Simply Fire Doors

FD30 Data Sheet

Certificate Number 276

1. <u>Over View</u>

This door leaf *(frame if supplied)* has been fire tested and is certified by Chiltern International Fire Ltd as being capable of providing fire resistance of 30 minutes insulation and 30 minutes integrity *(Providing no more than 20% of un-insulating glass)* this is as set out and defined to meet the requirements of BS 476: Part 22 1987, when installed in accordance with the following guidelines.

In recognition of the above the door leaf or frame as applicable is prefixed above the top hinge with a Qmark plug(s), which are issued under the terms of the BM TRADA Certification Limited Scheme for Q-Mark Fire Doors. This plug carries a unique reference code that highlights that the manufacturer complies with the terms of the BM Trada Qmark Fire Door Scheme. In addition, there is a range of inner and outer plugs that are fitted to show additional information as set out in the following table;

DOOR / FRAME	
OUTER PLUG	***FIRE RESISTANCE***
Yellow	30 Minutes
DOOR LEAF	
INNER TREE	***STATUS***
Red	*Approved door. Intumescent not yet fitted*
Green	*Approved door. Intumescent in door factory fitted.*
Yellow	*Approved factory fitted glazing.*
Silver	*Certified factory hung door & frame set*
FRAME	
INNER TREE	***STATUS***
Green	*Approved Frame to match door. All Intumescent to door and frame fitted.*

The Qmark plugs are to be left clearly visible at all times and shall not be removed.

It is emphasised that certification is conditional upon the following instructions being complied with in their entirety. ***Failure to do so will invalidate this approval and may jeopardise the fire performance of the door***. Door sets supplied with pre fitted ironmongery / components by Simply Fire Doors trading name of B Batch Shopfitters Ltd may be considered to meet the requirements as set out in report reference FEA/F98164 Rv 30 minutes fire resistance.

2. Door Frame

Door frame timber may be either softwood or hardwood with a minimum density 510kg/m³. Where door leaves above 2440mm high x 1220mm wide are used, hardwood frames are required of minimum density 640kg/m³. In all cases, timber must be to class J10 as specified in BS EN 942: 1996.

The minimum timber frame section must be 70mm x 32mm. A 12mm deep planted Stop is adequate for single acting frames whilst double acting frames may be scalloped or square. If frames are square, the maximum radius to the corners of the leaf is 8mm. Frame joints must be mortised and tenoned, mitred, half lapped, butt jointed, nailed or screwed and with no gaps.

3. Door Gaps

Leaf to frame and leaf-to-leaf gaps must be representative of those tested. If substantially different gaps are employed, the fire resistance performance of this doorset design may change. As a general guideline, gaps should not exceed 4mm, except for the threshold, where 10mm is acceptable to allow for floor coverings. Door Leaves must not be proud of each other or from the door frame by more than 1mm.

4. Fixings

The supporting construction must be capable of staying in place and intact for the full period of fire resistance required from the doorset. The frame jambs are to be fixed to the supporting construction using steel fixings at 600mm maximum centres. The fixings must be of the appropriate type for the supporting construction and must penetrate to a minimum depth of 40mm. It is not necessary to fix the frame head, although packers must be inserted.

5. Sealing to Structural Opening

The door frame to structural opening gap must be protected using one of the following methods:

1. Gaps up to 20mm must be tightly packed with mineral fibre capped with a 10mmdepth of tested acrylic intumescent mastic on both sides (a 10mm x 10mm shadow gap may be used with this detail).

2. Full depth timber/timber based composite material or non-combustible subframe up to 20mm thick, with gaps up to 10mm between components sealed with a 10mm depth of a tested acrylic intumescent mastic on both sides or full depth tested expanding PU foam

3. Full depth timber/timber based composite material or non-combustible subframe up to 40mm thick, with no gaps between the components and fitted with a minimum of 10mm thick architraves.

4. Gaps up to 20mm filled with proprietary product tested for similar gap filling applications to the required integrity (e.g. expanding PU foam or preformed compressible intumescent foam)

Guidance for methods of sealing the frame to structural opening gap is also given in BS 8214: 1990, "Code of practice for fire door assemblies with non-metallic leaves", which may be referred to where appropriate

6. Glazed Apertures

All apertures are to be factory prepared by Simply Fire Doors trading name of **B Batch Shopfitters Limited**
Site cutting of apertures is strictly prohibited.

