

**Sponsor:**

ROCKWOOL® Limited  
Pencoed  
Bridgend  
CF35 6NY  
United Kingdom  
www.ROCKWOOL®.com



**Solutions**

**Prepared by:**

UL International (UK) Ltd

**Approved body No.:**

0843

**Product Name:**

ROCKWOOL® Fire Barrier EN

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UL International (UK) Ltd.  
220, Cygnet Court, Centre Park, Warrington. WA1 1PP

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## 1. Introduction

This classification report defines the classification assigned to the element ROCKWOOL® Fire Barrier EN, in accordance with the procedures given in BS EN 13501-2: 2016.

## 2. Details of classification product

### 2.1 General

The system is comprised of a 50mm thick stone wool that has a galvanised wire mesh, which is stitched to one side. The stone wool is covered with black foil on single or both faces, depending upon the performance requirements of the system.

### 2.2 Product description

The element, ROCKWOOL® Fire Barrier EN, is fully described in the test reports provided in support of Classification, detailed in clause 3.1.

## 3. Test reports in support of classification

### 3.1 Summary of test reports

Name of laboratory	Name of sponsor	Test reference	Test date	Test method
Warringtonfire Testing and Certification Limited	ROCKWOOL® Limited	534719/R	20/07/2023	BS EN 1364-1: 2015
Warringtonfire Testing and Certification Limited	ROCKWOOL® Limited	532702/R	17/06/2023	BS EN 1364-1: 2015
Warringtonfire Testing and Certification Limited	ROCKWOOL® Limited	526271/R	24/04/2023	BS EN 1364-1: 2015
Warringtonfire Testing and Certification Limited	ROCKWOOL® Limited	535149/R	08/08/2023	BS EN 1364-1: 2015
Warringtonfire Testing and Certification Limited	ROCKWOOL® Limited	526277/R	15/08/2023	BS EN 1364-1: 2015
Warringtonfire Testing and Certification Limited	ROCKWOOL® Limited	535152/R	28/10/2023	BS EN 1364-1: 2015
Warringtonfire Testing and Certification Limited	ROCKWOOL® Limited	539153/R	12/12/2023	BS EN 1364-1: 2015
Warringtonfire Testing and Certification Limited	ROCKWOOL® Limited	535151/R	30/09/2023	BS EN 1364-1: 2015

### 3.2 Results

Summary of report No.: WF No. 534719/R

A fire resistance test in accordance with BS EN 1364-1: 2015, on a non-loadbearing, flexible wall assembly, referenced 50mm ROCKWOOL® Fire Barrier EN that was fixed to a concrete soffit.

The barrier was fixed onto ROCKWOOL® Fire Barrier support angles and clamping plate, at the head and to one vertical edge. The support angles were fixed to the restraint frame using steel knock-in fixings at 600mm centres.

All vertical and horizontal joints were butt jointed and stitched using 0.9mm steel wire at max. 150mm centres.

An additional 150mm strip of Fire Barrier was fixed to the fire barrier angle on the exposed face and fixed with clamping plate.

It is noted that due to safety concerns at the test laboratory the base of the barrier was restrained with weights. This is not a detail used in practice but may have had an impact on the specimen performance.

Test Results

INTEGRITY:	Sustained flaming	66 Minutes*
	Gap gauge	66 Minutes*
	Cotton pad	66 Minutes*
INSULATION:		26 Minutes
* No failure recorded. The test was discontinued after a period of 66 minutes		

Summary of report No.: WF No. 532702/R

A fire resistance test in accordance with BS EN 1364-1: 2015, on a non-loadbearing, flexible wall assembly, referenced 50mm ROCKWOOL® Fire Barrier EN, Double sided foil, that was fixed to a concrete soffit.

The barrier was fixed onto ROCKWOOL® Fire Barrier support angles and clamping plate, at the head and to one vertical edge. The support angles were fixed to the restraint frame using steel knock-in fixings at 600mm centres.

All vertical and horizontal joints were butt jointed and stitched using 0.9mm steel wire at max. 150mm centres.

It is noted that due to safety concerns at the test laboratory the base of the barrier was restrained with weights. This is not a detail used in practice but may have had an impact on the specimen performance.

