Mattson Joinery - Mattador™ -/30/30 & - /60/60 Fire Door System – Australian Version

Understanding fire resistance ratings;

Fire protection is an important aspect of building design. Fire barriers prevent fire spread within the building, minimising the risk to life safety. Minimising the fire spread is usually addressed by providing fire rated systems that have been tested to, and meet specific standards called up by the relevant building code.

In New Zealand and Australia fire - resistant systems are required to be tested in accordance with AS1530.4: *Methods for fire tests on building materials, components and structures – Fire – resistance test of elements of construction.* They achieve a fire resistance rating (or level) based on the test result. The rating is stated in minutes in the form of **60/60/60**.

The **first** number relates to the structural **'stability'** of the tested building element (called structural adequacy in AS1530.4 and stability in the New Zealand Building Code compliance document for fire safety). This is for load bearing elements like load bearing walls, floors, columns and beams.

The **second** number relates to the **'integrity'** of the tested element, and its ability to provide fire separation and prevent flames and hot gases passing through the element.

The **third** number relates to the ability of the tested element to maintain the temperature on the non fire side of the separating to below specific criteria, and is known as **'insulation**.'

The fire resistance ratings may be a mix of numbers. Where specific criteria are not relevant a '-' will be shown. For example, a structural element which is only required to support the building but not provide any fire separation could have a fire resistance rating of 60/-/-. A fire door which is not required to support any load but is required to provide separation and achieve at least 30 minutes insulation could have a rating of -/30/30

Trans Tasman Differences;

In New Zealand, the Building Code Clause C *Fire safety* defines the fire resistance rating '… the minimum fire resistance required of primary and secondary elements as determined in the standard test for fire resistance…' The standard test currently referenced is AS1530.4 1997, which provides the test procedure for a number of different fire – resistant systems including walls, door sets and penetrations.

In Australia, the Building Code of Australia defines the fire resistance level as determined by a test in accordance with AS 1530.4-2005. Australia also allows tests that have been conducted to previous versions of the adopted standard as evidence of compliance, as long as they have been tested *prior* to the publication date of the adopted standard.

Mattador™ Overview

This over view sets out the Fire Resistance Tests and Fire Assessments / Approvals of B Mattson Ltd - Mattson Joinery (MJ) **Mattador™** fire tests conducted at BRANZ Building Research Association New Zealand .

Mattador™ fire doors have been tested to AS/NZS 1905.1; 1997 / NZS 4520:2010 Standards; Fire Resistant Door-sets.
Tests were conducted to AS 1530.4-1997 Methods for fire tests on building materials, components and structures.
BRANZ have extended the Mattson Joinery fire doors approvals and have issued the following documents.

- FAR3096 Issued 12th December 2007
- FAR3116 Issued 22nd January 2008

FAR3096, & FAR 3116 extends the Fire Resistance of B Mattson Ltd Door-sets to the following International Fire Resistance Test Standards;

- AS 1530.4 : 2005
- BS 476 : Part 22 : 1987
- SS 332 :2000
- MS 1073 : Part 3 : 1996
- ISO 3008 : 2007
- EN 1634 – 1 : 2000

Mattador™ Fire doors that are currently manufactured by Mattson Joinery.

Mattador™ Fire Door leaves are made from Triboard™, a **FSC Certified** reconstituted engineered wood product manufactured from renewable plantation softwoods, grown in New Zealand;

55mm Triboard™ (-/60/60) (60 minute) - clashed both vertical edges with 6mm hardwood timber.
45mm Triboard™ (-/30/30) (30 minute) - clashed both vertical edges with softwood timber,
45mm Triboard ™ is also used to manufacture (-/45/45) (45 minute) to a maximum leaf size of 1980mm x 810mm. Larger leaf sizes can be offered using 55mm Triboard™

Mattador™ clashless door leaves, (edge filled and primed) are available upon request.

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Mattador ™ Fire Door systems are prehung into approved timber frames and machined for either an architrave finish, or grooved for plaster-board. **Mattador™** Fire Door leaves up to (-/60/60 minute) are also available prehung in approved steel frames.

Door Specifications

The following sets out the limitations of the **Mattador™** approved Fire Door system.

-/30/30 (30 Minute) Doors

Singles - Maximum leaf height 2.700mm, Maximum area 2.67m2.
Pairs - Maximum leaf height 2.500mm, Maximum area 2.54m2 per leaf.
Double Action, **Singles** / **Pairs** - Maximum leaf height 2.700mm, Maximum area 2.68m2 per leaf.

-/30/- (30 Minute) Vision Panels

Georgian Wire – Maximum clear opening height 850mm, Maximum area 0.44m2.

Pyran S™ / Firelite™ / Robax™ Maximum clear opening height 1.060mm, Maximum area 0.55m2

-/30/30 (30 Minute) Vision Panels

(Pyrobel™ & Pyranova™ are insulated glass). Pyrobel™ and Pyranova™ is available with UV (Ultra Violet) protection, **if exposed to the sunlight.**

Pyrobel ™/ Pyranova™ Maximum clear opening height 1.060mm, Maximum area 0.55m2..

-/30/30 (30 Minute) Side and Over Panels.

Side Panels and Over Panels to the same size as for door leaves listed above.

-/30/30 (30 Minute) Grille

Grille -- to 350mm x 350mm intumescant with press plate cover.