Glasses: *6 & 7mm Pyroshield,6mm Pyran S, 7mm Pyroguard,7mm Pyrobelite,7mm Pyrodur Plus, 10mm Pyrodur, 12mm Pyrobel, 14mm Swissflam Lite, 15mm Pyrostop, 16mm Pyrobel*

Intumescent System	***Bead Section Sizes***	***Minimum Density***	***Fixing Method***
Lorient System 36	*22mm Wide X 18mm High Chamfered with 5mm bolection*	*640 kg/m³ Hardwood*	*No 8 screws or 38mm pins max 200mm centres*

7. Intumescent Seals

Application	**Location**	**Product/Manufacture**
Edge Seals	As section 7.1 Specific Door-Frame configuration Table States	1. PVC encapsulated Palusol 100 – Mann McGowan 2. Pyroplex – Reddiplex Group Plc 3. Type 617 Lorient Polyproducts Ltd
Hinges	Under both hinge blades	1mm thick Therm-A-Strip, G30 or Interdens
Locks/Latches	Under forend & keep	1mm thick Therm-A-Strip, G30, Interdens or tested acrylic intumescent mastic
Top Pivots	Lining all sides of the mortices	1mm thick Therm-A-Strip, G30 or Interdens and 5mm of head seal remaining continuous past each side
Flush Bolts	Lining all sides of the mortices	1mm thick Therm-A-Strip, G30 or Interdens

All seals exposed unless otherwise clearly stated

All seals used must be to Simply Fire Doors trading name of B Batch Shopfitters Ltd specifications and as approved by Chiltern International Fire Ltd

7.1 Specific Door Frame Intumescent configuration

Door configuration	Location	Required Intumescent Timber frames
Single & Double Acting Single Leaf Ply Faced	Frame head & jambs	1no 15mm X 4mm P100,617,Pyroplex centrally fitted
	Leaf head & vertical edges	1no 15mm X 4mm P100,617,Pyroplex centrally fitted
Single & Double Acting Single Leaf MDF Faced	Frame head & jambs	1no 20mm X 4mm P100,617,Pyroplex centrally fitted
	Leaf head & vertical edges	1no 20mm X 4mm P100,617,Pyroplex centrally fitted
Door configuration	**Location**	**Required Intumescent Timber frames**
Single & Double Acting Double Leaf Ply Faced	Frame head & jambs	1no 15mm X 4mm Type 617 or 1no 20mm X 4mm P100, ,Pyroplex centrally fitted
	Leaf head & vertical edges	1no 15mm X 4mm Type 617 or 1no 20mm X 4mm P100, ,Pyroplex centrally fitted
	Meeting edges	1no 15mm X 4mm Type 617 or 1no 20mm X 4mm P100, ,Pyroplex centrally fitted
Single & Double Acting Double Leaf MDF Faced	Frame head & jambs	1no 15mm X 4mm Type 617 or 1no 20mm X 4mm P100, ,Pyroplex centrally fitted
	Leaf head & vertical edges	1no 15mm X 4mm Type 617 or 1no 20mm X 4mm P100, ,Pyroplex centrally fitted
	Meeting edges	1no 15mm X 4mm Type 617 or 1no 20mm X 4mm P100, ,Pyroplex centrally fitted

8. Tested Ironmongery

The following ironmongery has been successfully incorporated in the tests:

1.	Royde & Tucker H105 steel butt hinges.
2.	100mm x 32mm Stainless steel butt hinges.
3.	Dorma TS73V & TS83V overhead closers.
4.	Henderson Hardware 63mm tubular mortice latch with aluminium lever handles.
5.	Nemef latch (235mm x 20mm forend) with stainless steel lever handles.

8.1 Additional & Alternative Ironmongery

Latches & Locks
Either latches or locks must be as tested, or alternatively components with the following specification are acceptable:

Maximum forend and strike plate dimensions:	235mm high by 32mm wide by 6mm thick
Maximum body dimensions:	20mm thick by 150mm wide by 150mm high.
Intumescent protection:	As section 7 states
Materials:	All parts essential to the locking/latching action, including the latch bolt, forend and strike, to be Steel or brass.

8.2 Hinges

Hinged doorsets must be hung on a minimum of 3 hinges, whilst leaves over 2300mm high must fit 4 hinges. Hinges with the following specification are acceptable:

Blade height:	90 - 120mm
Blade width (excluding knuckle):	32 - 40mm
Blade thickness	2.5 - 4mm
Fixings:	Equal number and nominally same pattern as Tested
Materials:	Steel or stainless steel
Hinge positions:	**Top** - 150-200mm from the head **2nd** – 350mm from top hinge or equal spaced between top and bottom when using 3 hinges **Bottom** - 180-250mm from foot **4th** –- equal spaced between second and bottom (where required)
Intumescent protection:	As section 7 states

8.3 Automatic Closing

Automatic closing devices, must either be as tested or components of equal specification that can demonstrate contribution to the required performance of this type of 30 minute doorset design, when tested to BS476: Part 22: 1987 or BSEN1634-1: 2000.

Note:
Floor spring top pivots must be protected with intumescent gaskets in accordance with section 4.

8.4 Flush Bolts

Flush bolts may be incorporated into the top and bottom of the meeting edge of the inactive leaf of a double doorset, provided that the following maximum dimensions are not exceeded:

- 200mm long x 20mm deep x 20mm wide.

The mechanisms of the flush bolts must be of steel and the mortice must be lined on all edges with intumescent gaskets in accordance with section 4. The mortice must be as tight to the mechanism as is compatible with its operation.

