CHILTERN INTERNATIONAL FIRE LTD (trading as BM TRADA)

Global Fire Resistance Assessment

CONFIDENTIAL

Report: Chilt/A13242 Revision B **Job Ref:** CNA/F14134

Sentry ProTech Doorsets for 30 Minutes Fire Resistance

Valid From: 25th June 2014 **Valid Until:** 29th November 2018

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BMTRADA

Sponsor:

Bo'ness

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Sentry Panel Products Ltd.

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BM TRADA – the new name for Chiltern International Fire Ltd.

From July 1st 2013, Chiltern International Fire Ltd. commenced trading under the name of its parent company BM TRADA and at the same time adopted a brand new visual identity.

Historically, the group has delivered its services through a number of individual companies: BM TRADA Certification Ltd, TRADA Technology Ltd, Chiltern International Fire Ltd. (including Chiltern Dynamics) and a network of international offices. Both BM TRADA Group and these individual companies will now trade under the same name - BM TRADA and adopt the new visual identity.

To coincide with this change, our Technical Reports, Test Reports, Products Assessments, company stationery and marketing collateral have been re-designed to carry the new branding and visual identity.

The validity of all documents previously issued by the individual companies including certificates, test reports and product assessments is unaffected by this change and a letter to this effect will be available to download from our website www.bmtradagroup.com.

About BM TRADA

With origins dating back to 1934, we have a deep history and services which are highly valued by our customers. We offer independent certification, testing, inspection, training and technical services around the world. In all these areas we continue to use industry-leading experts in their chosen fields to develop and deliver services – an ethos that has been at the heart of our approach since we began.

A recent review of our businesses and customers revealed that the individual identities sometimes make communications confusing, and that in an already complex business area, clarity and simplicity in communications is rare, but valued. It also revealed that a single identity and combined offer would help us strengthen our appeal.

With this in mind, we brought the companies together under the name BM TRADA and took the opportunity to create a fresh new visual identity.

We have modernised our image and combined our strengths. However, our values, our people and the integrity of our services remain the same. I hope you will welcome these changes and the improvements they will bring.

Jon Osborn Chief Operating Officer



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1 Introduction

This document constitutes a global assessment report relating to Sentry ProTech 30 minute fire resisting doorsets for Sentry Panel Products Ltd. The assessment uses established extrapolation and interpretation techniques in order to extend the scope of application by determining the limits for the design based on the tested constructions and performances obtained. The assessment is an evaluation of the potential fire resistance performance, if the elements were to be tested in accordance with BS EN 1634-1 and BS EN 1363-1: 1999.

The assessment is written for the purpose of national application in the United Kingdom or other jurisdictions accepting this approach. The assessment should not be used for the purposes of CE Marking or for claiming compliance with regulations outside the aforementioned areas of jurisdiction.

2 General Description of Construction

The basic tested construction for door leaves of this design comprises the following:

Element		Material	Dimensions (mm)	Min. Density (kg/m ³)
Stiles	& Rails	None fitted		O
Core		Mixed Pine (Elliotis/Radiata) 3-layer core comprising outer vertically orientated lamels and inner horizontal lamels	36 wide x 12 thick	450-500*
Facings		Poplar core 3 ply hardwood plywood	4 thick	450*
	Lippings	PU**	-	-
Adhesive Core Facings		WBP melamine**	-	-
		WBP melamine**	-	-
Lippings – all edges		Sapele	6 thick	640*

Notes:

* Stated density; accuracy agreed by laboratory. ** Stated by client; not checked by laboratory.

Leaf Sizes

Assessment for increased leaf dimensions is based on the design's performance and the characteristics exhibited during test. Data sheets specifying the maximum assessed leaf sizes and graphs showing the permitted gradient between maximum height and width are contained in appendix D.

4 Configurations

Unequal leaf double doorsets are covered by this assessment with no restriction on the smaller leaf dimension. Doorsets containing leaves with smaller dimensions than those stated are deemed to be less onerous and are therefore automatically covered.



