



---

INTERNATIONAL FIRE  
CONSULTANTS LIMITED

---

**PRIVATE & CONFIDENTIAL**

## IFC FIELD OF APPLICATION REPORT

**PAR/11439/01 REVISION A**

### **Field of Application for Door Assemblies that Comprise Minimum 54mm Thick FD60 Three Layer Core Door Leaves Installed in Timber Frames**

**Fire Resistance Standard: BS476: Part 22: 1987**

Prepared on behalf of:

PKF Global Ltd  
Unit 2  
Devonshire Business Park  
Chester Road  
Borehamwood  
Hertfordshire  
WD6 1NA

**NOTE:** *This report should not be manipulated, abridged or otherwise presented without the written consent of International Fire Consultants Ltd*

Ref: #15353

Issue Date – December 2015  
Valid Until – December 2018

---

**International Fire Consultants Ltd**

Head & Registered Office: 20 Park Street, Princes Risborough, Buckinghamshire, England HP27 9AH

Tel: +44(0)1844 275500, Fax: +44(0)1844 274002, E-mail: ifc@intfire.com

Registered No: 2194010 England

An International Fire Consultants Group Company

## ISSUE AND AMENDMENT RECORD

Revision	Issue Date	Author	Reviewer	Amendments
PAR/11439/01	September 2012	PP	DC	-
Revision A	December 2015	MB	DC	Review and Revalidation. Revise to current IFC format.

# CONTENTS

<b>1. INTRODUCTION .....</b>	<b>4</b>
<b>2. TEST EVIDENCE .....</b>	<b>4</b>
<b>3. SCOPE OF APPROVAL.....</b>	<b>4</b>
3.1 DOOR CONFIGURATION .....	4
3.2 MAXIMUM ASSESSABLE DOOR LEAF SIZES .....	5
3.3 DOOR LEAF SPECIFICATION.....	5
3.4 DOOR FRAMES.....	6
3.5 INTUMESCENT SEALS .....	7
3.6 AMBIENT TEMPERATURE SMOKE SEALS.....	8
3.7 HARDWARE .....	8
3.8 INSTALLATION, SUPPORTING CONSTRUCTION, AND DOOR EDGE GAPS .....	11
<b>4. CONCLUSION .....</b>	<b>11</b>
<b>5. LIMITATIONS .....</b>	<b>12</b>
<b>6. VALIDITY .....</b>	<b>13</b>
<b>APPENDIX A .....</b>	<b>14</b>
PKF GLOBAL LTD DOOR LEAF DETAILS	
FIGURES PAR/11439/01A:01 AND 02	
<b>APPENDIX B .....</b>	<b>15</b>
ASSESSED LEAF SIZE ENVELOPES	
FIGURES PAR/11439/01A:03 AND 04	
<b>APPENDIX C .....</b>	<b>16</b>
SUMMARY OF FIRE TEST EVIDENCE	
<b>APPENDIX D .....</b>	<b>18</b>
ADVICE REGARDING CE MARKING OF FIRE RESISTING DOORSETS	

## 1. INTRODUCTION

This report has been prepared by International Fire Consultants Ltd (IFC) to define the Field of Application for door assemblies that comprise minimum 54mm thick three layer core door leaves installed in timber frames, that are required to provide 60 minutes fire resistance performance, when adjudged against BS476: Part 22: 1987.

The methodologies used in preparing this document are based upon the guidance in BS ISO/TR 12470: 1998; 'Fire resistance tests - Guidance on the application and extension of results'.

It is proposed that variations to the tested specifications, as described in the following sections, may be accommodated into assemblies, without reducing their potential to achieve a 60 minute integrity rating, if tested in accordance with the method and criteria of BS476: Part 22: 1987. The omission of information on any components or manufacturing methods does not imply a lack of approval of those details but these would need to be the subject of a separate analysis. Only variations specifically mentioned are supported by this assessment document, and all other aspects must otherwise be as tested.

*This report is published with regard to the standards and requirements in force at the time of issue. It is recommended that anyone using this report after 1 September 2016 should seek advice from IFC, or IFC Certification Ltd, concerning the CE marking process, and how it applies to door assemblies approved in this report. Further advice is included in Appendix D of this report.*

## 2. TEST EVIDENCE

The test evidence used to support this assessment is summarised in Appendix C of this report.

## 3. SCOPE OF APPROVAL

### 3.1 Door Configuration

The following door configurations are approved within the scope of this report:

Latched, Single Acting, Single leaf Doors	LSASD
Unlatched, Single Acting, Single leaf Doors	ULSASD

### 3.2 Maximum Assessable Door Leaf Sizes

The calculated envelopes of assessed leaf dimensions for each mode and configuration covered by this field of application report are given in Appendix B, based upon use of the intumescent seal specification shown in Section 3.5.

### 3.3 Door Leaf Specification

A detailed constructional specification of the basic door construction is given below. This is based upon the test evidence detailed in Appendix C, (and is, therefore, limited to the information available from that test report), but also defines variations and tolerances, where it is considered that these will not adversely affect overall fire resistance.

Component		Species/ Material	Dimensions	Minimum Density
Core	Inner	Hardwood	17mm thick horizontal laminated timber	510kg/m <sup>3</sup> <i>Note 1</i>
	Outer	Albasia Falcata	13.9mm thick vertical laminated timber	300kg/m <sup>3</sup> <i>Note 1</i>
Closing Stile		Meranti	4no. vertical lamels of total thickness 100mm	510kg/m <sup>3</sup> <i>Notes 1 &amp; 2</i>
Top Rail		Meranti	3no. horizontal lamels of total thickness 100mm	510kg/m <sup>3</sup> <i>Notes 1 &amp; 2</i>
Facings Option A	Sub Facing	Meranti	3mm thick	510kg/m <sup>3</sup> <i>Note 1</i>
	Outer Facing	Albasia Falcata	1mm thick	300kg/m <sup>3</sup> <i>Note 1</i>
Facings Option B		MDF	4mm thick	730kg/m <sup>3</sup> <i>Note 1</i>
Lippings		Meranti	8-12mm thick on all edges	510kg/m <sup>3</sup> <i>Notes 1 &amp; 2</i>
Adhesives	Core lamels	Urea Formaldehyde	-	-
	Core to stiles and rails	Polyurethane	-	-
	Stile and rail elements	Polyurethane	-	-
	Core to sub facing	Urea Formaldehyde	-	-
	Sub facing to outer facing	Urea Formaldehyde	-	-

