

# Certificate of Test

No. 2347

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This is to certify that the element of construction described below was tested by the CSIRO Division of Manufacturing and Infrastructure Technology in accordance with Australian Standard 1530, Methods for fire tests on building materials, components and structures, Part 4-2005, Fire-resistance test of elements of construction on behalf of:

AFS Products Group Pty Ltd  
22-24 Sommersville Circuit  
EMU PLAINS NSW

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSV 1513A.

PRODUCT NAME 120-mm thick, load-bearing AFS structural wall system.

DESCRIPTION: The specimen comprised a reinforced concrete wall system 3000-mm high x 3000-mm wide x 120-mm thick made up of three pre-fabricated permanent formwork panels core-filled with concrete after assembly. The pre-fabricated permanent formwork panels, 1200-mm wide x 3000-mm high, comprised two 6-mm thick fibre cement sheets (CSR Waterblock Technology) bonded to the perforated steel stud assembly using AFS Structural Adhesive. The studs, nominally 2900-mm long x 108-mm wide x 35-mm high, with perforations shown in drawing numbered AFS-CSIR-23-11-11, dated 23 November 2011, by Peter Ellsmore & Associates Pty Ltd., were equally spaced over the width of the panel at nominally 140-mm centres. The wall was reinforced with N12 reinforcing bars at 400-mm centres vertically and 600-mm centres horizontally. The panels were appropriately braced and 32 Mpa 120-mm slump concrete was pumped in through the top openings in 1500-mm high layers, and trowelled off when completely filled. A total load of 700 kN was applied to the specimen for the duration of the test.

The element of construction described above satisfied the following criteria for fire-resistance for the period stated

Structural adequacy	-	no failure at 241 minutes
Integrity	-	no failure at 241 minutes
Insulation	-	190 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of 240/240/180. The FRL is applicable for exposure to fire from either direction.

This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.

Testing Officer: Chris Wojcik Date of Test: 23 November 2011  
Issued on the 16<sup>th</sup> day of December 2011 without alterations or additions.

Garry E Collins  
Manager, Fire Testing and Assessments



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