Test Results

INTEGRITY:	Sustained flaming	72 Minutes*
	Gap gauge	72 Minutes*
	Cotton pad	72 Minutes*
INSULATION:		40 Minutes
* No failure recorded. The test was discontinued after a period of 72 minutes		

Summary of report No.: WF No. 526271/R

A fire resistance test in accordance with BS EN 1364-1: 2015, on a non-loadbearing, flexible wall assembly, referenced 50mm ROCKWOOL® Fire Barrier EN, installed in two layers and fixed to a concrete soffit.

The barrier was fixed onto ROCKWOOL® Fire Barrier support angles and clamping plate, to the head and one vertical edge. The support angles were fixed to the restraint frame using steel knock-in fixings at 600mm centres.

All vertical joints were butt jointed and stitched using 0.9mm steel wire at max. 150mm centres. The layers of the barrier were staggered 100mm to each face.

The horizontal joint had a 100mm overlap and was stitched together with vertical stitches at max. 150mm separation.

Test Results

INTEGRITY:	Sustained flaming	148 Minutes*
	Gap gauge	148 Minutes*
	Cotton pad	148 Minutes*
INSULATION:		144 Minutes
* No failure recorded. The test was discontinued after a period of 148 minutes		

Summary of report No.: WF No. 535149/R

A fire resistance test in accordance with BS EN 1364-1: 2015, on a non-loadbearing, flexible wall assembly, referenced 50mm ROCKWOOL® Fire Barrier EN that was fixed to a timber frame soffit.

A timber flexible partition was constructed out of 97mm wide x 47mm thick "Softwood (grade TR26)". The timber frame was fixed to the head, base, and left-hand side of the restraint frame. The right-hand side was a free edge. The flexible partition was faced with a single layer of 50mm ROCKWOOL® Fire Barrier EN, to the exposed face of the construction.

All vertical and horizontal joints were butt jointed and stitched using 0.9mm steel wire at max. 150mm centres. The barrier was not stitched back to the timbers.

The barrier was fixed onto ROCKWOOL® Fire Barrier support angles and clamping plate which were screw fixed to the face of the timber along the head and fixed edge of the frame. The free edge was fixed with clamping plate and wood screws. The base on the exposed face had no strap.

The unexposed face had a 300mm wide strip of Fire Barrier fixed around the perimeter of the timber frame. This was secured to the frame using fire barrier clamping plate and wood screws at 300mm centres. The strip was stitched back to the main barrier at max. 150mm centres.

Test Results

INTEGRITY:	Sustained flaming	83 Minutes*
	Gap gauge	83 Minutes*
	Cotton pad	83 Minutes*
INSULATION:		29 Minutes
* No failure recorded. The test was discontinued after a period of 83 minutes		

Summary of report No.: WF No. 526277/R

A fire resistance test in accordance with BS EN 1364-1: 2015, on a non-loadbearing, flexible wall assembly, referenced 50mm ROCKWOOL® Fire Barrier EN that was installed in two layers and fixed to a timber frame soffit.

A timber flexible partition was constructed out of 97mm wide x 47mm thick "Softwood (grade TR26)". The timber frame was fixed to the head, base and left-hand side of the restraint frame. The right-hand side was a free edge. The flexible partition was faced on both sides with a single layer of 50mm ROCKWOOL® Fire Barrier EN.

All vertical and horizontal joints were butt jointed and stitched using 0.9mm steel wire at max. 150mm centres. The barrier was not stitched back to the timbers.

The barrier was fixed onto ROCKWOOL® Fire Barrier support angles and clamping plate, the support angles were screw fixed to the face of the timber along the head and fixed edge of the frame. The base and the free edge were fixed with clamping plate and wood screws.

Test Results

INTEGRITY:	Sustained flaming	133 Minutes*
	Gap gauge	133 Minutes*
	Cotton pad	133 Minutes*
INSULATION:		133 Minutes
* No failure recorded. The test was discontinued after a period of 133 minutes		

Summary of report No.: WF No. 535152/R

A fire resistance test in accordance with BS EN 1364-1: 2015, on a non-loadbearing, flexible wall assembly, referenced 50mm ROCKWOOL® Fire Barrier EN that was fixed to a timber frame soffit.