Component	Species/ Material	Dimensions	Minimum Density
Minimum leaf thickness	-	54mm	-
Optional additional decorative facings	Timber veneer, decorative plastic based laminate, PVC	Maximum 2mm thick	-
Optional finishes	Paint	N/A	-

*Note 1 Nominal stated density.*

*Note 2 The following alternative species of hardwood are acceptable;*

*American Rock Maple nominal density 660kg/m<sup>3</sup> (+20/-10%)*

*American Cherry/Black Cherry nominal density 580kg/m<sup>3</sup> (+20/-10%)*

*Sapele nominal density 640kg/m<sup>3</sup> (+20/-10%)*

*American Black Walnut nominal density 660kg/m<sup>3</sup> (+20/-10%)*

*Merbau nominal density 830kg/m<sup>3</sup> (+10/-10%)*

*Dark Red Meranti nominal density 640kg/m<sup>3</sup> (+20/-10%)*

*[The density of Meranti varies considerably, hence the density of each specific batch used for production must be checked for compliance]*

*Timber must be of appropriate quality in accordance with BS EN 942: 1996. Moisture content shall be 10 ± 2% for UK market, (or to suit internal joinery moisture content specification of export countries).*

Detailed drawings of the proposed door leaf constructions are given in **Figures PAR/11439/01A:01** and **02** in Appendix A.

*Note 3: The door design includes a laminated stile on the closing/lock stile, and a laminated rail at the head; but these are concealed by the lippings. It is a condition of this approval that the doors must be "marked" to ensure that end-users can correctly identify the head and hanging edge during installation.*

### 3.4 Door Frames

Door frames must be constructed from hardwood with a minimum measured density of 650kg/m<sup>3</sup> (measured at 12% moisture content). Timber must be straight grained and of appropriate quality in accordance with BS EN 942: 1996, or national equivalent. Moisture content shall be 10 ± 2% for UK market, (or to suit internal joinery moisture content specification of export countries).

Minimum frame section is 32mm face width (excluding stop) x 90mm deep with a 12mm deep doorstop. Doorstop to comprise the same material as the door frame and may be either planted and pinned using 40mm steel pins, or integral with the main door frame.

*Note 4 These dimensions assume that the rear of the frame is protected by the adjacent wall, and firestopping, and that the frame does not project out from the wall or include a shadow gap detail between the frame and the wall.*

The overall frame depth may be increased by the use of extension linings, but the joint between the main frame and the extension lining must not intrude in the plane of the door thickness.

Head/jamb joint: Mortice and tenon, or half-lapped joint, head twice screwed to each jamb **or** mitred joint which is glued with a non-thermally softening adhesive and the head twice screwed to each jamb.

Architraves: Loose architraves are optional and have no fire performance requirements. Where an integral architrave is used, the face of the door may project beyond the face of the wall, providing the thickness of the architrave is no greater than 10mm and it projects at least 15mm beyond the rear face of the door frame. This assumes that the face of the door leaf is flush with the face of the architrave. (See Section 3.8 regarding wall/frame gaps).

### 3.5 Intumescent Seals

The following intumescent seal combinations shall be used for the door configurations covered by this report.

#### Option A

Position	Specification
Jambs	2no 15 x 4mm intumescent seals fitted 10mm apart centrally in the frame reveal
Head	2no 15mm x 4mm intumescent seals fitted 10mm apart centrally in the frame reveal <b>and</b> 1no 15 x 4mm intumescent seal fitted centrally in the leaf edge

#### Option B

Position	Specification
Jambs	2no 15 x 4mm intumescent seals fitted 10mm apart centrally in the frame reveal
Head	2no 15mm x 4mm intumescent seals fitted 10mm apart centrally in the frame reveal <b>and</b> 1no 20 x 4mm intumescent seal fitted centrally in the leaf edge

All intumescent seals are to be graphite based or Lorient 617 type in pvc cases. It is recommended that all intumescent seals are manufactured or supplied by members of the Intumescent Fire Seals Association (IFSA) to ensure product quality and consistency. If smoke control is required, these may be substituted by combined intumescent/smoke seals, subject to the limitations given in Section 3.6.

### **3.6 Ambient Temperature Smoke Seals**

Smoke seals, or combined intumescent/smoke seals (using the intumescent products approved in Section 3.5), that have been tested to BS476: Part 31: Section 31.1: 1983 and shown not to leak by more than 3m<sup>3</sup>/m/hr at 25Pa may be used in conjunction with the proposed door assemblies to provide smoke control.

The orientation of the seals, door edge gaps, degree of building hardware interruption, and leaf configuration, will need to be as tested to BS476: Part 31: Section 31.1: 1983 to achieve the desired level of smoke control, unless these conflict with the intumescent seal widths and positions as shown in Section 3.5, in which case, the latter shall take precedence.

Test evidence to BS476: Part 22: 1987 shall be available to demonstrate that the smoke seals will not adversely affect the overall fire resistance of timber door assemblies, when fitted in the proposed arrangements.

### **3.7 Hardware**

Some of the various items of hardware to be used with the proposed door assemblies will have a positive contribution to the overall performance ('essential hardware') and others are classed as 'non-essential'. However, in all cases it must be ensured that choice of items, or their installation within the assemblies, does not have a detrimental effect upon their achievement of the required period of fire resistance.

All hardware beyond the scope of the general guidance given below must have been subjected to fire resistance testing, and/or assessed by a notified body, to support its use in doors of a similar construction to that proposed, or third party certification shall be available to support its use on doors of the proposed type.

General guidance for all items of hardware is outlined below, based upon the range of items tested.

#### **3.7.1 Hinges**

The door assembly was tested utilising steel butt hinges, (3no hinges per leaf) and are thus proven to make a positive contribution to the required 60 minutes integrity performance. Other makes of hinge may be used as alternatives providing they comply with the following specification:

Hinge types: Fixed pin, washered butt, ball bearing butt or journal supported hinges may be used.

Number of hinges: 3no (1½ pairs) per leaf.