Based on the test evidence listed in appendix A, this assessment covers the following doorset configurations:

Abbreviation	Description
LSASD & ULSASD	Latched & unlatched, single acting, single doorset
DASD	Double acting, single doorset
LSADD & ULSADD	Latched & unlatched, single acting, double doorset
DADD	Double acting, double doorset

5 Leaf Size Adjustment

Sentry ProTech door leaves may be altered as follows:

Element	Reduction
Leaf	The manufactured size of the leaf may be reduced in height or width without restriction, providing the leaf is re-lipped in accordance with section 9
Lipping	The dimensions stated in section 9 may be reduced by 20% for fitting purposes

6 Overpanels

6.1 Solid

Overpanels of the same construction as the door leaves may be used only when separated by a transom. The overpanel must be fully contained within the door frame (see following diagram).

The transom is required to separate the leaf heads from the overpanel, and must be to the same specification as the door frame (see the note under the table in section 8.1).

Door frame joints must utilise one of the following four methods: mortise and tenon joints; half lapped joints; mitre joints; butt joints (see section 8.3).

All methods require joints to be tight, with no gaps, and require mechanical fixing with the appropriate size ring shank nails or screws. Butt joints must be additionally bonded with urea formaldehyde or equivalent.

Overpanels must be fixed by screwing through the rear of the frame with steel screws passing at least 30mm into the centre line of the overpanel. Fixings must be no more than 100mm from each corner and a maximum of 250mm centres in between.

The intumescent seals specified for the jambs in appendix D must also be fitted to all four edges of the overpanel. The seals may be fitted in the overpanel edges or alternatively in the frame reveal. A maximum 2mm gap is permitted between the edge of the overpanel and the frame reveal.

Maximum overpanel dimensions are as follows:

Configuration	Height (mm)	Width (mm)
Single doorsets	2000	Overall door width
Double doorsets	1500	Overall door width



Note: Drawing is representative of doorset construction only; actual construction must comply with the specification contained in this document.

6.2 Glazed Fanlights

Doorsets with timber frames including a transom may include a glazed fanlight. The timber frame and glazing beads must be hardwood with a minimum density of 640kg/m^3 , whilst the frame section for the transom must be a minimum of 70mm x 44mm. All other elements of the timber door frame and transom assembly must comply with the specifications contained in section 8.

The maximum assessed fanlight dimensions are detailed in the table below, subject to the following restriction:

• The glazing system and glass must be able to demonstrate adequate performance when tested as a window or screen in accordance with BS EN 1634-1, at the pane dimensions to be installed.



Note: Drawing is representative of doorset construction only; actual construction must comply with the specification contained in this document.



7 Glazing

7.1 General

The testing conducted on the Sentry ProTech doorset has demonstrated that the design is capable of tolerating glazed apertures, whilst providing a margin of over performance. Glazing is therefore acceptable within the following parameters:

The maximum assessed glazed area is 1.08m².

7.2 Assessed Glazing Systems

The glazing system must be one of the following tested proprietary systems:

Product	Manufacturer	Max. Area (m ²)
1. MAP Tape*	Lorient Polyproducts Ltd.	0.7
2. Fireglaze 30	Sealmaster Ltd.	1.08
3. Therm-A-Strip 30	Intumescent Seals Ltd.	1.08
4. Firestrip 30	Hodgsons Sealants Ltd.	1.08
5. Flexible Figure 1 (FF1)	Lorient Polyproducts Ltd.	0.5
6. System 36+	Lorient Polyproducts Ltd.	0.5
7. Pyroglaze 30	Mann McGowan Ltd.	0.5
8. R8193	Pyroplex Ltd.	0.5

* 10mm high x 2mm thick, fitted between the glass and bead on both faces.

7.3 Assessed Glass Products

	Product	Manufacturer	Thickness (mm)	Max. Area (m ²)
	1. Pyroshield	Pilkington Glass Ltd.	6&7	1.08
	2. Pyroshield 2	Pilkington Glass Ltd.	6 & 7	1.08
	3. Pyran S	Schott Glass Ltd.	6	1.08
	4. Pyroguard EW30	CGI Ltd.	7	0.87
	5. Pyrobelite 7	AGC Flat Glass UK Ltd.	7	1.08
19	6. Pyrodur 30-104	Pilkington Glass Ltd.	7	1.08
$\langle \gamma \rangle$	7. Pyrodur 60-10	Pilkington Glass Ltd.	10	1.08
	8. Pyroguard EW MAXI	CGI Ltd.	11	0.52
	9. Pyrobelite 12	AGC Flat Glass UK Ltd.	12	1.08
	10. Pyroguard EI30	CGI International	15	1.08
	11. Pyrostop 30-10	Pilkington Glass Ltd.	15	1.08
	12. Pyrobel 16	AGC Flat Glass UK Ltd.	16	1.08

Assessed glass types are as follows:

Note: All glass types must be fitted strictly in accordance with the manufacturers' tested details/installation requirements, particularly with reference to suitable tolerances for expansion of the glass pane.



