



# FLAMEGUARD™

## Fire Resistant Sandwich Panel

**FLAMEGUARD™ panels are sandwich panels with steel faces and a core of mineral wool fibreboard. They can be used as wall and ceiling panels in buildings where improved fire performance is required.**

**The metal faces of the panels have an interlocking tongue and groove joint on the long edges, which may be sealed for weatherproofing or for "clean room" applications.**

### FLAMEGUARD™ SPECIFICATIONS

- » Panels are 1200mm wide as standard and are made to order normally in lengths up to 9 metres, depending on handling limitations. Thicknesses are normally 50, 75 and 100mm, although other thicknesses are possible. Care in handling is required to prevent damage to long or heavy panels.
- » Factory Mutual has advised that FLAMEGUARD™ may be used when correctly installed where non-combustible building panels are required for insurance purposes.
- » Metal faces are 0.6mm thick COLORBOND™ prepainted steel with a yield strength of 300 mPa.
- » The core is mineral wool fibreboard of 100kg/m<sup>3</sup> density. Most mineral wool fibres are orientated perpendicular to the faces of the panel to provide bending strength to the panel and a proportion are cross-interlinked to provide shear strength as well.
- » The steel faces are bonded to the core with a two component thermosetting structural adhesive.

- » The panel surfaces are supplied as either flat steel or with the option of light ribbing to a 0.7mm deep surface profile.
- » No ozone depleting materials are used in the panels (CFC and HCFC free).

### MINERAL WOOL FIBRE

- » Made from basalt and other naturally occurring rocks which are melted and spun into fibreboard. The fibres are bio-soluble so that the body's natural processes remove them.
- » Classed as non-combustible as a building material. When the mineral wool fibreboard is made into a sandwich panel with steel skins and installed to BONDOR™ specifications, it provides a panel system with excellent fire performance.
- » Is chemically inert and has a melting point above 1000°C.

*The manufacturing process sandwiches » mineral wool fibreboard between layers of COLORBOND® steel.*



## FLAMEGUARD™ Properties & Spans Inside Buildings

Thickness (mm)	50	75	100
Mass/m <sup>2</sup>	15.6	18.1	20.6
Panel spans inside a building (mm)			
- walls (non load bearing)	4800	5900	7000
- ceilings (see note 2 at right)	2300	3600	4500
Thermal Insulation			
Value, R (m <sup>2</sup> K/W)	1.3	1.9	2.5

**Note 1.** The spans do not apply to coldstore enclosures.

**Note 2.** Ceiling spans allow for either a 0.25 kPa uniform load or a 1.4 kN (140kg) load at any one location on each 1200mm wide panel. These are live loads – no storage loads are permitted.

**Note 3.** Ceiling panels are not to be supported by panel walls where fire performance is required. Ceilings are to be independently supported.

**Note 4.** Carry panels on their edge to prevent buckling damage.





# FLAMEGUARD™

## Fire Resistant Sandwich Panel

# National network

### » WESTERN AUSTRALIA

17 Gauge Circuit  
Canning Vale WA 6155  
Ph: (08) 9256 0600  
Fax: (08) 9256 0620  
wa@bondor.com.au

### » SOUTH AUSTRALIA

34 George Street  
Green Fields SA 5107  
Ph: (08) 8282 5000  
Fax: (08) 8282 5099  
sa@bondor.com.au

### » VICTORIA

329a St Albans Road  
Sunshine VIC 3020  
Ph: (03) 8326 8000  
Fax: (03) 8326 8099  
vic@bondor.com.au

### » TASMANIA

6 Johns Street  
Breadalbane TAS 7258  
Ph: (03) 6391 8344  
Fax: (03) 6391 8424  
tas@bondor.com.au

### » NEW SOUTH WALES

16 Davis Road  
Wetherill Park NSW 2164  
Ph: (02) 9609 0888  
Fax: (02) 9729 1114  
nsw@bondor.com.au

### » QUEENSLAND

111 Ingram Road  
Acacia Ridge QLD 4110  
Ph: (07) 3323 8500  
Fax: (07) 3323 8501  
qld@bondor.com.au



www.bondor.com.au  
Ph: 1300 300 099

## FLAMEGUARD™ Wind Load Span Tables

### a) Wall Panels

Multi Span Case (supported with end and intermediate supports)

Permissible Uniform pressure kPa	Spans for various panel thicknesses (mm)		
	50mm	75mm	100mm
0.6 kPa	3750	—	—
0.8 kPa	2840	4220	5090
1.0 kPa	2310	3410	4550
1.2 kPa	1940	2860	3820
1.5 kPa	1570	2320	3090
1.8 kPa	1290	1930	2580

**Note 1.** FLAMEGUARD™ panel has 0.6mm steel skins with a core of mineral wool board

**Note 2.** Table values apply for uniform live loads only. No dead loads

**Note 3.** The maximum deflection (at mid span) is Span/180

**Note 4.** The permissible pressure values incorporate a safety factor of 1.8 on ultimate strength

Specifications may change, always check with BONDOR™ for the latest information.

### b) Wall Panels

Single Span Case (supported at ends only)

Permissible Uniform pressure kPa	Spans for various panel thicknesses (mm)		
	50mm	75mm	100mm
0.4 kPa	4750	—	—
0.6 kPa	3970	4730	—
0.8 kPa	3330	4100	4890
1.0 kPa	2670	3660	4380
1.2 kPa	2240	3310	3990
1.5 kPa	1810	2700	3560
1.8 kPa	1500	2250	3000

## Fixing and Installation

All connecting components (angles etc) above the base of walls and partitions are steel with a minimum thickness of 0.8mm (engineering considerations may require thicker components).

All fixings are steel or stainless steel. As a minimum, rivets are 3mm diameter and self-drilling screws are 8 gauge. No aluminium rivets are to be used anywhere in the installation.

Aluminium trims such as radius cove extrusions may be used as covers over steel

structural connections. Steel or stainless steel fixings are to be used.

Wall and ceiling panels are supported by the structural steel of the building.

BONDOR™ offers an installation service to ensure optimum performance from FLAMEGUARD™ panels.