Positions:	The top hinge must be positioned 150mm down from the head of the leaf to the top of the hinge and the bottom hinge positioned 225mm up from the foot of the leaf to the bottom of the hinge. The middle hinge may be either equispaced between the top and bottom hinge, or 150–250mm below the top hinge. (All positions $\pm 25$ mm).
Fixings:	Steel screws, as recommended by the hinge manufacturers, but in no case smaller than No 8 (3.8mm diameter) x 32mm long, and having thread for the full length. Position of screws (in relation to the door face) in blades of alternative hinge types shall be similar to hinges tested with the proposed door type.
Hinge blade sizes:	2.5–3.5mm thick x 89–110mm high x 30–35mm width. (These dimensions refer to the blade size, i.e. the part of the hinges that are recessed into the edge of the leaves/frame).
Hinge materials:	Brass, Phosphor Bronze, Steel or Stainless Steel. (Aluminium, Nylon or 'Mazac' are not permitted). No combustible or thermally softening materials to be included.
Additional protection:	1mm thick non-pressure forming intumescent material (e.g. Interdens or Therm-A-Strip) positioned on the underside of both hinge blades.

Rising butt, non-cranked butts and spring hinges (single or double action) are not suitable for use on doors approved within the scope of this generic assessment, although may be suitable to form the subject of an individual and specific evaluation.

### **3.7.2 Mortice latches/locks**

Where mortice latches or locks are fitted they should comply with the following specifications:

Positioning:	Centred at 1000mm ( $\pm 200$ mm), above the bottom of the door leaf
Latch/lock types:	Mortice latches, tubular mortice latches, sashlocks, deadlocks
Maximum dimensions:	Forend plate: 235mm long x 22mm wide Latch body: 18mm thick x 150mm high x 100mm wide Strikeplate: 235mm long x 20mm wide
Materials:	Latches must have no essential part of their structure made from polymeric or other low melting point ( $<800^{\circ}\text{C}$ ) materials, and should not contain any flammable materials.
Additional protection:	1mm thick non-pressure forming intumescent material (e.g. Interdens or Therm-A-Strip) positioned beneath the latch forend and strike and completely encasing the latch body.

Over-morticing is to be avoided; mortices should be as tight as possible to the latch. If gaps either side of the case exceed 2mm, then these must be made good with intumescent mastic or sheet (rounding to the top and bottom of the mortice is permitted). Holes for spindles or cylinders should be kept as small as is compatible with the operation of the hardware.

### **3.7.3 Door closers**

Where required by regulatory guidance, each hinged door leaf must be fitted with a self-closing device unless they are normally kept locked shut and labelled as such with an appropriate sign which complies with BS5499: Part 1: 1990. The specification for self-closing devices are as follows:

Face-fixed overhead door closer (and accessories such as soffit brackets) that have been tested, assessed or otherwise approved for use on unlatched FD60 cellulosic door leaves may be used. Any accessory that is located within the door reveal must have appropriate test or assessment evidence.

Transom mounted or concealed overhead closers must not be incorporated into any of the door assemblies within the scope of this generic scope of this report.

It is essential that all closers are of the correct power rating for the width and weight of the doors. They must be fitted according to the manufacturer's instructions, and be adjusted so that they are capable of fully closing the door leaf, against any friction imposed by the latch, (and smoke seals, if fitted), from any position of opening.

### **3.7.4 Non-essential hardware items**

#### ***Push plates, kick plates, etc.***

Plastic, pvc or metal plates may be surface-mounted to the doors, but, if more than 800mm in length by nominally 200mm wide, they must be attached in a way that would prevent them distorting the door leaf, e.g. glued with thermally softening adhesive or screwed with short aluminium screws and fitted in such a way so they will not be prevented from falling away by being trapped under door stops, glazing beads or handle escutcheons etc.

#### ***Pull handles***

If steel or brass, and fixed to the doors with bolt through fixings, the pull handles must not be more than 500mm long to prevent distortion of the leaf if heated. Leaves must include intumescent sheet material at least 1mm thick wrapped around the through-bolt to line the hole and reduce thermal conduction. Aluminium handles may be used without length restriction, but any components passing through the door must be steel.

### 3.8 Installation, Supporting Construction, and Door Edge Gaps

The frames must be fixed back to the supporting construction with steel fixings at centres not exceeding 600mm; this applies to jambs and head. Screws shall be of sufficient length to penetrate the wall by at least 40mm, and shall be positioned such that they are not exploited by charring of the frame, irrespective of the direction of test exposure; (this may necessitate a twin line of screws). Packers shall be used at all fixing positions, although if combustible packers are employed, these must be protected by a layer of firestopping (see below), aligned near to each face of the door frame.

The supporting construction may be either timber or steel stud plasterboard clad partition, blockwork, brickwork or concrete walls, but shall be of a type that has been tested or assessed to provide in excess of 60 minutes fire resistance at the required size when incorporating door openings. If fitted into timber or steel stud partitions, the method of forming the door aperture must be as tested by the partition and/or door manufacturer.

*Note 5 Reference to steel stud partitions is in the context of permanent elements, such as those designed and proven by the plasterboard manufacturers – this report does not approve use of the proposed doors in proprietary 'demountable' partitions, which must be subject to a full and independent appraisal of the particular system and doors therein.*

No part of the rear of the frame section shall be exposed once installed, (except for integral architraves) and the leaf must be flush with the face of the wall. There shall be no feature rebates or shadow gaps at the junction of the frame and wall.

The fire stopping between the supporting construction and timber frames should follow the recommendations of Table 3 in BS8214: 2008, "Code of practice for fire door assemblies", using a product proven in such timber applications, and with reference to the correct depth of seal to suit the width of gap between wall and frame. The firestopping shall be positioned on the plane of the door leaf; (unless combustible packers are employed).

The gap between the door and the frame should be 2–4mm. Gaps under the door(s) should not exceed 6mm for fire performance, although, if smoke control is also required, these gaps should only be 3mm, or smoke seals should be included in accordance with BS8214 (see also Section 3.6 regarding suitability of smoke seals).

The door assembly should be such that the leaves are fully flush within the frame when in the closed position. They may however be set back from the exposed face of the frame if required.

## 4. CONCLUSION

It is the opinion of International Fire Consultants Ltd that, if the proposed door assemblies, comprising minimum 54mm thick three layer core door leaves installed in timber frames, were manufactured and installed within the limitations of this assessment, and tested for fire resistance, they would satisfy the integrity criteria of BS476: Part 22: 1987 for 60 minutes.

## 5. LIMITATIONS

This assessment addresses itself solely to the ability of the proposed assemblies described to satisfy the criteria of the fire resistance test and does not imply any suitability for use with respect to other unspecified criteria.

This document only considers the door assemblies described herein, and assumes that the surrounding construction will provide no less restraint than the tested assembly, and that it will remain in place and be substantially intact for the full fire resistance period.