7.4 Glazing Beads & Installation

Glazing beads must be from hardwood as specified in the following table:

Material	Profile	Min. Density (kg/m³)	Application
Hardwood	Splayed	640	All proprietary systems specified in section 7.2 and detailed in appendix B
Hardwood	Square	640	Proprietary systems 1-4 as specified in 7.2 and glass types 5-12 as specified in 7.3

An alternative to the proprietary splayed bead systems is a square hardwood bead which may be used either with or without a 3mm high x 3mm deep quirk (see appendix B for diagram of profile). Square beads may be used with glass types 5 - 12, and with systems 1 - 4 listed in section 7.2.

Timber for glazing beads must be straight grained, joinery quality hardwood, free from knots, splits and checks.

The shape of glazed apertures is not restricted providing the glazing system can accommodate the profile.

Glazed apertures must not be nearer than 100mm to any leaf edge. Multiple apertures are acceptable up to the maximum approved area with a minimum dimension of 80mm separating the apertures.

Glazing beads must be retained in position with 40mm long x 1.5mm diameter steel pins or 40mm long No. 8 screws, inserted at $35 - 40^{\circ}$ to the vertical at no more than 50mm from each corner and at 150mm maximum centres.

Hardwood beads \leq 50mm wide may be applied across the glass face with glass types 4 - 11 using one of the following methods:

- Intumescent mastic/silicon tested for glazing applications to BS EN 1634-1.
- 1 2mm thick acrylic high tack/high shear glazing tape tested for glazing applications to BS EN 1634-1.

Sectional drawings detailing the assessed glazing systems are depicted in appendix B.



8 Door Frames

8.1 Door Frame Construction

Door frames for Sentry ProTech doorsets must be timber and constructed as follows:

Material	Section Size (mm)	Min. Density (kg/m³)
Softwood or Hardwood	70 x 32	510

Notes:

- 1. If the doorset features a glazed fanlight, the door frame must be hardwood with a minimum section of 70mm x 44mm and of minimum density 640kg/m³.
- 2. All door frame timber must be straight grained, joinery quality, free from knots, splits and checks.
- 3. Rounded or rebated quirk edges to door frames are not permitted.
- 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.
- 5. Frame joints must be mortice and tenoned, mitred, half lapped or butt jointed, with no gaps and must additionally be mechanically fixed with appropriately sized ring shank nails or wood screws.

The following diagram depicts the assessed frame profiles and dimensions:





8.2 Door Frame Installation

The following diagrams indicate acceptable and unacceptable door frame installations:



- 1. Drawing is representative of door frame installation only; actual installation must be as the text within this document specifies. See section 16 for sealing to structural opening specification.
- 2. For the shadow detail depicted above (top right), the sub-frame material must be the same material as approved for the door frame, or a non-combustible board, tightly fitted and with no gaps.

8.3 Door Frame Joints





9 Timber Lippings

Sentry ProTech doorsets must be lipped on all edges in accordance with the following specification:

Material	Size (mm)	Min. Density (kg/m³)
Straight grained,	1. Flat = 6 - 11 thick with a maximum of 2mm profiling permitted at corners of lipping (see diagrams in section 8.1).	
hardwood, free from knots, splits and checks	2. Rounded = 8 - 18 thick with a radius matching the distance between leaf edge & floor pivot (see diagrams in section 8.1).	640
	3. Rebated = Not permitted.	

Notes:

- 1. Doors require lipping on all edges.
- 2. A 2.5° chamfer is permitted to the lipping at the leading edge of leaves providing the door gaps meet the requirements of section 14.

10 Leaf Facing Materials

10.1 Primary Facings

The tested facing was 4mm thick plywood. At this thickness, the facing is considered to have limited influence on structural stability and resistance to burn-through. MDF and particleboard meeting the following specification are assessed in addition to plywood.

Material	Dimensions (mm)	Min. Density (kg/m³)
Poplar core 3 ply hardwood plywood	4 thick	450*
MDF	4 thick	750
Chipboard	4 thick	680

* Stated density.

