FIRE TESTED BY NATA / CSIRO & OTHERS

FRL 90/90/90 fire tests to MIN LOAD BEARING OF 55kN achieved on 1.15BMT. If this is not a viable solution in timber then the frame must be built of steel as per CSIRO/NATA FRL 60/60/60 and each project will need to confirm the capability of the load bearing in timber framing.

Both passed the fire tests in 60 and 90 minutes. As all walls vary in LOAD bearing requirement, the structural engineer for "ADEQUACY" for the FRL required 60 OR 90, the 2nd figure material "INTEGRITY" and the "INSULATION" the 3rd figure have

For timber walls a structural engineer will be required to assess the project timber framing material 1st figure "STUCTURAL TIMBER FRAME LOAD BEARING, 1ST FIGURE, MUST BE ASSESSED BY THE PROJECTS STRUCTURAL ENGINEER. THE CAPABILITY IN MATERIAL INTEGRITY AND INSULATION 2ND AND 3RD FIGURE IS FIRE TEST ESTABLISHED BY CSIRO FIRE TESTS.

**NOTE:** TIMBER FRAME LOAD BEARING, 1ST FIGURE, MUST BE ASSESSED BY THE PROJECTS STRUCTURAL ENGINEER. THE CAPABILITY IN MATERIAL INTEGRITY AND INSULATION 2ND AND 3RD FIGURE IS FIRE TEST ESTABLISHED BY CSIRO FIRE TESTS.

Suitable moisture barriers (BCA) must be used for all external walls between frame and board.

**RECOMMENDED PRODUCTS**

Products recommended for use with FireCrunch are continually being added as we test the compatibility of application products and systems.

The latest products that have been tested and approved for use on the FireCrunch product can be viewed on the FireCrunch Support site under Recommended Products.

firecrunch.com.au

FIRE RATED BOUNDARY WALLS, LOAD AND NON LOAD BEARING, FOR BOUNDARY WALLS FRL 60/60/60**** to FRL 90/90/90****

AS1530.4-2014 BCA, CSIRO, NATA, FIRE, ON ASBESTOS AND NON CHLORIDE NATA TESTED. (CSIRO CERTIFICATES WEB SITE)

BOUNDARY WALLS STEEL AND TIMBER FRAMING

- Movement or expansion control joints should be provided where the FireCrunch abuts dissimilar materials, where the construction changes within the plane of the wall, and at not more than 5 metre centres.
- **TIMBER FRAMES** External joints are to be filled and backing studs facings applied with recommended fire sealant AS 1530.4. Tested and approved product information is available on our support website NCC.
- **(NCC) ALTERNATE TESTED SYSTEM**
  - For FRL 60/60/60 TIMBER STUD WALLS are to have a minimum cavity of 90mm x 45mm stud frame and a 10mm sheet each side of frame min R 2.5 GLASS WOOL or R value to suit climate Zone of property but not below R 2.5.
  
  **NOTE** NOTE THE MAX FRL USING PCA ON TIMBER FRAMING IS FRL .../60/60 SINGLE FRAME and FRL .../90/90 ON DOUBLE STUD TIMBER FRAMING
  - USE STEEL FRAMING for LOAD BEARING (55kN) FRL 60/60/60 to 90/90/90 and ABOVE
  - AS/1530.4 - 2014 (Approved steel framing min 1.15BMT)
  - Steel framed walls, floors and ceilings are to be constructed strictly in accordance with AS/NZS 4600 (Cold Formed Steel Structures), the Building Code of Australia and all relevant Standards.
  - Fasten to the studs, joints and rafters min. 12mm to 15mm from edge and 50mm from the 50mm stud backer and be staggered fixed each side of board joint at a maximum of 200mm centres.
  - Fasteners to be recommended corrosion proof, ribbed head bugle screws and finish 2mm below the surface of the FireCrunch boards.
  - The boards are strong but should be taken not to damage the core or face.

FRL /60/60/60**** & 90/90/90****

**STEEL FRAMES LOAD** (55kN) 60/60/60 R2.5 GLASS wool batts, but use 80Kg ROCKWOOL OR MINERAL WOOL batts for FRL 90/90/90. (min 1.15 BMT)

**IMPORTANT NOTE TO ABOVE ****

AS ALL STRUCTURAL LOAD BEARING REQUIREMENTS VARY CONSIDERABLY THE FIRE TESTS ARE RELATED TO FIGURE 2 AND 3 IS STRUCTURAL INTEGRITY 90 MINS AND INSULATION 90MINS. THE REQUIREMENT IN LOAD BEARING (1ST FIGURE)

**INDICATIVE CONSTRUCTION DIAGRAM**

As every building is different the following diagram is provided as an indicative guide to the use of FireCrunch in fire rated area situations. Architects, designers and contractors should consult FireCrunch Australia if additional assistance is required.

4mm fire sealant gap joints in FireCrunch external lining sheets.

**NOTE**: FireCrunch is of no interest to Termites.

**NOTE**** NO FRL can be obtained unless there is a corresponding FCA board on the INNER face of the Frame. Whilst all FCA board is NON combustible AS /1530.1 and AS/3837, for a tested DTS system rated IN FRL, there must be an FCA sheet on each side of frame to qualify FRL under BCA DTS, OTHERWISE NO FRL CAN BE RATED

firecrunch.com.au

**MORE LOAD BEARING WALL NOTES:-**

Please note that timber frames (90mm/45MM) have been tested in a non load bearing format. The 2nd figure "MATERIAL INTEGRITY" containing no fire tests and the 3rd figure "INSULATION PERIOD" have all been tested to the BCA standard under NCC. Because all load bearing walls will vary to "QUALIFY" the 1st figure "STRUCTURAL ADEQUACY" the project structural engineer must specify the timber framing dimensions to meet required load bearing in timber and fire tests on 60 or 90 minutes. FIRE TEST REPORTS AVAILABLE UPON REQUEST FROM SUPPLIER.

For timber walls a structural engineer will be required to assess the project timber framing material. Lot figure " STRUCTURAL ADEQUACY" for the FRL required 60/60/60, the 2nd figure material "INTEGRITY" and the "INSULATION" the 3rd figure have both passed the fire tests on 60 and 90 minutes. As all walls vary in LOAD bearing requirement, the structural engineer for each project will need to confirm the capability of the load bearing in timber framing.

If this test is not a viable solution in timber then the frame must be built of steel per AS/1530.4 FRL 60/60/60 and FRL 90/90/90 fire tests to MIN LOAD BEARING OF 55kN achieved on 1.15BMT.

**Screw fix at 200mm centres with ribbed head self c/s bugle screws.**

Put the FRL 60/60/60 R2.5 fire batt in the 90mm created cavity and screw fix the outer 10mm FCA board as per instruction on technical ref sheet at 200mm centres. Before fixing THE OUTER WALL SHEET, see that the fire sealant is gunned down the outer face of each joined stud to board and the 4mm gap left between boards is further filled with fire sealant to 2/3mm from top of edges. Screw fix at 200mm centres with ribbed head self c/s bugle screws.

Fix 10mm FCA sheets to the outer SINGLE timber frame install vertically. Put the FRL 60/60/60 R2.5 fire batt in the 90mm created cavity and screw fix the outer 10mm FCA board as per instruction on technical ref sheet at 200mm centres. Before fixing THE OUTER WALL SHEET, see that the fire sealant is gunned down the outer face of each joined stud to board and the 4mm gap left between boards is further filled with fire sealant to 2/3mm from top of edges. Screw fix at 200mm centres with ribbed head self c/s bugle screws.