Where the constructional information in this report is taken from details provided to IFC and/or fire resistance test reports referenced herein, it is therefore limited to the information given in those documents. It is necessarily dependent upon the accuracy and completeness of that information. Where constructional or manufacturing details are not specified, or discussed herein, it should not, therefore, be taken to infer approval of variation in such details from those tested or otherwise approved.

Where the assessed constructions have not been subject to an on-site audit by IFC, it is the responsibility of anyone using this report to confirm that all aspects of the assemblies fully comply with the descriptions and limitations herein.

Any materials specified in this report have been selected and judged primarily on their fire performance. IFC do not claim expertise in areas other than fire safety. Whilst observing all possible care in the specification of solutions, we would draw the reader's attention to the fact that during the construction and procurement process, the materials used should be subjected to more general examination regarding the wider Health and Safety, and CoSHH Regulations.

This Report is provided to the sponsor on the basis that it is a professional independent engineering opinion as to what the fire performance of the construction/system would be should it be tested to the named standard. It is IFC's experience that such an opinion is normally acceptable in support of an application for building approvals, certainly throughout the UK and in many parts of Europe and the rest of the world.

However, unless IFC have been commissioned to liaise with the Authorities that have jurisdiction for the building in question for the purpose of obtaining the necessary approvals, IFC cannot assure that the document will satisfy the requirements of the particular building regulations for any building being constructed.

It is, therefore, the responsibility of the sponsor to establish whether this evidence is appropriate for the application for which it is being supplied and IFC cannot take responsibility for any costs incurred as a result of any rejection of the document for reasons outside of our control. Early submittal of the Report to the Authorities will minimise any risks in this respect.

The analysis and conclusions within this report are based upon the likely fire resisting performance of a complete assembly that is manufactured and installed in accordance with this document, and offered for fire resistance testing in 'perfect' condition. In practice, management procedures must be in place in any building where the door assemblies are installed, to ensure that no parts of the assembly are damaged or faulty. Further, the door must open and close without the use of undue force. The edge gaps/alignment of door leaves must be in accordance with the tolerances defined, herein, when the doors are closed. Any such shortfalls in respect to the condition of the door assemblies will invalidate the approval by IFC, and may seriously affect the ability of the assembly to provide the required level of fire resistance performance. Determination of what constitutes wear or damage, and any corrective actions in order to return door assemblies to the required condition, should only be carried out following consultation with the manufacturer and IFC.

This assessment considers the fire resistance performance of the door assemblies when tested with the leaves in the closed position, within the frame reveal; either retained by the latch, or self-closing device, or locked shut, as applicable. The door assemblies will only provide the assessed fire performance when in a similar configuration; and it is the responsibility of the building occupants/owner to ensure that this is the case.

When establishing the variations in the construction that can achieve the required fire resistance performance, International Fire Consultants Ltd follow the guidance given in BS.ISO/TR12470: 1998, *"Fire resistance tests - Guidance on the application and extension of results"*. This report does not purport to follow the guidance regarding direct or extended application of test results outlined in EN product standards, and the approvals herein should not be used as supporting evidence for CE marking.

## 6. VALIDITY

This assessment has been prepared based on International Fire Consultants Ltd's present knowledge of the products described, the stated testing regime and the submitted test evidence. For this reason anyone using this document after December 2018 should confirm its ongoing validity.

Prepared by:



**Mark Billingham**  
Senior Fire Safety Engineer  
International Fire Consultants Ltd. (IFC)

Checked by:



**David Cooper** BEng (Hons) AIMMM AIFireE  
Fire Safety Engineering Manager  
International Fire Consultants Ltd. (IFC)

## **APPENDIX A**

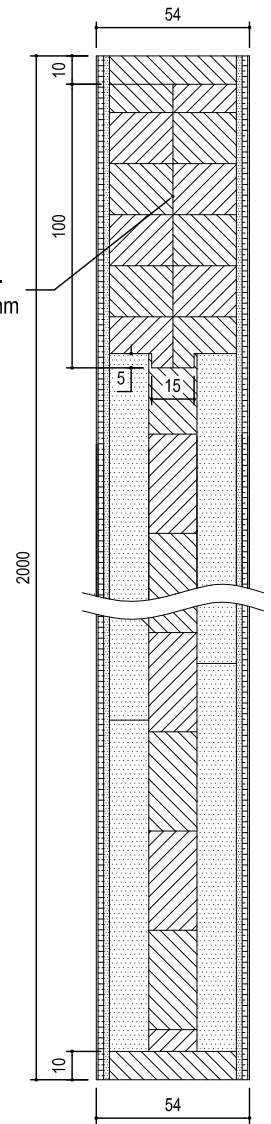
**PKF Global Ltd Door Leaf Details**

**Figures PAR/11439/01A:01 and 02**

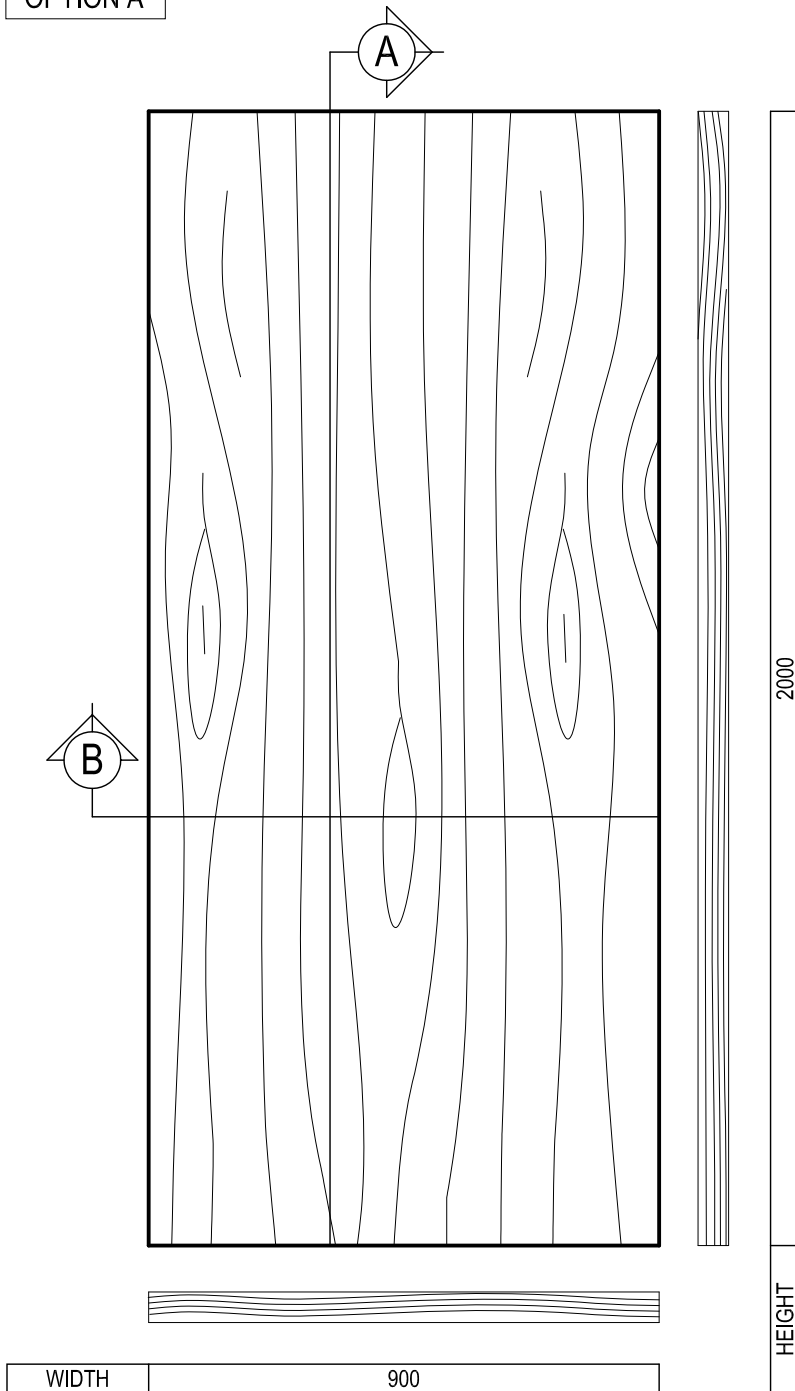
***The figures in this Appendix are not included  
in the sequential page numbering of this report***