The specimen comprised a timber frame system installed at the head of the restraint frame. The timber frame was constructed from 172 mm deep by 47 mm wide softwood TR26 timber. The top of the frame was clad with two layers of 12.5 mm thick 'Gyproc Fireline' to prevent attack from above.

A single 50mm thick 'ROCKWOOL® Fire Barrier EN' was installed below. The overall size of the barrier was nominally 2603 mm high by 3050 mm wide by

The barrier was fixed onto ROCKWOOL® Fire Barrier support angles and clamping plate and the head and to one vertical edge. The support angles were fixed to the timber sections using wood screws and to one face of the restraint frame using knock-in fixings.

Each timber section was wrapped back on each face with 300mm sections of fire barrier, which was fixed back using clamping plate and wood screws.

All vertical joints were butt jointed and stitched using 0.9mm steel wire at max. 150mm centres.

It is noted that due to safety concerns at the test laboratory the base of the barrier was restrained with weights. This is not a detail used in practice but may have had an impact on the specimen performance.

Test Results

INTEGRITY:	Sustained flaming	71 Minutes
	Gap gauge	72 Minutes*
	Cotton pad	71 Minutes
INSULATION:		22 Minutes
* No failure recorded. The test was discontinued after a period of 72 minutes		



Summary of report No.: WF No. 539153/R

A fire resistance test in accordance with BS EN 1364-1: 2015, on a non-loadbearing, flexible wall assembly, referenced 50mm ROCKWOOL® Fire Barrier EN that was installed in two layers and fixed to a timber frame soffit.

The specimen comprised a timber frame system installed at the head of the restraint frame. The timber frame was constructed from 172 mm deep by 47 mm wide softwood TR26 timber. The top of the frame was clad with two layers of 12.5 mm thick 'Gyproc Fireline' to prevent attack from above.

A double layer of 50mm thick 'ROCKWOOL® Fire Barrier EN' was installed below. The overall size of the barrier was nominally 2603 mm high by 3050 mm wide by 100mm thick.

The barrier was fixed onto ROCKWOOL® Fire Barrier support angles with clamping plates. The support angles were fixed to the soffit of the timber sections using wood screws.

Each timber section was wrapped back on each face with 300mm sections of fire barrier, which was fixed back using clamping plate and wood screws.

All vertical joints were butt jointed and stitched using 0.9mm steel wire at max. 150mm centres.

Test Results

INTEGRITY:	Sustained flaming	130 Minutes
	Gap gauge	132 Minutes*
	Cotton pad	130 Minutes
INSULATION:		101 Minutes
* No failure recorded. The test was discontinued after a period of 132 minutes		

Summary of report No.: WF No. 535151/R

A fire resistance test in accordance with BS EN 1364-1: 2015, on a non-loadbearing, flexible wall assembly, that comprises a partially boarded steel framed gypsum wall. The wall had a nominal thickness of 75mm and was built with the upper 1620mm of the wall without boarding. The un-boarded steel frame was protected with a single, 50mm ROCKWOOL® Fire Barrier EN, layer on each face of the construction.

A single layer of 50mm thick ROCKWOOL® Fire Barrier EN was fixed to each face of the metal partition framing.

The ROCKWOOL® Fire Barrier EN was fixed to the head and left-hand side of the restraint frame using ROCKWOOL® Fire Barrier EN support angles and clamping plate. The support angles were fixed to the restraint frame using steel knock-in fixings at 600mm centres.

The ROCKWOOL® Fire Barrier EN overlapped onto the partition boards by 100mm and was secured in place with clamping plates which were screwed fixed back to the supporting construction.

Test Results

INTEGRITY:	Sustained flaming	132 Minutes*
	Gap gauge	132 Minutes*
	Cotton pad	132 Minutes*
INSULATION:		110 Minutes
* No failure recorded. The test was discontinued after a period of 132 minutes		

#### 4. Classification and field of application

##### 4.1 Reference of classification

This classification has been carried out in accordance with Clause 7 of EN 13501-2:2016.

