

PROTECT YOUR HOME FROM FIRE USING



A simple & effective fire protection render system



Protects against radiant heat, flame & ember attack



Complies to the Australian Standards. BAL-FZ Compliant & has a Fire Resistancy Level (FRL) of -/240/180. The required Australian Standard is (AUS 1530.8.2 -/30/30)



Can help to reduce heating and cooling costs up to 70%



Helps ensure your home has the best chance of survival in a bushfire

As we live in one of the most fire prone areas in the world, as proven by the devastating BLACK SATURDAY BUSH FIRES. On that day, the weather conditions & high fuel loads created catastrophic Bushfires that generated enough energy as 1500 HIROSHIMA Atom bombs. CSIRO research shows that by 2020 there will be a greater number of extreme fire weather days, longer fire seasons and a greater potential for multiple fire events.

So we need to protect our homes today!

New building codes, introduced after the Royal Commission following the Victorian bushfires in February 2009, specify that: "A building that is constructed in a designated bushfire prone area must be designed and constructed to reduce the risk of ignition from a bushfire while the fire front passes."

"This means that the building needs to be resistant enough to protect life and minimise the loss of the building."

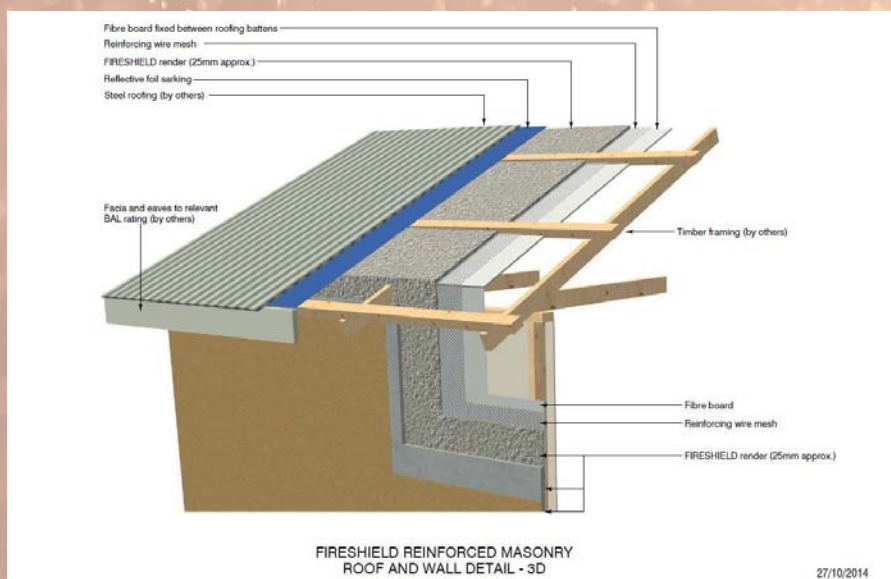
www.fireshieldsystems.com.au

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NEW HOMES

FIRESHEILD *FIRE RENDER** is a highly fire resistant, lightweight reinforced masonry render (approx 25-30mm thick), that when applied to wall frames (timber/steel) & roof trusses, stops **RADIANT HEAT, FLAME & EMBERS** entering the wall and roof cavities.



Fireshield Render has been designed to give your new home greater fire resistance to your wall and roof cavities.

The reinforced masonry render is fastened to the wall studs and to the roof rafters (between the roof battens) which envelopes the wall and roof areas.

This prevents:

Embers entering the Roof and Walls
Radiant Heat entering through Walls
Flame entering wall and roof Cavities

The system also makes the wall and roof structure stronger as the fibre board and reinforced masonry are fastened to the wall studs and roof rafters. This also helps stop flying debris impacting during a fire storm. If roof iron/tiles are moved or dislodged, the reinforced masonry is there for added security.

This makes it ideal as a lightweight and cost efficient method for constructing FIRE WALLS for High Rise Buildings and other Commercial Buildings.

By having proper fire regulation windows/shutters and fire doors fitted, your home would have a better chance of survival if left unattended during a fire emergency.

The system helps keep the home cooler in the summer and retains heat in the winter, drastically reducing heating and cooling costs.

As well as stopping embers entering, it helps to block out the vast amount of heat that enter a home through the roof.

The 25-30mm thick render is reinforced with wire/mesh, which can also strengthen the roof structure, and help protect it from falling trees and branches.

Roofs are the most neglected part of a home and authorities have not stressed enough that an unmaintained roof is a large problem during a bushfire.

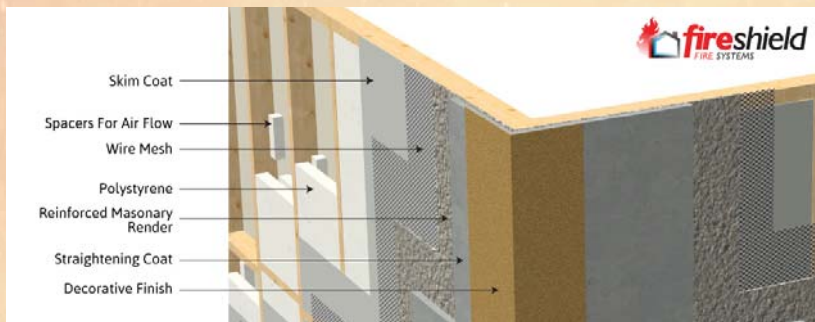
One of the main reasons homes are lost in a bushfire is when embers enter the roof space undetected. Bushfires travel fast and usually have strong winds pushing them along and the Canberra fires showed this, with uprooted trees and damaged roofs