# OPTION A

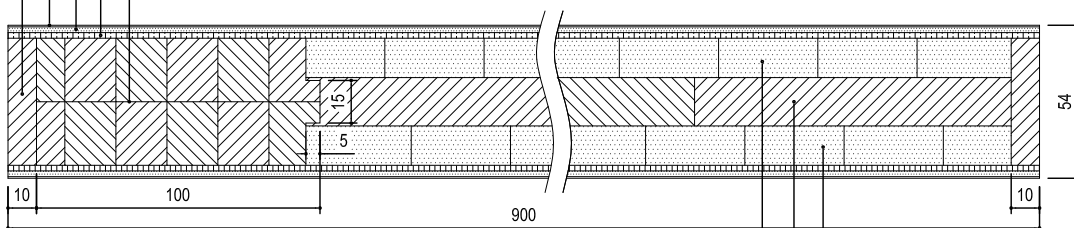
Type: Flush Door  
Door Thickness: 54 mm  
Species: MERANTI



Section: A



Solid lipping 10 mm  
Fancy Veneer 0.6 mm  
Cross Grain 1 mm  
Long Grain 3 mm  
Rail, Laminated Hardwood 100 mm



Section: B

Core - Falcata Albazia 13.9 mm  
Core - Any Hardwood 17 mm  
Core - Falcata Albazia 13.9 mm

This drawing is Copyright©  
Contractors must check all dimensions.  
Any discrepancies must be reported before  
work proceeds.  
Only work to dimensions stated on drawing.

## INTERNATIONAL FIRE CONSULTANTS LTD

20 Park Street  
PRINCES RISBOROUGH  
Buckinghamshire  
HP27 9AH  
United Kingdom  
Tel: +44 (0) 1844 275500  
Fax: +44 (0) 1844 274002  
Email: ifc@intfire.com  
Website: <http://www.intfire.com>

Field of Application Report  
PAR/11439/01 Revision A  
PKF Global Ltd  
Minimum 54mm Thick FD60  
Three Layer Core Door Leaves  
Installed in Timber Frames