8.5 Pull Handles

These may be surface-fixed or bolted through the door leaf provided that they are steel or brass and the length is limited to 1000mm. No additional intumescent protection is required provided that the hole for the bolt through the leaf is tight.

8.6 Push Plates/Kick Plates

Face-fixed ironmongery such as push plates and kick plates may be fitted to the doorsets providing they do not exceed 30% of the door leaf area.

8.7 Door Selectors

These may be freely applied, provided that they are not invasive of the leaf edges or door frames. Those that are invasive will require fire resistance test/assessment evidence to support their use. No additional intumescent protection is required unless test evidence dictates otherwise.

8.8 Panic Ironmongery

Panic ironmongery may be fitted, provided that its installation does not require the removal of any timber from the leaf, stop or frame reveal and it in no way interferes with the self-closing action of the door leaf.

8.9 Door Security Viewers

Door security viewers with brass or steel bodies and glass lenses may be fitted, providing they have been tested to 30 minutes integrity in this type of timber composite doorset design, in accordance with BS476: Part 22: 1987 or BSEN 1634-1: 2000. Any intumescent materials used for protecting the product during testing must be replicated.

8.10 Air Transfer Grilles

Air transfer grilles may be fitted providing the product has suitable test evidence to BS 476: Part 22: 1987 or BSEN 1634-1: 2000 that demonstrates a minimum 30 minutes integrity performance when installed within a timber based doorset of comparable thickness. Margins to the leaf edges will remain as detailed for glazing and the position of the unit will be dictated by the pressure regime tested in the proving evidence (normally below mid height). The area occupied by the air transfer grille must not exceed 0.1m².

8.11 Acoustic, Weather and Dust Seals

Silicon based acoustic, weather and dust seals may be fitted to this door set design without compromising the performance, providing their fitting does not interfere with the activation of the intumescent seals or hinder the self-closing function of the leaves

8.12 Threshold Seals

The following types of automatic threshold drop seals may be recessed in to the bottom rail of leaves to this design without compromising the performance:

- Lorient Polyproducts IS8005si and IS8010si
- Pemko 411-AR, 411-RL & 411-NBL
- Raven RP8 and RP78
- Domatic A6003

Alternative products may be used providing they are essentially of the same construction, materials and dimensions.

9 Fire Door Maintenance

Fire doors are intended to facilitate a similar level of fire resistance as per the structural elements of a building. However, since doors are often opened and closed many times a day, it is important therefore for regular inspection be performed.

Fire doors should therefore be examined at six-monthly intervals as follows;

- Recommended clearance of 3 mm (between door and frame) along head, down sides maintained
- Where applicable, any signs of damage, to glass or glazing system as the glass and glazing system are critical to the performance of the fire door.
- Fire and smoke seals (as maybe fitted) for any signs of damage, degradation or missing in part or total, as either of these will have serious implications on the fire door performance
- Hinges should be inspected for signs of wear. Worn hinges should be replaced with those that perform in accordance with the latest edition of BS EN 1935
- Ensure that (where fitted) the latch or lock furniture moves freely and engages fully. Damaged or badly worn latch or lock furniture should be replaced immediately
- Self-closing devices should be examined to ensure it closes the door leaf properly. The door should close effectively from any angle. There are a number of reasons why doors may fail to close
  - Check that there are no foreign bodies or other objects obstructing the door.
  - Check that any smoke seals (as maybe fitted) remain correctly fitted and are undamaged.
  - Check the latch (if fitted) to ensure correct operation

Any self-closing device (as maybe fitted) which is unable to be effectively adjusted should be replaced using a closer that has been validated by test for use on a door assembly of similar specification, and performs in accordance with the latest edition of BS EN 1154

It is not easy to repair doors and maintain the interactive behaviour of the various component parts, and except for minor repairs to 30 minute fire rating door leaf which Simply Fire Doors (B Batch Shopfitters Ltd) recommend are performed via a professional source, where significant damage is detected the door leaf should be replaced in total. Door leaves providing a 60 minute fire rating or higher should be replaced, not repaired

Note: In the event of damage that necessitates the replacement of one leaf of a double door, both leaves should be replaced with a new matching pair. As a commitment of continuous improvement and possible changes of legislative requirement, would make it virtually impossible to ensure that a replacement single leaf would be of identical construction to that being removed.

9.1 Fire Door Decoration

Fire door leaves are generally not required to provide a specific surface spread-of-flame barrier, and may therefore be re-decorated as desired.

Smoke seal blades or brushes should remain **unpainted** and whilst it is suggested that the over painting/varnishing intumescent seals does not have detrimental effects, it is recommended that such action is limited to no more than 2-3mm thickness of paint.

Where intumescent seals are incorporated within the doorframe the use of heat or chemicals in preparation for re-coating should be avoided.

Certified fire doors supplied by Simply Fire Doors (B Batch Shopfitters Ltd) are permanently marked with their declared fire resistance period by means of a colour-coded plug(s). It is therefore recommended to avoid painting over the plug(s) during re-decoration.