REGULATORY INFORMATION REPORT

The fire resistance level (FRL) of timber-framed floor/ceiling systems incorporating Mitek Posi-strut metal strut web beams when tested in accordance with AS1530.4-2014

EWFA Report No:

RIR 37600400B.2

Report Sponsor:

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Testing. Advising. Assuring.

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1 INTRODUCTION

This report contains the minimum information sufficient for regulatory compliance in accordance with AS1530.4-2014 Clause 2.16.3 and refers to the Assessment Report EWFA 37600400B.2.

The referenced assessment report (EWFA 37600400B.2) presents an assessment of the fire resistance level (FRL) of timber-framed floor/ceiling systems incorporating Mitek Posi-strut metal strut web beams when tested in accordance with AS1530.4-2014.

The tested system is described in Section 2 and subject to the proposed variations described in Section 3 and tested in accordance with the referenced test method described in Section 4. The conclusions of the report are summarised in Section 5.

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

2 TESTED PROTOTYPES

The referenced assessment report is based on reference to a loadbearing floor-ceiling test EWFA 36474400.

The test report EWFA 36474400.1 comprised a floor ceiling system that included Mitek Posi-strut metal strut web beam elements protected with two layers of 16mm Boral USG Firestop plasterboard. The test was sponsored by Forest and Wood Products Australia and was conducted by Exova Warringtonfire Aus Pty Ltd in accordance with AS1530.4-2014.

3 VARIATION TO TESTED PROTOTYPES

The proposed horizontal element construction shall be as tested in EWFA 3647400.1 optionally subject to any combination of the following variations;

- The primary structural elements shall be varied to include one or a combination of the following elements;
  - Metal Strut web beams such as Mitek Posi-strut
  - Roof truss configuration (on edge) with nail plate connections
- Depth and span of primary structural element may be increased provided it is designed in accordance with AS1720.5 or AS1720.1 as appropriate.
- Width of the floor can be increased.
- The Plasterboard shall be 2 x 16mm Boral USG Firestop or other proprietary Fire Resistant Grade plasterboard that has been tested or assessed with two 16mm layers for an FRL of 90/90/90 and RISF of 60 minutes when protecting a solid timber floor system with cavity 288mm or more.
- Flooring shall be varied from 15mm thick plywood tested to one of the following;
  - Particleboard with minimum thickness of 18mm
  - Engineered flooring with minimum thickness of 15mm
  - Cement sheet or calcium silicate sheet with minimum thickness of 15mm
  - Tongue and groove timber flooring with minimum thickness of 15mm
  - AAC panel with minimum thickness of 50mm.
  - Concrete or sand / cement screed cast over plywood or particleboard
- Flooring may have one of the following additional coverings;
  - Carpet
  - Tile
  - Stone
  - Various acoustic treatments
- The ceiling suspension systems shall be designed to support the loads expected to be applied by the ceiling and any insulation and other fixtures. The framing and

support system for the ceiling battens shall include any combination of the following when installed at the maximum 600mm centres;

- 16mm and 28mm furring channels with
- Direct fixing clips or one of the following resilient mounts
  - M237R Direct Fix Furring Channel resilient mount (Studco)
  - Furring Channel resilient mount (Rondo)
  - Furring Channel resilient mount (Gyprock)
- or supported by one of the following resilient mounts
  - Rondo WHI Rubber Hanger Isolator (Green)
  - Rondo WHI Rubber Hanger Isolator (Red)
  - Rondo WHI Rubber Hanger Isolator (White)
  - M50R-BLK Resilient Isolation Hanger (Studco)
- Suspended ceiling systems with cross rails

- The floor cavity shall include the following insulation options;
  - No insulation
  - Non-combustible mineral or Glasswool fibre up to the maximum cavity depth
- The floor ceiling systems shall optionally include a non-fire rated decorative ceiling system below provided the fixing method and support system is via the ceiling battens and they have designed to support the loads at ambient conditions.

4 REFERENCED TEST PROCEDURES

The referenced assessment report is prepared with reference to the requirements of AS1530.4-2014, AS1170.0-2002, AS1720.1-2010, AS1720.4-2010 and AS1720.5-2015

5 FORMAL ASSESSMENT SUMMARY

On the basis of the discussion presented in the referenced assessment report, it is the opinion of this testing authority that if the tested prototypes described in Section 2 and varied as described in Section 3 they will achieve the fire resistance performance below when tested in accordance with the test method referenced in Section 4 and subject to the requirements of Section 7.

FRL 90/90/90

RISF > 60minutes

6 DIRECT FIELD OF APPLICATION

The results of the referenced assessment report apply to the floor\ceiling systems exposed to fire in accordance with AS1530.4-2014 Clause 4.7.

7 REQUIREMENTS

7.1 GENERAL REQUIREMENTS

The referenced assessment report details the methods of construction, test conditions and assessed results of the specific elements of construction described herein been tested in accordance with AS 1530.4- 2014.

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

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

The information contained in the referenced assessment 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 assessment 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 Exova Warringtonfire Aus Pty Ltd.

9.3 AUTHORISATION ON BEHALF OF EXOVA WARRINGTONFIRE AUS PTY LTD

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9.4 DATE OF ISSUE

20/05/2016

9.5 EXPIRY DATE

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