10.2 Decorative & Protective Facings

The following additional facing materials are permitted for this door design since they would degrade rapidly under test conditions without significant effect:

Facing Material	Maximum Permitted Thickness (mm)
Paint	0.5
Timber veneers	2
PVC	2
Plastic laminates	2
Decorative paper/non-metallic foil	0.4

Notes:

- 1. Metallic facings are not permitted (except push plates and kick plates).
- 2. The door leaf thickness must not be reduced to accommodate the finish.
- 3. Materials must not conceal intumescent strips.
- 4. PVC and plastic laminates must not be applied to the edges of leaves.



10.3 Grooves

Both sides of Sentry ProTech door leaves may be grooved to the following specification. Grooves may coincide with the top and bottom of glazed apertures if required:

Element	Details	
Max. groove size (mm)	5 wide :	x 3 deep
Proximity to leaf edges (mm)	Horizontal grooves	≥ 95 from bottom & ≥ 90 from top
	Vertical grooves	≥ 90 from sides
Groove spacing (mm)	Maximum 7No. horizontal vertical grooves per leaf f no closer than 90 apart. V may intersed	grooves & maximum 4No. ace. The grooves must be ertical & horizontal grooves ct each other.
Orientation	Vertical or	r horizontal
Configuration	Latched & unlatched, sing double lea	le & double acting, single & af doorsets
Leaf size range (mm)		All
Intumescent seal dimensions (mm)		

11 Intumescent Materials

The intumescent materials tested and assessed for this doorset design are as follows:

	Application	Location	Product/Manufacturer
	Edge seals	Fitted in the frame jambs or leaf edges	 SLS-PLA-103 – Halspan Ltd. 500P – Mann McGowan Ltd. Pyroplex FO8700 – Pyroplex Ltd.¹ Type 617 – Lorient Polyproducts Ltd.¹
	Hinges	Underneath both hinge blades	 2mm Interdens – Dufaylite Developments Ltd. 2mm MAP paper – Lorient Polyproducts Ltd. 2mm G30 – Sealmaster Ltd. 2mm Therm-A-Strip – Intumescent Seals Ltd. 2mm SLS-PAD-106 – Halspan Ltd. 1mm SLS-PAD-103 – Halspan Ltd.
	Lock/latches	Under forend & keep	 2mm MAP paper – Lorient Polyproducts Ltd. 2mm G30 – Sealmaster Ltd. 2mm Therm-A-Strip – Intumescent Seals Ltd. 2mm SLS-PAD-106 – Halspan Ltd. 1mm Interdens – Dufaylite Developments Ltd.
	Top pivots & flush bolts	Lining all sides of the mortices	 2mm Interdens – Dufaylite Developments Ltd. 2mm MAP paper – Lorient Polyproducts Ltd. 2mm Therm-A-Strip – Intumescent Seals Ltd. 2mm G30 – Sealmaster Ltd. 2mm SLS-PAD-106 – Halspan Ltd.

The seal specification for each configuration is shown in appendix D.

¹ Pyroplex Ltd. and Lorient Polyproducts Ltd. intumescent perimeter edge seals are only permitted with single leaf doorsets. For double leaf doorsets, assessed Halspan intumescent perimeter edge seals must be used.

The legal validity of this report can only be claimed on presentation of the complete report.

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12 Adhesives

The following adhesives must be used in construction:

Element	Product
Core	WBP melamine
Facings	WBP melamine
Lippings	PVA, PU or UF

13 Hardware

13.1 General

The following section details the permitted scope and constraints for fitting hardware to this door design. The following items of hardware must also bear the CE Mark:

- Latches & locks: Test Standard EN 12209
- Single axis hinges: Test Standard EN 1935
- Controlled door closing devices: Test Standard EN 1154
- Electrically powered hold-open devices: Test Standard EN 1155
- Door co-ordinators: Test Standard EN 1158
- Emergency exit hardware: Test Standard EN 179
- Panic exit hardware: Test Standard EN 1125.