Pyranova™ -/30/30 (30 Minute) Insulated Timber Framed Fire Windows, Side Lights and Over Lights.

Maximum clear opening size 3610mm H x 2330mm W or 2900mm H x 2900mm W. Maximum area 8.41m2. (Subject to a fire resistance rating approval being available or obtained in Australia).

Pyrobel™ -/30/30 (30 Minute) Insulated Timber Framed Fire Windows, Side Lights and Over Lights.

Maximum clear opening size 2900mm H x 1600mm W or 1900mm H x 1920mm W. Maximum area 4.64m2. (Subject to a fire resistance rating approval being available or obtained in Australia).

Pyranova™ DGUs (Double glazed Units) Insulated -/30/30 Timber Fire Windows, Side Lights and Over Lights

Maximum clear opening size 3150mm H x 1510mm W or 2182mm H x 2182mm W. Maximum area 4.76m2. (Subject to a fire resistance rating approval being available or obtained in Australia).

-/30/- (30 Minute) Timber Framed Fire Windows For Periods of 30 Minutes Integrity.

Georgian Wire -- Maximum clear opening height 1.035 mm. Maximum area 0.56m2. (Multiple units allowed with common mullion or transom).

Pyran S™ -- Maximum clear opening size 3150mm H x 1510mm W or 2520mm H x 2520mm W. Maximum area 6.35m2. (Subject to a fire resistance rating approval being available or obtained in Australia).

Pyran S™ DGUs (Double glazed Units) -/30/- Timber Framed Fire Windows For Periods of 30 Minutes Integrity. Side Lights and Over Lights.

Maximum clear opening size 2262mm H x 1260mm W or 1688mm H x 1688mm W. Maximum area 2.85m2. (Subject to a fire resistance rating approval being available or obtained in Australia).

Pyran S™ -/30/- Timber Framed Fire Door Leafs For Periods of 30 Minutes Integrity.

Maximum clear Glazed size 1940mm H x 722mm W or 1750mm H x 700mm W. Maximum area 1.40m2 (Subject to a fire resistance rating approval being available or obtained in Australia).

-/60/60 (60 Minute) Doors

Singles - Maximum leaf height 2.700mm, Maximum area 2.67m2.

Pairs - Maximum leaf height 2.500mm, Maximum area 2.67m2 per leaf.

-/60/60 (60 Minute) Vision Panels

Georgian Wire / Firelite™ / Robax™ – Maximum clear opening height 850mm, Maximum area 0.065m2

Pyrobel ™/ Pyranova™ / Maximum clear opening height 962mm, Maximum area 0.50m2 .

(Pyrobel™ & Pyranova™ are laminated insulated glass) Pyrobel™ and Pyranova™ is available with UV (Ultra Violet) protection, **if exposed to the sunlight.**

-/60/60 (60 Minute) Side and Over Panels.

Side Panels and Over Panels to the same size as for door leaves listed above

Pyranova™ -/60/60 (60 Minute) Insulated Timber Framed Fire Windows, Side Lights and Over Lights.

Maximum clear opening size 3067mm H x 1500mm W or 2145mm H x 2145mm W. Maximum area 4.60m2. (Subject to a fire resistance rating approval being available or obtained in Australia).

Pyrobel™ -/60/60 (60 Minute) Insulated Timber Framed Fire Windows, Side Lights and Over Lights.

Maximum clear opening size 2874mm H x 1658mm W or 2000mm H x 2283mm W. Maximum area 4.76m2. (Subject to a fire resistance rating approval being available or obtained in Australia).

-/60/- (60 Minute) non insulated Timber Framed Fire Windows, Side Lights and Over Lights.

Pyran S™ -- Maximum clear opening size 3150mm H x 1510mm W or 2520mm H x 2520mm W. Maximum area 6.35m2.(Subject to a fire resistance rating approval being available or obtained in Australia).

Pyran S™ DGUs (Double glazed Units) -/60/- Timber Framed Fire Windows For Periods of 60 Minutes Integrity. Side Lights and Over Lights.

Maximum clear opening size 2020mm H x 1010mm W or 1428mm H x 1428mm W. Maximum area 2.04m2. (Subject to a fire resistance rating approval being available or obtained in Australia).

Summary;

Mattador™ fire door approvals allow a maximum 2mm gap between the door leaf and the door frame / jamb (Sides and Head). A 10mm maximum gap between the underside of the door leaf and the top of the finished flooring is permitted.

Refer to the **Mattador™** Approved Fire **Rated Hardware List** (FRHL) for a selection of approved closers, latches and misc hardware. The installation of non approved hardware will void the rating of the door system. Mattson Joinery will not be responsible for non compliant door systems. Fire tags are issued for each specific **Mattador™** doorset on receipt of the signed and completed **Hardware Declaration List** (HDL) All Mattson Joinery Fire Door Systems require the appropriate tags to be affixed to the door leaf and door frame.

No modifications / alterations are to be made to the **Mattador™** door system after installation of the tags. (Eg; penetrations for pet doors etc)

Mattador™ fire doors are available in paint quality (PQ) or timber veneer (TV) surface finish. Exterior grade (EG) doors are also available. Doors must be kept dry and primed as soon as possible. Doors should be stacked vertically on even ground using same size bearers. Exterior doors should be coated (both faces) in light reflective colours. Dark colours are NOT recommended and may void the warranty. The above information is current at time of printing. Mattson Joinery reserves the right to update this information as required.

Mattson Joinery

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