



CONFIDENTIAL

**Report: Chilt/CR12065
Revision A**

**Resistance to fire classification report for
two glazed doorsets, incorporating
Vistamatic VS2 secure vision panels in
accordance with BSEN 13501-2: 2007
+A1: 2009**

Date of report: 17th August 2012

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*This classification report consists of eight
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1 Introduction

This resistance to fire classification report defines the classification assigned to the doorsets Vistamatic VS2 secure vision panels, in accordance with the procedures given in BSEN 13501-2: 2007 +A1: 2009.

2 Details of classified element

2.1 Type of function

The doorsets incorporating Vistamatic VS2 secure vision panels are defined in clause 7.5.5 of BSEN 13501-2 as a fire doorset assemblies. Their function is to resist fire in respect of the fire performance characteristics given in clause 5 of BSEN 13501-2.

2.2 Description

The doorsets are described in the test report in support of this classification detailed in clause 3.

3 Test reports and test results in support of classification

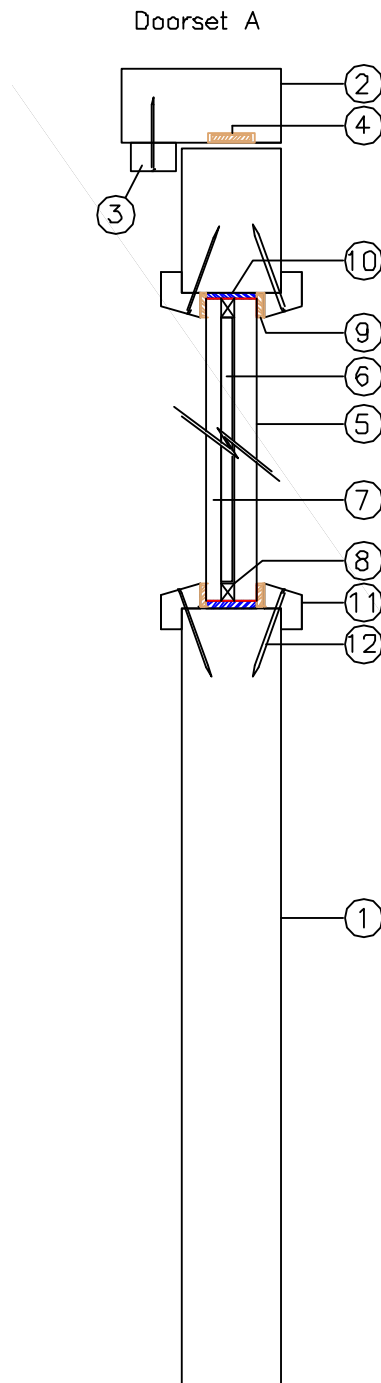
3.1 Summary of test report

This classification report is supported by the following test report:

Test laboratory	Test sponsor	Test report ref	Test method	Test date
Chiltern International Fire Ltd Notified body No: 1314	Vistamatic Ltd	Chilt/RF12065 (Revision B)	BSEN 1634-1: 2008 and BSEN 1363-1: 1999	10 th July 2012

The leaf of both doorsets, measured overall 2100mm high x 1140mm wide x 44mm thick, and were hung in European Redwood timber frames. Both doorsets incorporated two glazed apertures. The apertures were glazed with Vistamatic VS2 secure vision panels. The overall aperture sizes of the left doorset, designated doorset A, measured 1006mm high x 506mm wide, and 1506mm high x 406mm wide. The overall aperture sizes of the right doorset, designated doorset B, measured 1510mm high x 410mm wide, and 1010mm high x 510mm wide. The doorsets included Lorient intumescent strip to the frame reveal, with additional hardware protection of 1mm thick Dufaylite Interdens. The glazing of doorset A included Mann McGowan Pyroglaze 30 intumescent and Norseal acrylic mastic, and the glazing of doorset B included Norseal Graphite Intumescent and Norseal Intumescent liner. All vision panels included Norseal graphite sheet fitted around the spindle, lining the aperture in the outer glass layers.