13.2 Tested Hardware

The following hardware has been successfully incorporated in the tests on the Sentry ProTech doorset design:

	Element	Product
	Hinges	4No. Halspan R30 stainless steel bearing butt type - Product Reference HIN- BSS-104
215	Closer	Halspan R30 Eco closer - overhead type – Product Reference CLR-AGN-100 Halspan R60 Eco closer – overhead type – Product Reference CLR-AGN-101
	Latch	Halspan R30 stainless steel mortice latch - Product Reference LCK-BSS-200 Halspan R30 Eurospec Easi T latch – Product Reference LCK-BSS-100
	Furniture	Aluminium lever type handle
	Flush Bolts	Carlisle Brass - Product Reference AA79CP

13.3 Additional & Alternative Hardware

13.3.1 Latches & Locks

Latches and locks must either be as tested, or alternatively components with the following specification are acceptable:

Maximum forend and strike plate dimensions	235mm high by 25mm wide by 4mm thick
Aaximum body dimensions 165mm high by 100mm wide by 18mm thick	
Intumescent protection	See section 11
Materials	All parts essential to the locking/latching action (including the latch bolt, forend and strike) to be steel
Location	800 – 1200mm from the threshold

13.3.2 Hinges

Sentry ProTech leaves <2400mm high must be hung on a minimum of 3 hinges. Leaves \geq 2400mm high must fit 4 hinges. Hinges with the following specification are acceptable:

Blade height	90 – 120mm
Blade width (excluding knuckle)	30 – 35mm
Blade thickness	2.5 - 4mm
Fixings	Minimum of 4No. 30mm long No. 8 or No. 10 steel wood screws per blade
Materials	Steel, stainless steel or brass with a melting point ≥800°C
3 hinges	Top: 150 – 180mm from the head of the leaf Middle: Equispaced between top and bottom hinges Bottom: 180 – 250mm from the foot of the leaf
Hinge positions (to top of blade) 4 hinges	Top: 150 – 180mm from the head of the leaf 2 nd & 3 rd : Equispaced between top and bottom or 2 nd hinge 250mm from top hinge and 3 rd hinge equally spaced between 2 nd and bottom hinge Bottom: 180 – 2500 from the foot of the leaf
Intumescent protection	See section 11

13.3.3 Automatic Closing

Automatic closing devices must either be as tested or components of equal specification that have demonstrated contribution to the required performance of this type of 30 minute doorset design, when tested to BS EN 1634-1.

Note: The top pivots to floorspring assemblies must be protected with intumescent gaskets (see section 11), or alternatively the manufacturers tested intumescent gasket pack.

13.3.4 Door Security Viewers

Door security viewers with brass or steel bodies of a diameter less than or equal to 15mm may be used provided that the through-hole is bored tight to the case of the

viewer (maximum tolerance +1mm). Lenses must be glass and the item must be bedded onto a tested intumescent mastic.

13.3.5 Flush Bolts

Flush bolts may be incorporated centrally into the top and bottom of one meeting edge, providing the following maximum dimensions are not exceeded and the components are fitted opposite the edge fitted with intumescent strips:

• 200mm long x 20mm deep x 20mm wide

Flush bolts must be steel and the mortice must be as tight to the mechanism as is compatible with its operation. All edges of the mortice must be protected with intumescent gaskets as specified in section 11. Alternatively the hardware manufacturers tested gaskets may be used.

See diagram below for example of intumescent protection to flush bolt:



13.3.6 Pull Handles

These may be surface-fixed to the door leaf provided that they are steel or brass and the length is limited to 1200mm between the fixing points. No additional intumescent protection is required provided that the hole for the bolt through the leaf is tight.

13.3.7 Push Plates/Kick Plates

Face-fixed hardware such as push plates and kick plates may be fitted to the doorsets. These items of hardware are permitted up to a maximum of 20% of the door leaf area if mechanically fixed and a maximum of 30% if bonded with a contact or other thermally softening adhesive. Plates must not return around the door edges.

13.3.8 Panic Hardware

Panic hardware 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.



13.3.9 Air Transfer Grilles

Air transfer grilles may be fitted providing the product has suitable test evidence to BS EN 1634-1 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 0.2m² and must be deducted from the area of glazing, if both elements are fitted.

Smoke control as defined by the performance criteria set out in BS 476: Part 31: Section 31.1 and BS EN 1634-3: 2004 cannot be claimed for a doorset fitted with an air transfer grille(s).

13.3.10 Acoustic, Weather & Dust Seals

Silicon based flame retardant acoustic, weather and dust seals may be fitted to this doorset 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.