##### 4.2 Classification

The element, ROCKWOOL® Fire Barrier EN is classified according to the following combinations of performance parameters and classes as appropriate.

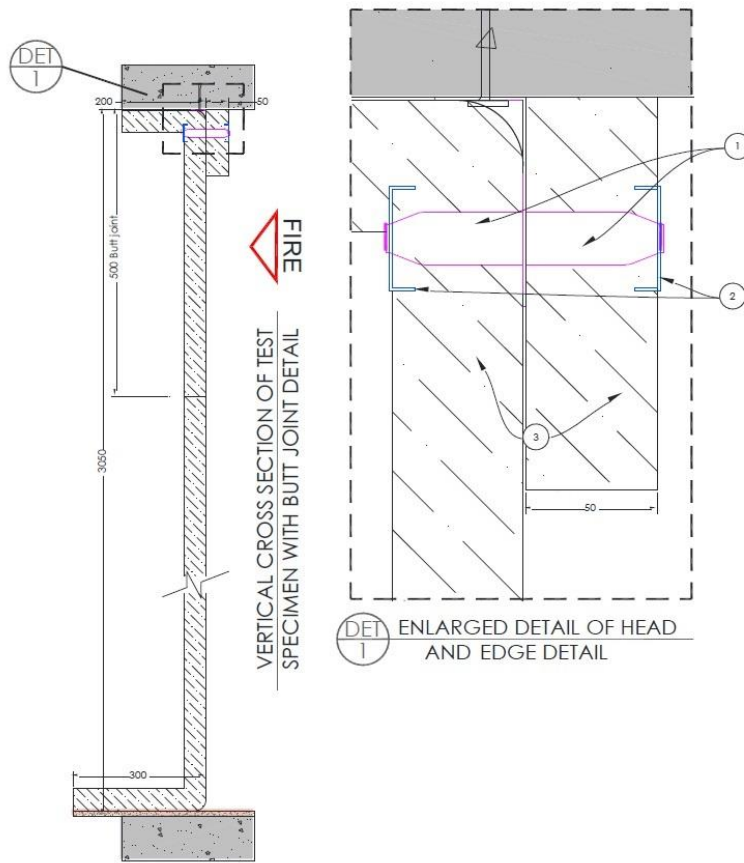
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**50mm ROCKWOOL® Fire Barrier EN when fixed up to a concrete soffit**

Fire Barrier EN fixed onto ROCKWOOL® Fire Barrier support angles and clamping plate. Support angles fixed to the supporting construction using steel knock-in fixings at 600mm centres.

All joints butt jointed and stitched using 0.9mm steel wire at max.150mm centres.

Additional 150mm strip of Fire Barrier fixed to the fire barrier angle on the exposed face and fixed with clamping plate.