* Fireshield Fire Render was originally tested as "Insulcrete Sunblok" in a fire test in accordance with AS1530.4.1997 sections 2&3 at Warrington Fire Research (Exova)

RETRO FITTING

The majority of houses destroyed in bush fires actually survive the passage of the fire front, only to burn down during the next few hours due to the fire spreading from ignitions caused by wind borne burning debris. Whilst direct flame contact and radiant heat also play a part in the ignition and destruction of buildings, these mechanisms are generally only significant during the few minutes it takes for the fire front to pass. Showers of burning debris, on the other hand, may attack a building for some time before the fire front arrives, during the passage of the fire front and for several hours after the fire front has passed. This long duration of attack, to a large extent, explains why burning debris is a major cause of ignition of buildings.



FIRE SHIELD **FIRE RENDER*** is usually applied to Polystyrene foam board or Fibre (Fibro) board onsite & can also be applied to wall frames (steel/timber) with Polystyrene foam board fitted between the studs for insulation purposes. FIRE SHIELD render is a 25-30mm thick masonry render that is cheaper than brick veneer.



Not only is Fireshield Systems a very highly fire resistant, it can help insulate up to 70 - 80% of the heat entering the home, via the roof and walls - saving on power and gas bills.

The introduction of building regulations that require consideration of Bushfire Protection Measures to Australian Standard 3959-2009 (AS 3959) means that residents who are rebuilding or renovating now have a clear direction on how to increase protection to their homes.

However, the majority of residences in bushfire prone areas pre-date these regulations, meaning existing houses are unlikely to achieve true increased levels of bushfire protection delivered by the new Australian Standard.

Research shows that making your home more energy efficient can add to its value, and make it more attractive to potential buyers. Lower bills are a very attractive feature also.

Most of the homes in the late 1800s - mid 1900s had an iron roof. Iron roofs were a lot stronger than modern day cladding (Zinc/Aluminium) but a lot of these are starting to show wear and tear, and rust.





Unexposed face of test specimen after completion of the flame testing.

TESTING FOR FIRESHIELD *FIRE RENDER**

Fireshield *FIRE RENDER** has been tested to AS 1530.4-19997(-/120/120) Sections 2&3 for a non-load bearing panel. The FIRESHIELD rendered (Insulcrete) panel was subjected to a rigorous 2hr fire test with temps reaching 1100 degrees, after passing this test it was decided to continue and a further 2hrs was achieved (temps 1200 degrees). This makes the FIRE SHIELD render system one of the highest FRL's ever tested in an actual FLAME test (- /240/180).



Exposed face of Fireshield test specimen, red hot after 4hrs of flame testing

Summary of Fire Resistance Levels Ascertained for the purpose of the building code of Australia for the tested specimen

Test Specimen Designation	Fire Resistance Level (FRL)
Nominal 3000mm x 3000mm x 145mm thick steel stud partition incorporating a phenolic foam infill & faced with insul-crete sunblok	-/240/180

CURRENT TESTING REQUIREMENTS FOR AS3959-2009

REGULATORY REQUIREMENTS

AS 3959-2009 specifies that for houses designated as being in the Flame Zone, systems should either meet deemed-to-satisfy provisions or pass a test to AS 1530.8.2 (-/30/30) (Standards Australia, 2007).

Comparative testing in AS1530.8.2 which uses a furnace exposure of 30minutes to simulate flame zone conditions.

It should be noted that the 30 minute exposure in AS1530.8.2 while intentionally severe does not impose temperatures in excess of 850 oC.

Which is well below what Fireshield *FIRE RENDER** has been subject to (4 hours)



Fixing 50mm polystyrene boards & fastened to wall studs.



Fastening mesh to 50mm polystyrene board & wall studs.



Complete stages of Fireshield Render System

Fireshield *FIRE RENDER** is the only render tested in a furnace to simulate flame zone conditions that reached temperatures between 1100-1200 degrees (see testing).

Application	BAL12.5	BAL19	BAL29	BAL40	BALFZ >10m	BALFZ <10m
External walls (parts less than 400mm from ground or near horizontal surface (<18° to horizontal) and >110mm in width from wall)	✓ §9.4.1(C) §3.4 [Note1]	✓ §9.4.1 §3.4 [Note1]	✓ §9.4.1 §3.4 [Note1]	✓ §9.4.1 §3.4 [Note1]	✓ §9.4.1 [Note1, 4]	* [Note 2] §9.1
External walls (other)	✓ §9.4.1(C) §3.4 [Note1]	✓ §9.4.1(C) §3.4 [Note1]	✓ §9.4.1(C) §3.4 [Note1]	✓ §9.4.1(C) §3.4 [Note1]	✓ §9.4.1(C) [Note1,4]	* [Note 2] §9.1

Notes:

- The system has been tested in test report WFRA F91864 and has achieved a fire resistance level of -/240/180 in accordance with AS1530.4-1997.
- This application is where the setback to classified vegetation is less than 10m (refer to clause 9.1 of AS3959-2009 amdt 3)
- Excludes penetrations through the external wall system.
- This application is where the setback to classified vegetation is more than 10m (refer to clause 9.1 of AS3959-2009 amdt 3)

For more information
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