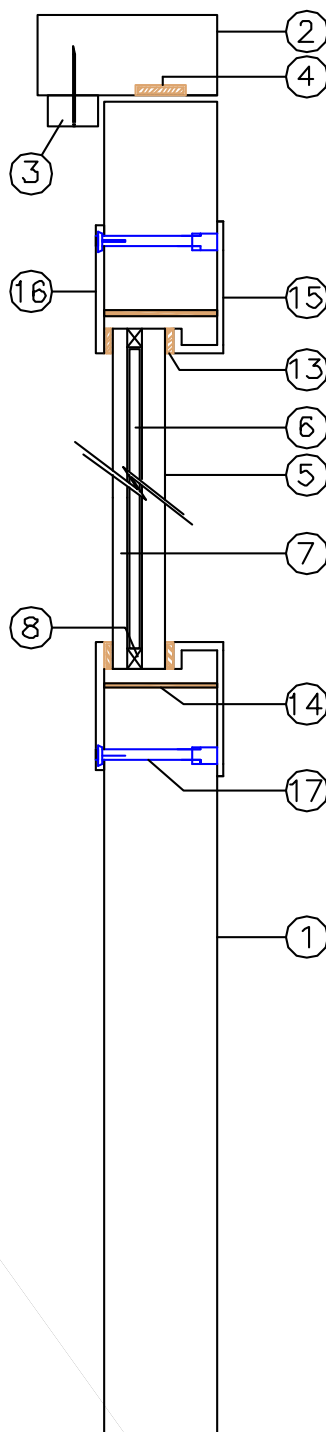
Key to drawing



1	Core – Halspan Prima particleboard - 44mm thick. Nominal density $630 \pm 10\% \text{ kg/m}^3$
2	Frame – European Redwood 70mm deep x 32mm thick. Nominal density 510kg/m^3
3	Stop – European Redwood 25mm wide x 12mm high planted (pinned)
4	Intumescent strip – Lorient Polyproducts Ltd LP2004 Type 617 fitted centrally in the frame reveal
5	Glass – Pyro-Ex toughened glass – Express Toughening, 6mm thick fitted on the unexposed face
6	Glass – Annealed glass – Express Toughening, 4mm thick fitted between the outer glass layers (fitted in the top half only of the longer vision panels)
7	Glass - Pyro-Ex toughened glass – Express Toughening, 10mm thick fitted on the exposed face
8	Spacer – stainless steel, 5mm thick fitted between the outer glass layers
9	Glazing intumescent – Mann McGowan Pyroglaze 30, 10mm wide x 3mm thick fitted between the glass and bead on both faces
10	Mastic – Norseal Fire Wizard acrylic intumescent mastic, fitted lining the glazing aperture between the Pyroglaze 30 intumescent
11	Glazing bead – 20mm high x 17mm deep including a 9mm x 9mm bolection return and a 15° chamfer, Sapele (nominal density 640kg/m^3)
12	Beading fixing – Steel pins, 40mm long, fitted 50mm from corners at 150mm centres

Sapele lippings 8mm thick were fitted on the vertical edges of the leaf (not shown).

Doorset B



Key to drawing

1	Core – Halspan Prima particleboard - 44mm thick. Nominal density $630 \pm 10\% \text{ kg/m}^3$
2	Frame – European Redwood 70mm deep x 32mm thick. Nominal density 510kg/m^3
3	Stop – European Redwood 25mm wide x 12mm high planted (pinned)
4	Intumescent strip – Lorient Polyproducts Ltd LP2004 Type 617 fitted centrally in the frame reveal
5	Glass – Pyro-Ex toughened glass – Express Toughening, 6mm thick fitted on the unexposed face
6	Glass – Annealed glass – Express Toughening, 4mm thick fitted between the outer glass layers (fitted in the top half only of the longer vision panels)
7	Glass - Pyro-Ex toughened glass – Express Toughening, 10mm thick fitted on the exposed face
8	Spacer – stainless steel, 5mm thick fitted between the outer glass layers
13	Glazing intumescent – Norseal Graphite Intumescent 10mm wide x 2.5mm thick fitted between the glass and bead on both faces
14	Glazing intumescent – Norseal intumescent liner, 44mm wide x 1.8mm thick, fitted lining the glazing aperture
15	Exposed face glazing bead – profiled stainless steel, 50mm high x 20mm deep overall, fitted around the glazing aperture on the exposed face
16	Unexposed face glazing bead – stainless steel, 50mm wide x 2mm thick, fitted around the glazing aperture on the unexposed face
17	Beading fixings – M5 x 12mm long studs welded to the unexposed face beads and M5 x 40mm long machine security screws fitted from the exposed face, fitted at 20mm from corners at 170mm centres