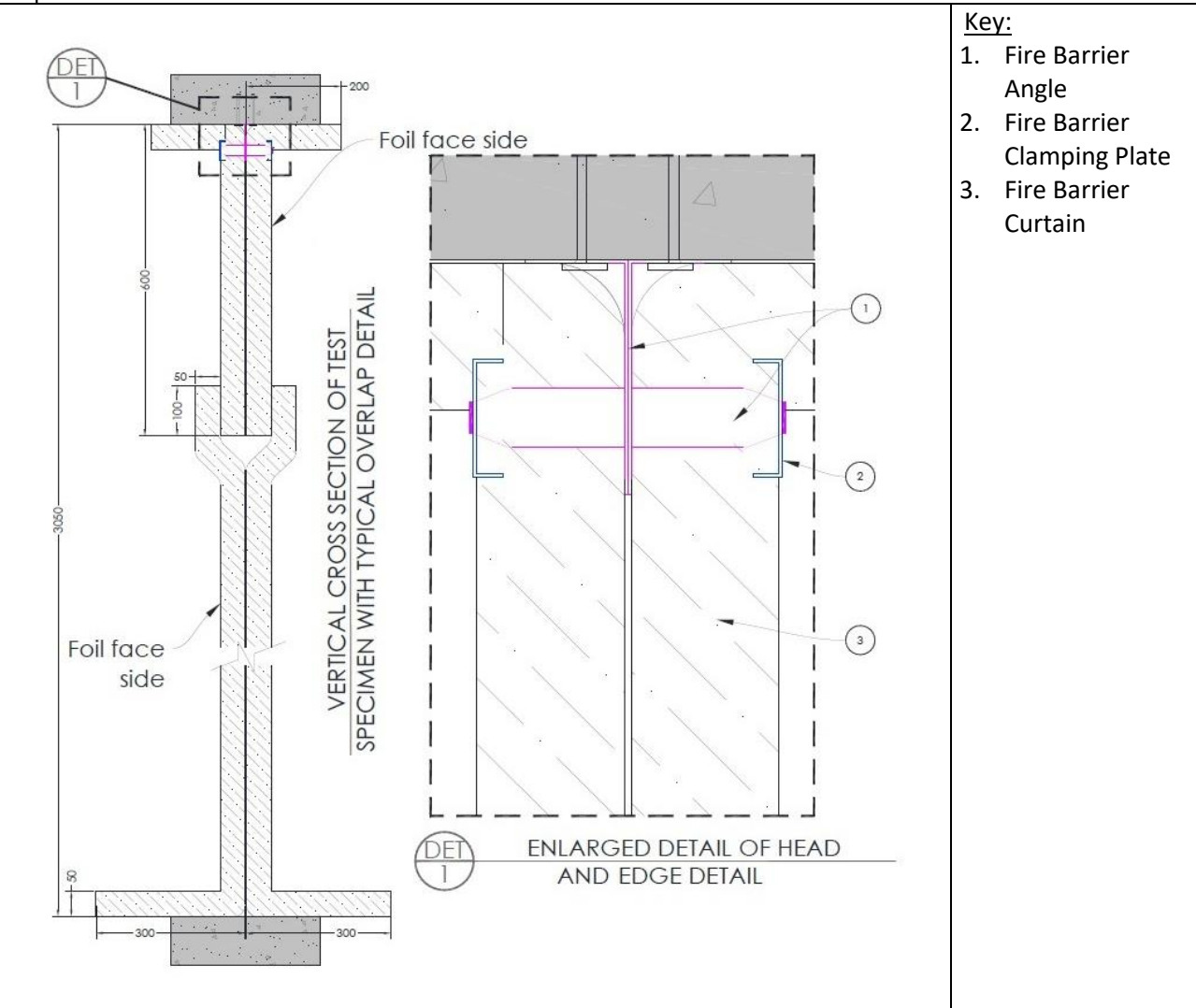
- Key:**
1. Fire Barrier Angle
  2. Fire Barrier Clamping Plate
  3. Fire Barrier Curtain

50mm ROCKWOOL® Fire Barrier EN when fixed up to a concrete soffit		
Configuration	Maximum Size	Fire Resistance Classification
Foil to single face (unexposed). Single 50mm barrier	3050 mm high x unlimited width	E60 / EI20
Foil to both faces. Single 50mm barrier		E60 / EI30

Fire Barrier EN fixed onto ROCKWOOL® Fire Barrier support angles and clamping plate. Support angles fixed to the supporting construction using steel knock-in fixings at 600mm centres.

All joints butt jointed and stitched using 0.9mm steel wire at max. 150mm centres. Layers of the barrier staggered 100mm to each face.

Horizontal joint overlapped by 100mm and stitched together with vertical stitches at max. 150mm separation.



50mm ROCKWOOL® Fire Barrier EN when fixed up to a concrete soffit

Configuration	Maximum Size	Fire Resistance Classification
Foil to single face. Double 50mm barrier with Overlapped horizontal joints	3050 mm high x unlimited width	<b>E1120</b>