Door Leaf Elevation  
& Sections  
Option A

Job number: 15353

Drawn by: CSP

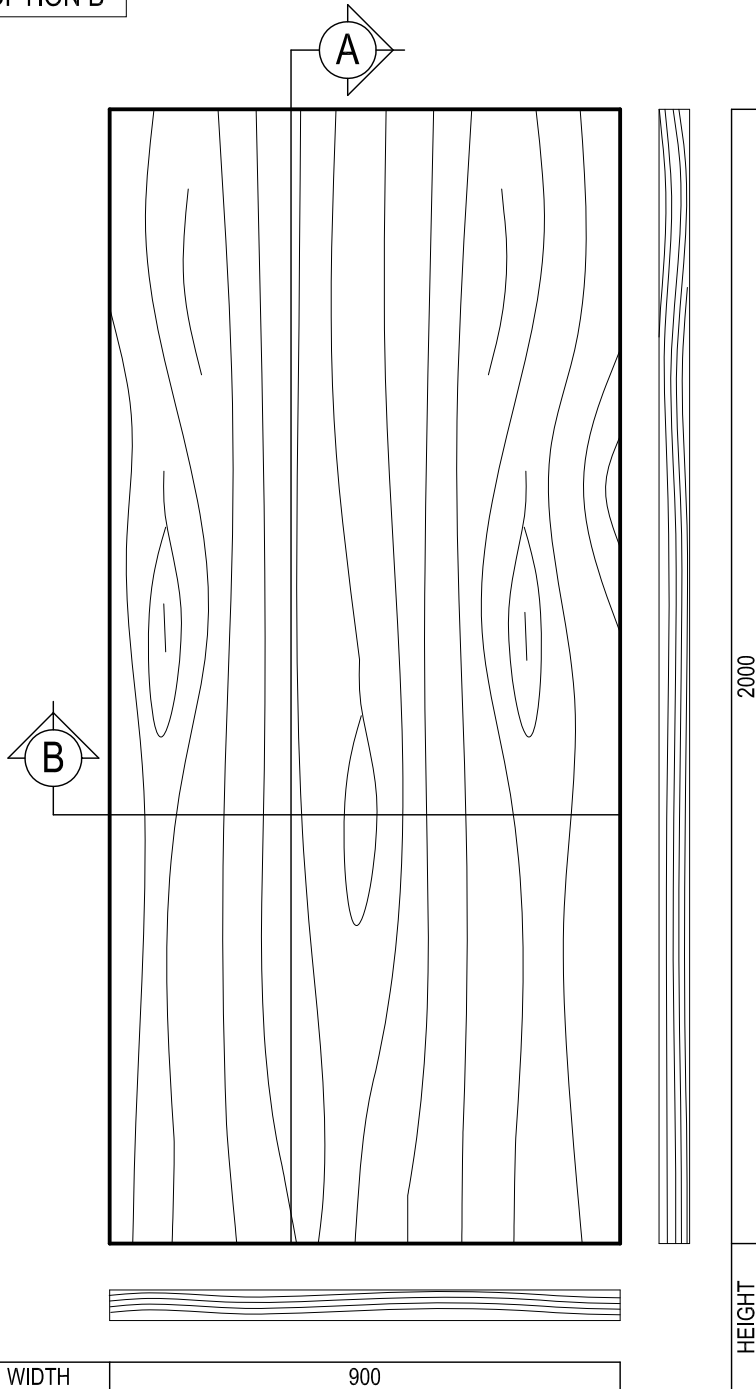
Checked by: DJC

Not To Scale

Drawn: Dec 2015

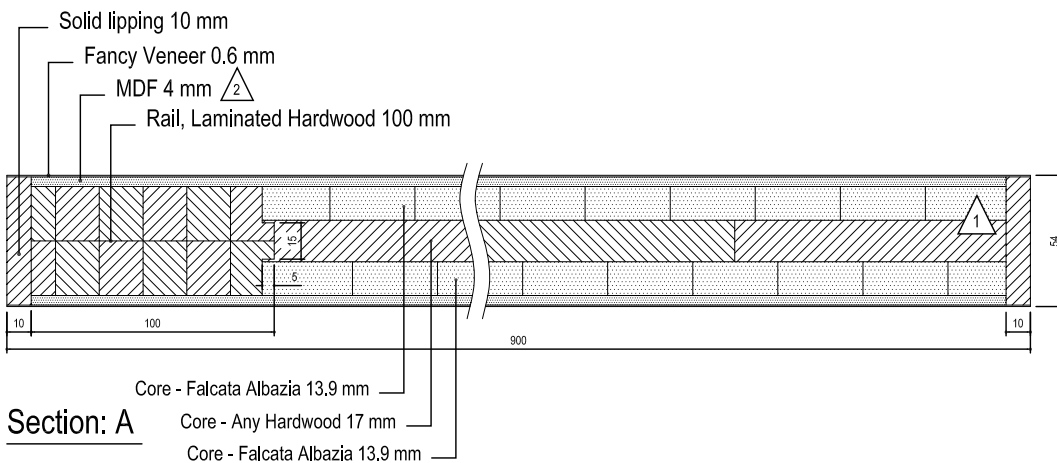
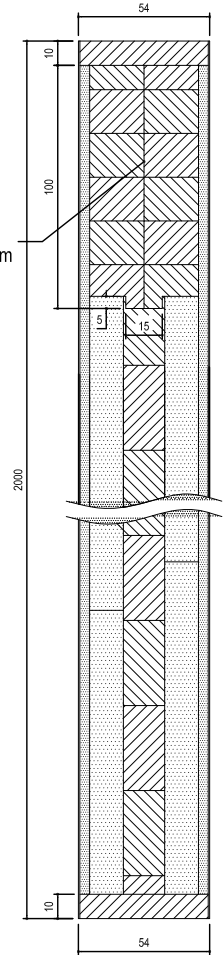
PAR/11439/01A:01

# OPTION B



Type: Flush Door  
Door Thickness: 54 mm  
Specie: MERANTI

Rail, Laminated -  
Hardwood 100 mm



This drawing is Copyright©  
Contractors must check all dimensions.  
Any discrepancies must be reported before  
work proceeds.  
Only work to dimensions stated on drawing.

## INTERNATIONAL FIRE CONSULTANTS LTD

20 Park Street  
PRINCES RISBOROUGH  
Buckinghamshire  
HP27 9AH  
United Kingdom  
Tel: +44 (0) 1844 275500  
Fax: +44 (0) 1844 274002  
Email: ifc@intfire.com  
Website: <http://www.intfire.com>

Field of Application Report  
PAR/11439/01 Revision A  
PKF Global Ltd  
Minimum 54mm Thick FD60  
Three Layer Core Door Leaves  
Installed in Timber Frames