13.3.11 Threshold Seals

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

Product Manufacturer IS8010si Lorient Polyproducts Ltd. RP8Si Raven Products Ltd.		
IS8010si Lorient Polyproducts Ltd. RP8Si Raven Products Ltd.	Product	Manufacturer
RP8Si Raven Products Ltd.	IS8010si	Lorient Polyproducts Ltd.
	RP8Si	Raven Products Ltd.
Schall-Ex Duo L-15 Athmer oHG	Schall-Ex Duo L-15	Athmer oHG
NOR810, NOR810S, NOR810dB+ Norsound Ltd.	NOR810, NOR810S, NOR810dB+	Norsound Ltd.
SLS-DRP-100 Halspan Ltd.	SLS-DRP-100	Halspan Ltd.

13.3.12 Letter Boxes/Plates

Letter boxes/plates may be fitted providing the product has demonstrated contribution to the required integrity performance of this type of doorset design, when tested to BS EN 1634-1, when installed within a timber based doorset of comparable thickness. Margins to the leaf edges must remain as detailed for glazing. The position of the letter box/plate will be dictated by the pressure regime tested in the proving evidence (normally below mid-height).

14 Door Gaps

For fire resistance performance, door gaps and alignment tolerances must fall within the following range:

Location	Dimensions
Door edge gaps	A minimum of 2mm and a maximum of 4mm
Alignment tolerances	Leaves must not be proud of each other or from the door frame by more than 1mm
Threshold	10mm between bottom of leaf and top of floor covering

15 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 50mm. It is not necessary to fix the frame head, although packers must be inserted.

16 Sealing to Structural Opening

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





Guidance for methods of sealing the frame to structural opening gap is also given in BS 8214: 2008, "Code of practice for fire door assemblies", which may be referred to where appropriate.

Note: Drawings are representative of doorset construction only; actual construction must comply with the specification contained in this document.

17 Insulation

Insulation performance may be claimed for a doorset to this design meeting the following:

Туре	Details
Partially insulating	Doorsets incorporating up to 20% of non-insulating glass
Fully insulating	Unglazed doorsets or doorsets fitted with 30 minute insulating glazing (e.g. Pyrostop 30-10 or Pyrobel 16)

18 Smoke Control

18.1 General

If the doorset design is required to provide a smoke control function to comply with Building Regulations, in the absence of a suitable pressurisation system, the doorset must meet one of the following criteria:

- (a) have a leakage rate not exceeding 3m³/m/hour (head and jambs only) when tested at 25Pa under BS 476 Fire tests on building materials and structures, Section 31.1 - Methods for measuring smoke penetration through doorsets and shutter assemblies, Method of measurement under ambient temperature conditions; or
- (b) meet the additional classification requirement of Sa when tested to BS EN 1634-3: 2004 - Fire resistance tests for door and shutter assemblies, Part 3 – Smoke control doors.

Smoke seals or combined intumescent/smoke seals that are fitted to the door to achieve the performance requirements specified above must have been tested in accordance with the associated test method. Providing the smoke seals, any interruptions, door gaps, and the type/configuration of the doorset are consistent with the detail tested, the doorset will comply with current smoke control legislation under Approved Document B; and a suffix 'S' or 'Sa', as appropriate, may be added to the designation. Any other components installed where smoke leakage may occur must also be taken into account.

Note: The incorrect specification and fitting of smoke seals may impair the operation of a doorset and therefore compromise the fire resistance performance. Advice should be sought from the seal manufacturers regarding the correct specification and installation of smoke seals or combined smoke and intumescent seals.

Further Considerations

Note that there is other guidance available, including BS EN 9999-2008 - *Code of practice for fire safety in the design, management and use of buildings,* which may impose different or additional requirements, such as consideration of the gap between door leaf and threshold.

Responsibility for the appropriate smoke sealing specification and performance of the doors should be agreed between the relevant parties (i.e. specifier, manufacturer, contractor) prior to commencing manufacture and/or installation.



19 Conclusion

If Sentry ProTech doorsets constructed in accordance with the specification documented in this global assessment were to be tested in accordance with BS EN 1634-1 and BS EN 1363-1, it is our opinion that they would provide a minimum of 30 minutes integrity and insulation (subject to section 17).