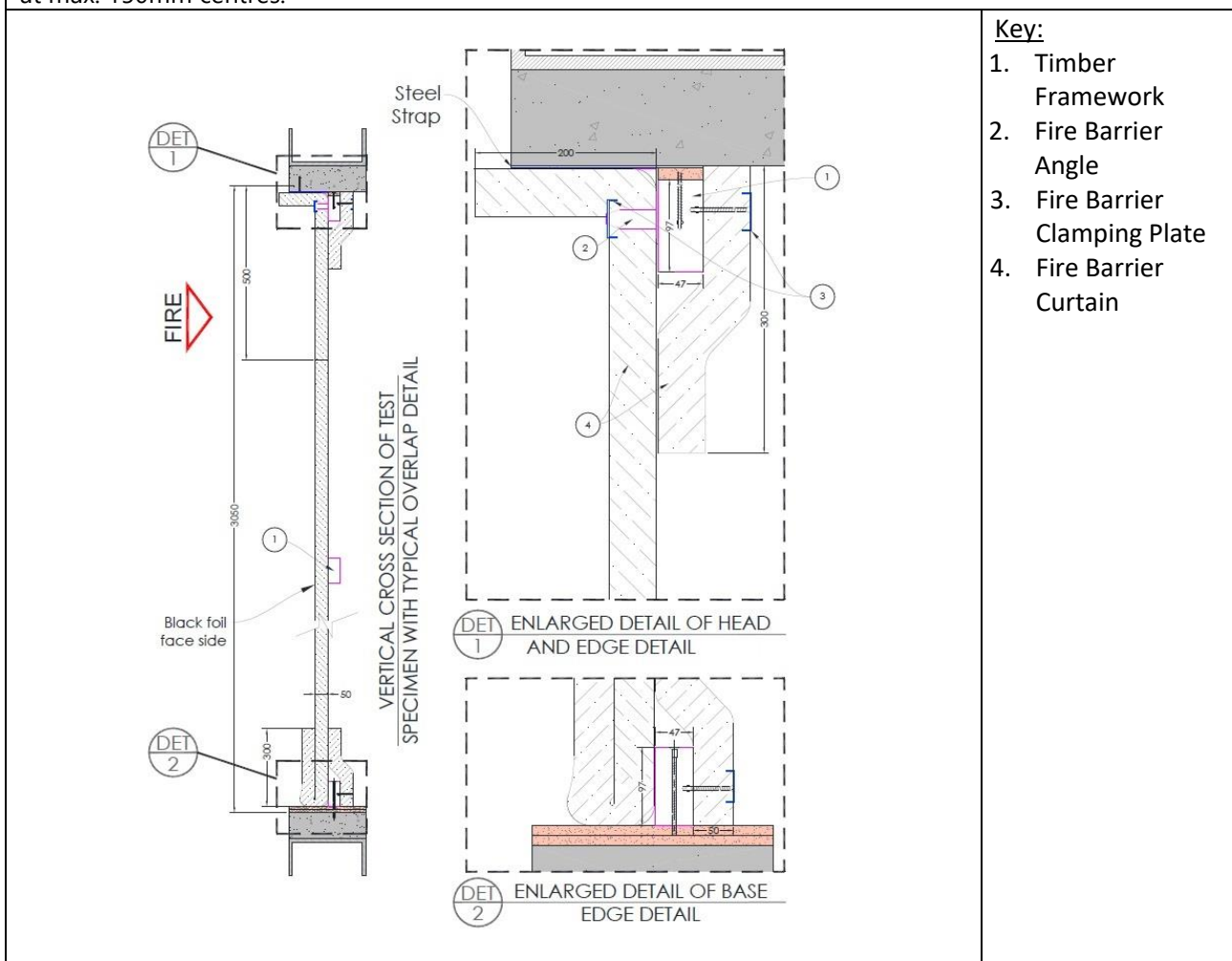
**50mm ROCKWOOL® Fire Barrier EN when fixed to a parallel timber truss**

Fire Barrier EN fixed to the exposed face of a timber truss with ROCKWOOL® Fire Barrier support angles and clamping plate which are screw fixed to the face of the timber along the head and edges of the frame.

Truss constructed out of minimum 97mm wide x 47mm thick timber with a nominal density of 444kg/m<sup>3</sup>.

All joints butt jointed and stitched using 0.9mm steel wire at max. 150mm centres.

300mm wide strip of Fire Barrier fixed around the perimeter of the timber frame to the unexposed face with fire barrier clamping plate and wood screws at 300mm centres. Strip stitched back to the main barrier at max. 150mm centres.