Sapele lippings 8mm thick were fitted on the vertical edges of the leaf (not shown).

3.2 Test results

Doorset A

Integrity	Cotton pad	30 (thirty) minutes*
	Continuous flaming	30 (thirty) minutes
	Gap gauges	31 (thirty one) minutes
Insulation	Average set	15 (fifteen) minutes
	Standard set (Max)	10 (ten) minutes
Glass	Maximum	10 (ten) minutes
Door frame	Maximum	29 (twenty nine) minutes
Radiation		30 (thirty) minutes*

* Failure criteria was not achieved prior to initial integrity failure at 30 minutes.

Doorset B

Integrity	Cotton pad	34 (thirty four) minutes*
	Continuous flaming	34 (thirty four) minutes
	Gap gauges	34 (thirty four) minutes*
Insulation	Average set	11 (eleven) minutes
	Standard set (Max)	12 (twelve) minutes
Glass	Maximum	10 (ten) minutes
Door frame	Maximum	34 (thirty four) minutes*
Radiation		34 (thirty four) minutes*

* Failure criteria was not achieved prior to initial integrity failure at 34 minutes.

4 Classification and direct field of application

4.1 Reference of classification

This classification has been carried out in accordance with clause 7 of BSEN 13501-2: 2007 + A1: 2009.

Performance Criteria

Integrity (E)

The assessment of integrity shall be made on the basis of the following three aspects:

- a) cracks or opening in excess of given dimensions
- b) ignition of a cotton pad
- c) sustained flaming on the unexposed face

Classification for integrity shall be according to whether or not the element is also classified both for integrity and insulation, the value of integrity is that determined by whichever of the three aspects fails first. Where an element is classified without an insulation classification, the value of integrity is that determined by the time to failure of only the cracks/openings or sustained flaming aspects, whichever fails first.

Insulation (I)

The performance level used to indicate define thermal insulation shall be the mean temperature rise on the unexposed face, limited to 140°C above the initial mean temperature, with the maximum temperature rise at any point limited to 180°C above the initial mean temperature.

Radiation (W)

Classification for radiation shall be given by the time for which the maximum value of radiation, measured in the test standard, does not exceed 15kW/m².

4.2 Classifications

The doorsets incorporating Vistamatic VS2 secure vision panels may both be classified to the following combinations of performance parameters and classes as appropriate:

R	E	I	W		t	t	-	M	C	S	IncSlow	sn	ef	r
	✓	✓	✓											

Considering the test evidence submitted for classification, the doorsets incorporating Vistamatic VS2 secure vision panels provides the following classification:

Fire resistance classification = E 15, E 20, E 30,
EW 20, EW 30

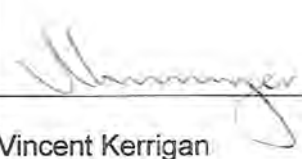
4.3 Field of direct application

As stated in clause 13 of BSEN 1634-1: 2008, the results of the test are directly applicable to similar constructions where one or more of the changes listed under the Field of Direct Application* are made. Other changes are not permitted by this document.

*Copies available on request from Chiltern International Fire Ltd

5 Limitations

This classification document does not represent type approval or certification of the product.

Signature:		
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Title:	Deputy Head of Section – Fire Resistance	Technical Manager
Date of issue:	05-11-2012	05-11-2012

Revision A – changes in line with test report RF12065 Revision B