BUSHFIRE PLANNING AND DESIGN

boardeX
exterior sheathing

FLAME ZONE

EXTERNAL EXPOSURE

MOULD FREE

VAPOUR PERMEABLE

TRAFALGAR FIRE

FyreROOF

TABLE OF CONTENTS

Click page title to go to **Page**

Trafalgar BoardeX board being subjected to a weather test outside our Sydney Manufactiring Facility. The Board has remained in great condition over the last few years, despite harsh weather conditions. Visit our office to check it out!

WHAT IS BOARDEX?

BoardeX is used in the construction of exterior roofs and walls with a moisture-resistant core and damage-resistant glass-fibre matt. Boardex can withstand high temperatures while remaining stable and crack free, providing an ideal product for bushfire fire protection.
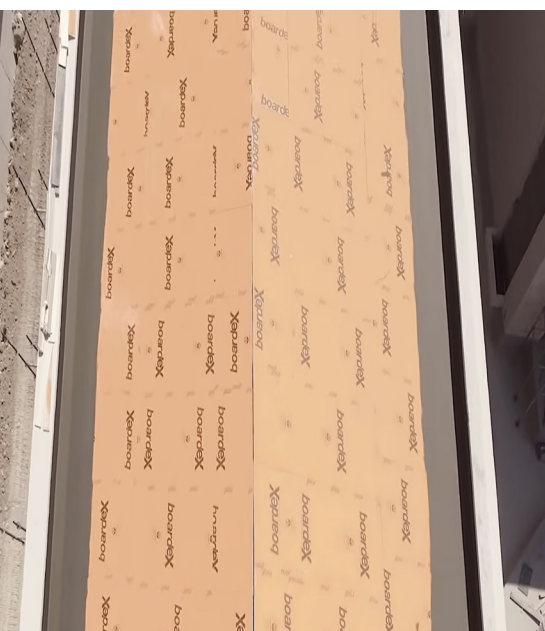
Boardex permits roofing/walls to be installed as soon as framing is erected, allowing for a dry and weather protected site for quicker construction. It provides a weatherproof envelope to allow internal trades to progress prior to completion of roofing and cladding. BoardeX can be exposed to weathering conditions for up to 12 months without requiring any treatment.

Now that NCC 2022 has been adopted, ALL class 9 (healthcare) buildings MUST be constructed in accordance with AS3959-2018. Trafalgar BAL-FZ Roof System is approved to satisfy these bushfire requirements and has been tested to AS1530.8.2 – 2018 and acheived a BAL-FZ classification result for roof applications. The Trafalgar BAL-FZ Wall system has an FRL of -/30/30 when (tested from outside/in), and therefore may be used in Flame Zone (FZ) applications where the vegetation is outside the 10m setback zone.

Reports:

- **AS1530.8.2-2018 (BAL-FZ Roof System) - FAS230057**
- **AS1530.4-2014 (-/30/30 Wall System) - FRT220334**

SYSTEM BENEFITS

- BAL-FZ Bushfire Roof Systems
- BAL-FZ Bushfire Wall Systems
- Designed to be used in All Climate Zones, including 6, 7 & 8.
- Mold resistant water barrier
- Vapour permeable, rigid fire board barrier provides a

  breathable system
- Strong and light-weight
- Weather resistant for 12 months when exposed
- BoardeX scores and snaps like plasterboard
- Staple fixing for quick installation

BOARDEX SPECIFICATIONS

Specifications	Detail
Board Size	2400 mm x 1200 mm
Thickness	12.5mm
Board Weight (approx.)	31 kg
Bending Diameter	1.5 m
Weight (per 1sqm)	11kg
Density	861 kg/m$_3$
Shear Strength	≥ 1000 N
R Value (For 12.5mm board thickness)	0.06 m^{2}K/W
Mould Resistance	**10 (according to ASTM D 3272-12)**
Vapour Permeance, μ (For 12.5mm board thickness)	**2.0 μg / Ns**
Water Vapour Permeability Resistance Factor	**10 (This is the best result achievable)**
Total Water Absorption (by the weight)	≤ 5% acc. To TS EN 15283-1, H1
Linear Variation (Due to change in moisture content)	0,004 mm/mt.%RH
Thermal Conductivity	0.25 W/m.K
Bushfire Resistance	• AS1530.8.2-2018 (BAL-FZ Roof System) - **FAS230057** • AS1530.4-2014 (FRL **-/30/30 Walls**) - **FRT220334**