Door Leaf Elevation  
& Sections  
Option B

Job number: 15353

Drawn by: CSP

Checked by: DJC

Not To Scale

Drawn: Dec 2015

PAR/11439/01A:02



## **APPENDIX B**

### **Assessed Leaf Size Envelopes**

**Figures PAR/11439/01A:03 and 04**

***The figures in this Appendix are not included  
in the sequential page numbering of this report***

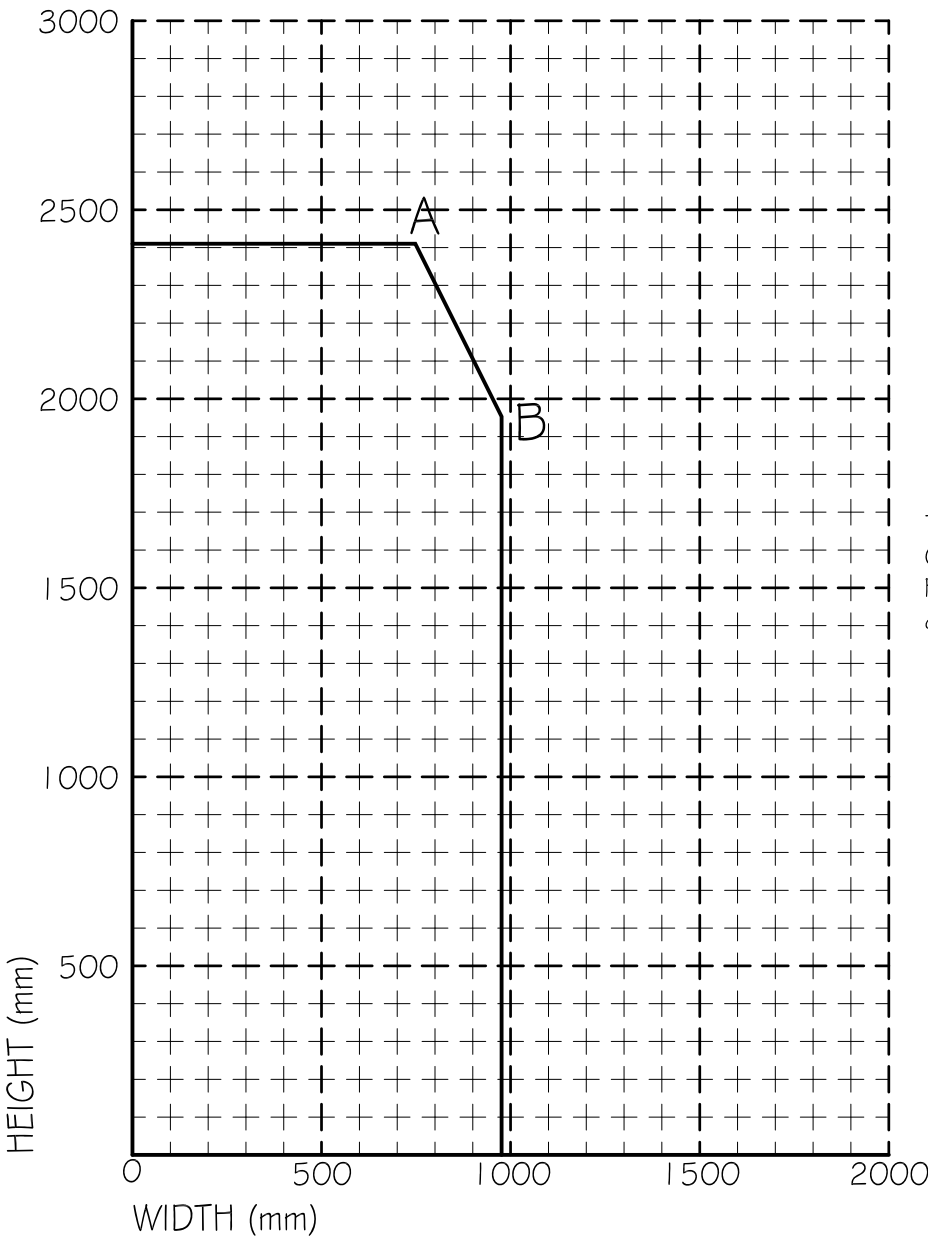
PROPOSED CONFIGURATION

LATCHED  
SINGLE ACTING  
SINGLE LEAF  
WITHOUT OVERPANEL

	A	B
Width	748	976
Height	2410	1953

LEAF SIZE ENVELOPE POINTS

REQUIRED INTEGRITY: 60 minutes



This figure forms part of International Fire Consultants Ltd's Assessment Report PAR/11439/01 Revision A, which contains full details of the assessed door construction.

This drawing is Copyright©  
Contractors must check all dimensions.  
Any discrepancies must be reported before  
work proceeds.  
Only work to dimensions stated on drawing.

**INTERNATIONAL FIRE  
CONSULTANTS LTD**

20 Park Street  
PRINCES RISBOROUGH  
Buckinghamshire  
HP27 9AH  
United Kingdom  
Tel: +44 (0) 1844 275500  
Fax: +44 (0) 1844 274002  
Email: ifc@intfire.com  
Website: <http://www.intfire.com>

Field of Application Report  
PAR/11439/01 Revision A  
PKF Global Ltd  
Minimum 54mm Thick FD60  
Three Layer Core Door Leaves  
Installed in Timber Frames

Envelope of Approved  
Door Leaf Sizes  
**LSASD**

Job number: 15353

Drawn by: CSP	Checked by: DJC
Not To Scale	Drawn: Dec 2015

PAR/11439/01A:03

ENVELOPE OF APPROVED LEAF SIZES

The above graph represents the envelope of approved leaf sizes for the proposed door leaf configuration.  
Any combination of leaf width and height that falls within the graph axes and the connecting line on the graph above are approved.  
POINT A represents the maximum leaf height and its associated width.  
POINT B represents the maximum leaf width and its associated height.