20 Declaration by the Applicant

- 1) We the undersigned confirm that we have read and comply with obligations placed on us by FTSG Resolution No. 82: 2001.
- 2) We confirm that the component or element of structure, which is the subject of this assessment, has not to our knowledge been subjected to a fire test to the Standard against which this assessment is being made.
- 3) We agree to withdraw this assessment from circulation should the component or element of structure be the subject of a fire test to the Standard against which this assessment is being made.
- 4) We are not aware of any information that could adversely affect the conclusions of this assessment.
- 5) If we subsequently become aware of any such information, we agree to ask the assessing authority to withdraw the assessment.

Signed:

Name:

For and on behalf of: Sentry Panel Products Ltd.

21 Limitations

The following limitations apply to this assessment:

- 1) This assessment addresses itself solely to the elements and subjects discussed and does not cover any other criteria. All other details not specifically referred to should remain as tested or assessed.
- 2) This assessment is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available, BM TRADA reserves the right to withdraw the assessment unconditionally, but not retrospectively.
- 3) This assessment has been carried out in accordance with Fire Test Study Group Resolution No. 82: 2001.
- 4) Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
- 5) This assessment relates only to those aspects of design, materials and construction that influence the performance of the element(s) under fire resistance test conditions. It does not purport to be a complete specification ensuring fitness for purpose and long-term serviceability. It is the responsibility of the client to ensure that the element conforms to recognised good practice in all other respects and that, with the incorporation of the guidance given in this assessment, the element is suitable for its intended purpose.

22 Validity

- 1) The assessment is initially valid until 29th November 2018, after which time it must be submitted to BM TRADA for re-appraisal.
- 2) This assessment report is not valid unless it incorporates the declaration given in Section 20, duly signed by the applicant.



Appendix A

Performance Data

Report No.	Configuration	Leaf Size (mm)	Test Standard	Performance	(mins)
				Integrity	30
RF13196	ULSADD	2440x915x44	BS EN 1634-1	Insulation	30
CTICM Test	A: LSASD (7mm Pyroguard)	2040x925x44	BS EN 1634-1 & BS EN 1363-1	A: Integrity	27 ²
06-V-252 ¹	B: LSASD (11mm Pyroguard)			B: Integrity	36
	A: LSASD A: 2130x915x44		BS EN 1634-1 &	A: Integrity	37
FEP/F14056	B: LSASD	B: LSASD B: 2030x915x44	BS EN 1363-1	B: Integrity	33

Notes:

¹ In conformance with section 5.2.2.1 of BS EN 13501-2, the samples were not evaluated for thermal insulation; test data is used to support assessment of un-insulating and partially insulating glass products in addition to the insulating glass tested with RF13196.

² Failure was recorded at the latch position; no failure was reported relating to the glass prior to blocking off the sample at 32 minutes.



Appendix B Proprietary 30 Minute Glazing Systems





Assessed Square Glazing Bead Profiles

(The following square bead profile may be used as an alternative to the splayed beads detailed above - refer to section 7 for glazing system and glass restrictions).



Appendix C

Revisions

	Rev.	BM TRADA Ref.	Date	Description	
	А	14047	08.04.14	Additional glazing options based on CTICM Test 06-V-252.	
	В	14134	25.06.14	Based on test report referenced BMT/FEP/F14056, the following items have been assessed for inclusion: Pyroplex & Lorient perimeter intumescent edge seals for single leaf doorsets; maximum glazed area increased from $0.5m^2$ to $1.08m^2$; 1mm thick hinge & lockset protection; PVA adhesive for lippings; 40mm long x 1.5mm diameter pneumatically fired pins for fixing glazing beads and the inclusion of feature grooves (with limitations) as an option.	
C	spandon permission				

The legal validity of this report can only be claimed on presentation of the complete report.

Y?

Appendix D

Data Sheets for:

Sentry Panel Products Ltd.

Sentry ProTech

30 Minute Fire Resisting Doorsets



Sentry ProTech – 30 Minute Fire Resisting Doorsets







Sentry ProTech – 30 Minute Fire Resisting Doorsets – Pyroplex Seals

Latched & Unlatched, Single & Double Acting, Single Doorsets





Sentry ProTech – 30 Minute Fire Resisting Doorsets – Lorient Seals

Latched & Unlatched, Single & Double Acting, Single Doorsets





Sentry ProTech – 30 Minute Fire Resisting Doorsets

Latched & Unlatched, Single & Double Acting, Double Doorsets



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