BUSHFIRE ATTACK LEVEL (BAL) DETAILS

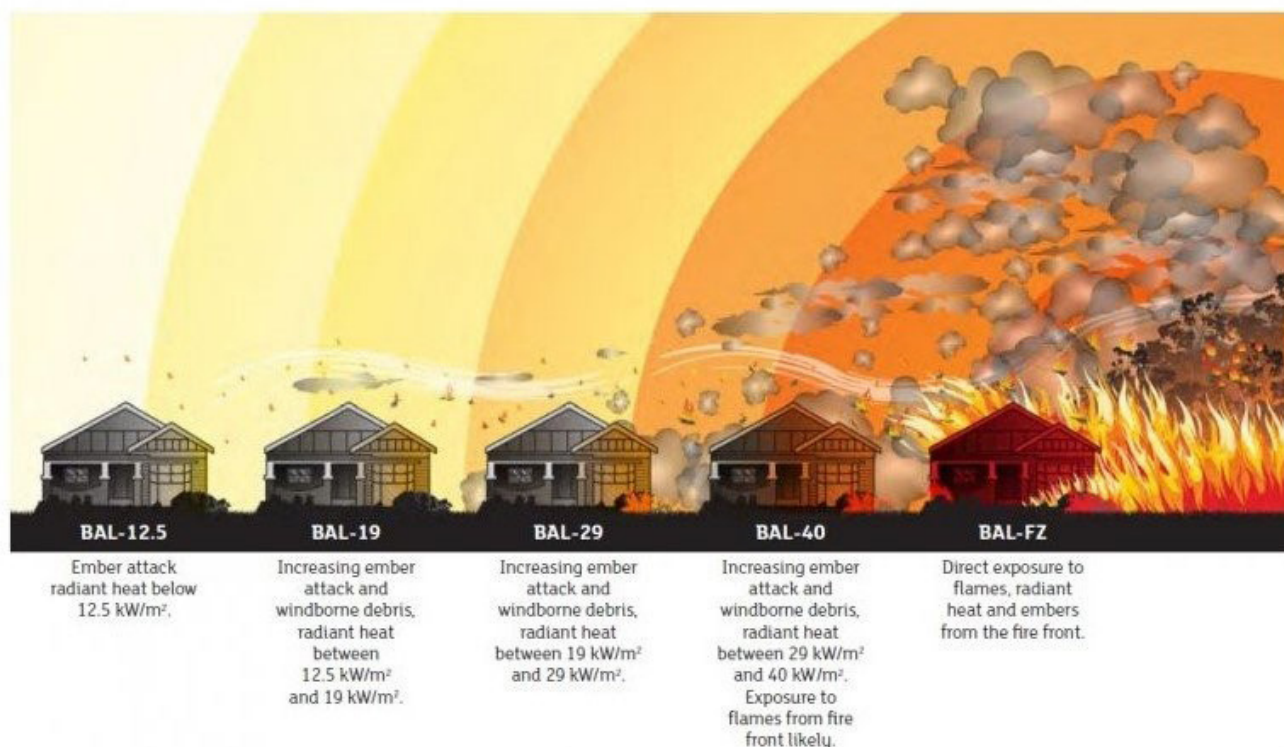| BAL-12.5	BAL-19	BAL-29	BAL-40	BAL-FZ
Ember attack radiant heat below 12.5 kW/m².	Increasing ember attack and windborne debris, radiant heat between 12.5 kW/m² and 19 kW/m².	Increasing ember attack and windborne debris, radiant heat between 19 kW/m² and 29 kW/m².	Increasing ember attack and windborne debris, radiant heat between 29 kW/m² and 40 kW/m². Exposure to flames from fire front likely.	Direct exposure to flames, radiant heat and embers from the fire front.

Image Source: Bushfire Prone Planning- What is BAL?

Trafalgar FyreROOF systems achieves the maximum BAL-FZ rating for roofing applications!

BAL	Description of Risk	Trafalgar Bush-fire Roof System
BAL- LOW	Lowest risk from a potential fire	✓
BAL- 12.5	Risk is primarily from potential embers during a fire	✓
BAL- 19	Moderate risk, particularly from embers and burning debris	✓
BAL- 29	High risk, particularly from embers, debris and heat	✓
BAL- 40	Very high risk. Likely to be impacted by embers, debris, heat and potentially flames	✓
BAL- FZ	Extreme risk. Directly exposed to the flames of a potential fire front	✓

070823