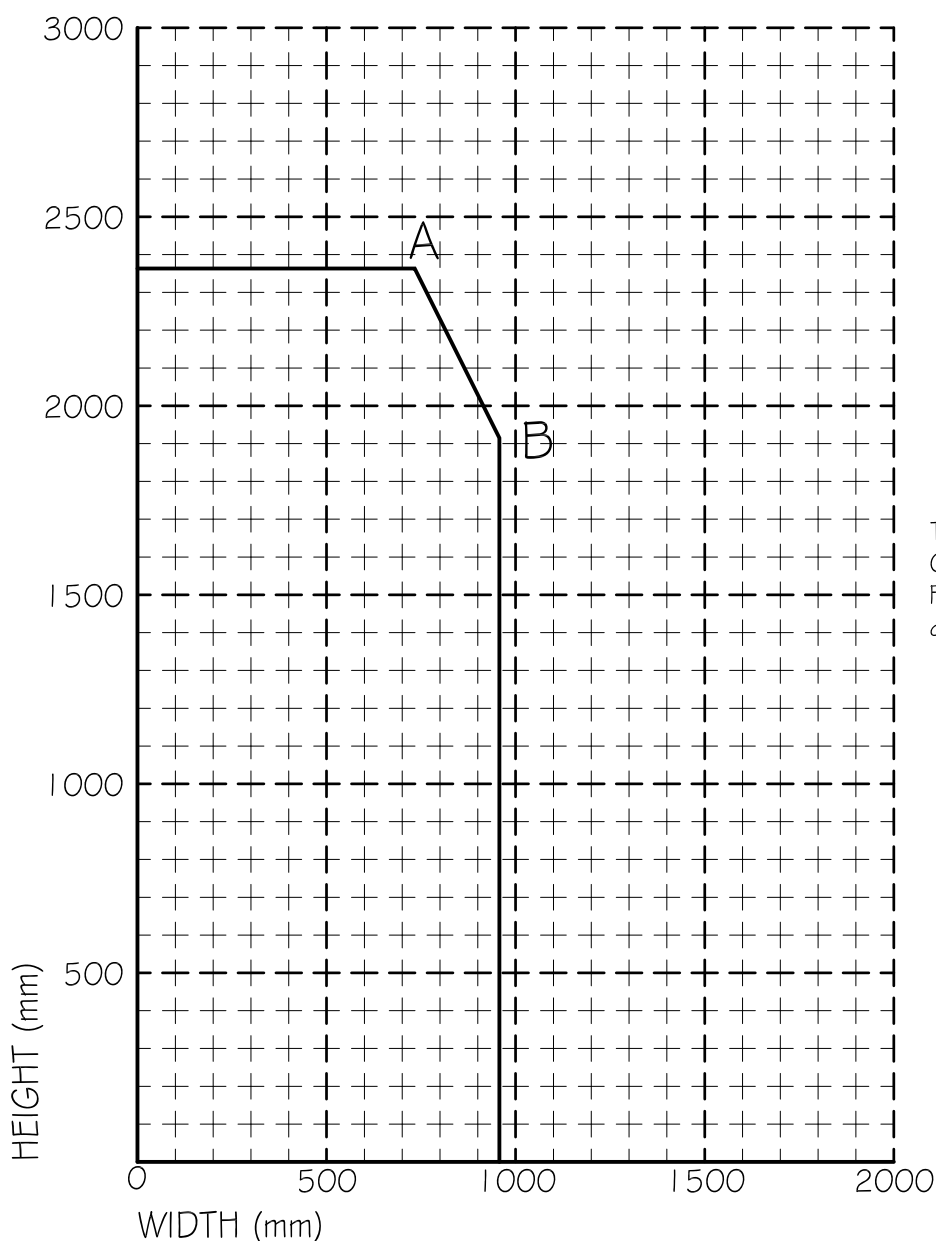
	A	B
Width	733	957
Height	2363	1915

LEAF SIZE ENVELOPE POINTS

## PROPOSED CONFIGURATION

UNLATCHED  
SINGLE ACTING  
SINGLE LEAF  
WITHOUT OVERPANEL

REQUIRED INTEGRITY: 60 minutes



This figure forms part of International Fire Consultants Ltd's Assessment Report PAR/11439/01 Revision A, which contains full details of the assessed door construction.

This drawing is Copyright©  
Contractors must check all dimensions.  
Any discrepancies must be reported before  
work proceeds.  
Only work to dimensions stated on drawing.

### INTERNATIONAL FIRE CONSULTANTS LTD

20 Park Street  
PRINCES RISBOROUGH  
Buckinghamshire  
HP27 9AH  
United Kingdom  
Tel: +44 (0) 1844 275500  
Fax: +44 (0) 1844 274002  
Email: ifc@intfire.com  
Website: <http://www.intfire.com>

Field of Application Report  
PAR/11439/01 Revision A  
PKF Global Ltd  
Minimum 54mm Thick FD60  
Three Layer Core Door Leaves  
Installed in Timber Frames

Envelope of Approved  
Door Leaf Sizes  
**ULSASD**

Job number: 15353

Drawn by: CSP

Checked by: DJC

Not To Scale

Drawn: Dec 2015

PAR/11439/01A:04

## ENVELOPE OF APPROVED LEAF SIZES

The above graph represents the envelope of approved leaf sizes for the proposed door leaf configuration.

Any combination of leaf width and height that falls within the graph axes and the connecting line on the graph above are approved.

POINT A represents the maximum leaf height and its associated width.

POINT B represents the maximum leaf width and its associated height.

## **APPENDIX C**

### **Summary of Fire Test Evidence**

## Summary of Fire Test Evidence

Test Report	Configuration Tested	Leaf Size	Test Standard	Results
CFR1204191	ULSASD	2000 x 900 x 54mm	BS476: Part 22: 1987	Integrity: 62 minutes Insulation: 62 minutes

**ULSASD** = Unlatched, Single Acting, Single leaf Doorset

## **APPENDIX D**

### **Advice Regarding CE Marking of Fire Resisting Doorsets**

## Advice Regarding CE Marking of Fire Resisting Doorsets

International Fire Consultants Ltd (IFC) have a duty of care to advise users of this report that the Harmonised Product Standard for fire resisting doorsets (EN 16034) was published in October 2014, completing the group of EN documents which relate to the CE marking of doorsets within the scope of the Construction Products Regulations that apply to all member states of the EU. The Official Journal of the European Union (OJEU) C378 Volume 6, dated 13 November 2015, includes the citation of EN 16034 and states that it will be a harmonized standard from 1 September 2016. The citation of EN 16034 also states that the coexistence period, where CE Marking of doorsets is voluntary, ends on 1 September 2019. CE marking of fire resisting doorsets will thus become mandatory during the current validity period of this report; hence the inclusion of this advice.

It should be noted that the Assessment and Verification of Constancy of Performance (AVCP) process to enable the CE marking of doorsets, can only be conducted by a Notified Certification Body, such as IFC Certification Ltd., and only applies to "fire resisting doorsets". The distinction between a doorset and a door assembly is important to note. The following definitions have been agreed by the *UK Fire Door and Doorset Industry Group*;

**doorset** – frame, finished door leaf or leaves, glazed where required, and their necessary hardware - including where appropriate any threshold strip; transom or side panels - fully machined needing no further site work other than possible re-assembly of factory-prepared component parts, and all placed on the market by one legal entity, for fixing in position in an opening in a wall.

**door assembly** – frame, door leaf or leaves and their necessary hardware - including where appropriate any threshold strip; transom or side panels - supplied as individual component parts, usually un-machined, and placed on the market by more than one legal entity, for incorporating into an opening in a wall. Door assemblies should conform to a tested or assessed specification provided by a door manufacturer and frequently supplied under an independent third party voluntary certification scheme.

Users of this report may be aware that the CE marking process is related to EN standards, and some may be mistaken in believing that the forthcoming requirement for CE marking of fire resisting doorsets does not apply if they only supply products that claim to comply with BS 476: Part 22:1987. This is not the case, and any fire resisting assemblies that are supplied as 'doorsets' (as defined above) must be CE marked - once the process becomes mandatory - and thus can only be based upon testing to EN1634-1.

It should also be noted that fitting of CE marked products, such as hardware and glass, (which are subject to different standards and procedures), to a 'fire door', even if it is of a design that has been independently type-tested to EN1634-1, (as part of development testing by the manufacturer), does NOT 'convert' the assembly into a CE marked 'doorset'. All items of the assembly must be tested, and the combinations approved, by a Notified Certification Body. The CE marking process also considers performance to other characteristics.

It is recommended that anyone using this report after 1 September 2016 should seek advice from IFC Certification Ltd, a UKAS accredited Notified Certification Body (NCB), [www.ifccertification.com](http://www.ifccertification.com), with regard to the CE marking process, and how it applies to doors approved in this report.

*The above advice is intended to help suppliers of products understand how the new CPR Regulations/EN Standards affect them. Although based on our current understanding of the requirements, it is not an authoritative interpretation of the Regulations/Standards, which is a matter for the courts. The guide explains the requirements in general terms, but it does not cover all the details. You should refer to the Regulations/Standards themselves for a full statement of the requirements. The Construction Product Regulation, 305/2011, is readily downloadable and gives valuable information on the responsibilities and duties of manufacturers and suppliers. EN16034 and other Standards can be obtained from BSI.*