9	3	<250
Sheoak, WA - <i>Allocosuarina fraseriana</i>	9	3	<250

Species	Minimum Thickness (mm)	Group No.	Average Specific Extinction Area (m ² /kg)
Stringy Bark, Yellow - <i>Eucalyptus muellerana</i>	9	3	<250
Tallowwood - <i>Eucalyptus microcorys</i>	9	3	<250
Turpentine – <i>Syncarpa glomulifera</i>	9	3	<250
Walnut, Black (American Wallnut) - <i>Juglans nigra</i>	9	3	<250
Wattle, Silver – <i>Acacia dealbata</i>	9	3	<250
Western Red Cedar – <i>Thuja plicata</i>	9	3	<250

6 Direct field of application

The results of the referenced assessment report are applicable to internal wall and ceiling linings that are required to have fire hazard properties in accordance with AS5637.1:2015.

7 Requirements

The referenced assessment report details the methods of construction, test conditions and assessed results had the specific elements of construction described herein been tested and assessed in accordance with AS/NZS3837:1998 and AS5637.1:2015.

Any further variations with respect to size, constructional details, loads, stresses, edge or end conditions, other than those identified in this report, may invalidate the conclusions drawn in this report.

8 Validity

The referenced assessment report does not provide an endorsement by Exova Warringtonfire Aus Pty Ltd of the actual products supplied.

The conclusions of the referenced 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.

Because of the nature of fire testing, and the consequent difficulty in quantifying the uncertainty of measurement, it is not possible to provide a stated degree of accuracy. The inherent variability in test procedures, materials and methods of construction, and installation may lead to variations in performance between elements of similar construction.

The referenced assessment can therefore only relate 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.

The referenced 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 the referenced report be reviewed on or, before, the stated expiry date.

The information contained in the referenced report shall not be used for the assessment of variations other than those stated in the conclusions above. The assessment is valid provided no modifications are made to the systems detailed in the referenced report. All details of construction should be consistent with the requirements stated in the relevant test reports and all referenced documents.

9 Authority

9.1 Applicant undertakings and conditions of use

By using this report as evidence of compliance or performance, the applicant(s) confirms that:

- to their knowledge the component or element of structure, which is the subject of this assessment, has not been subjected to a fire test to the Standard against which this assessment is being made, and
- they agree to withdraw this assessment from circulation should the component or element of structure be the subject of a fire test by a test authority in accordance with the Standard against which this assessment is being made and the results are not in agreement with this assessment, and
- they are not aware of any information that could adversely affect the conclusions of this assessment and if they subsequently become aware of any such information, agree to ask the assessing authority to withdraw the assessment.

9.2 General conditions of use

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 Warringtonfire Aus Pty Ltd.

9.3 Authorisation on behalf of Warringtonfire Aus Pty Ltd

Prepared by:



Tanmay Bhat

Reviewed by:



Mahmoud Akl

9.4 Date of issue

11 December 2018

9.5 Expiry date

31 December 2023