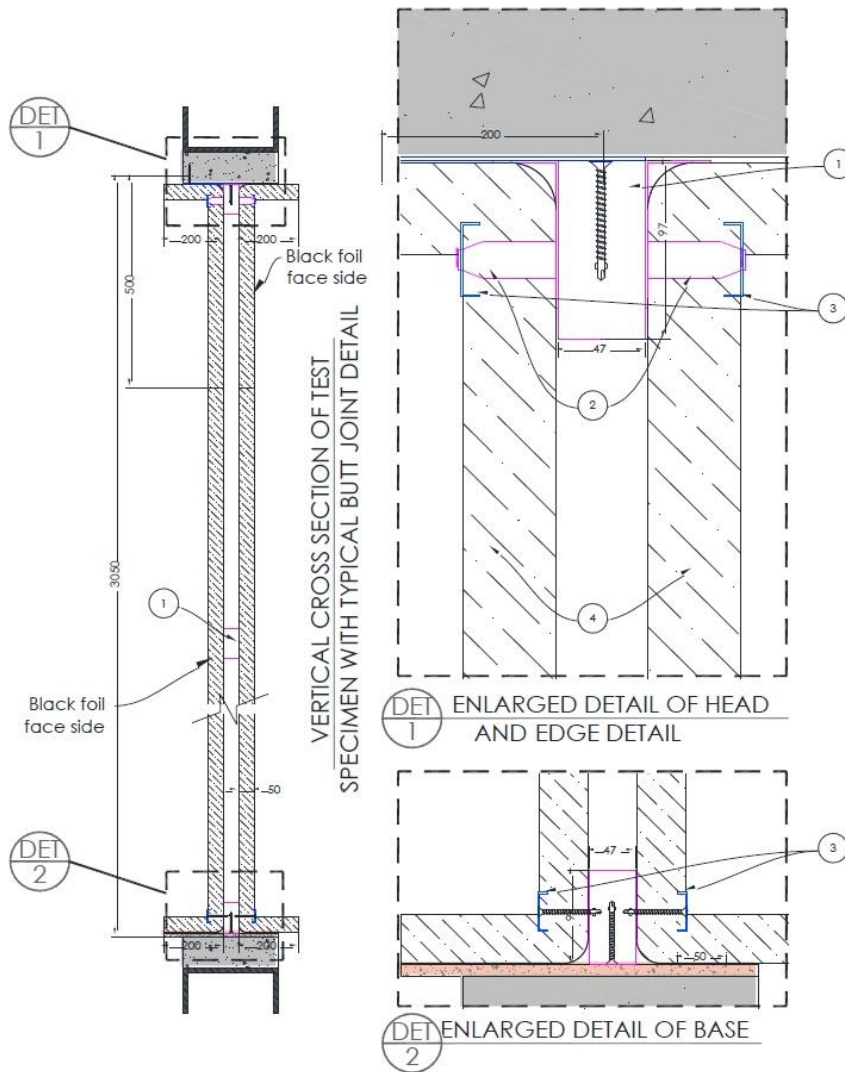


50mm ROCKWOOL® Fire Barrier EN when fixed up to a parallel softwood timber truss		
Configuration	Maximum Size	Fire Resistance Classification
Foil to single face (exposed). Single 50mm barrier	3050 mm high x unlimited width	E60 / EI20

Fire Barrier EN fixed to both faces of a timber truss with ROCKWOOL® Fire Barrier support angles and clamping plate which are screw fixed to the face of the timber along the head and edges of the frame. The base of the barrier is fixed with clamping plate and wood screws.

Truss constructed out of minimum 97mm wide x 47mm thick timber with a nominal density of 444kg/m<sup>3</sup>.

All joints butt jointed and stitched using 0.9mm steel wire at max. 150mm centres.



**Key:**

- 1. Timber Framework
- 2. Fire Barrier Angle
- 3. Fire Barrier Clamping Plate
- 4. Fire Barrier Curtain

50mm ROCKWOOL® Fire Barrier EN when fixed up to a parallel softwood timber truss

Configuration	Maximum Size	Fire Resistance Classification
Foil to single face. Double 50mm barrier	3050 mm high x unlimited width	<b>E1120</b>

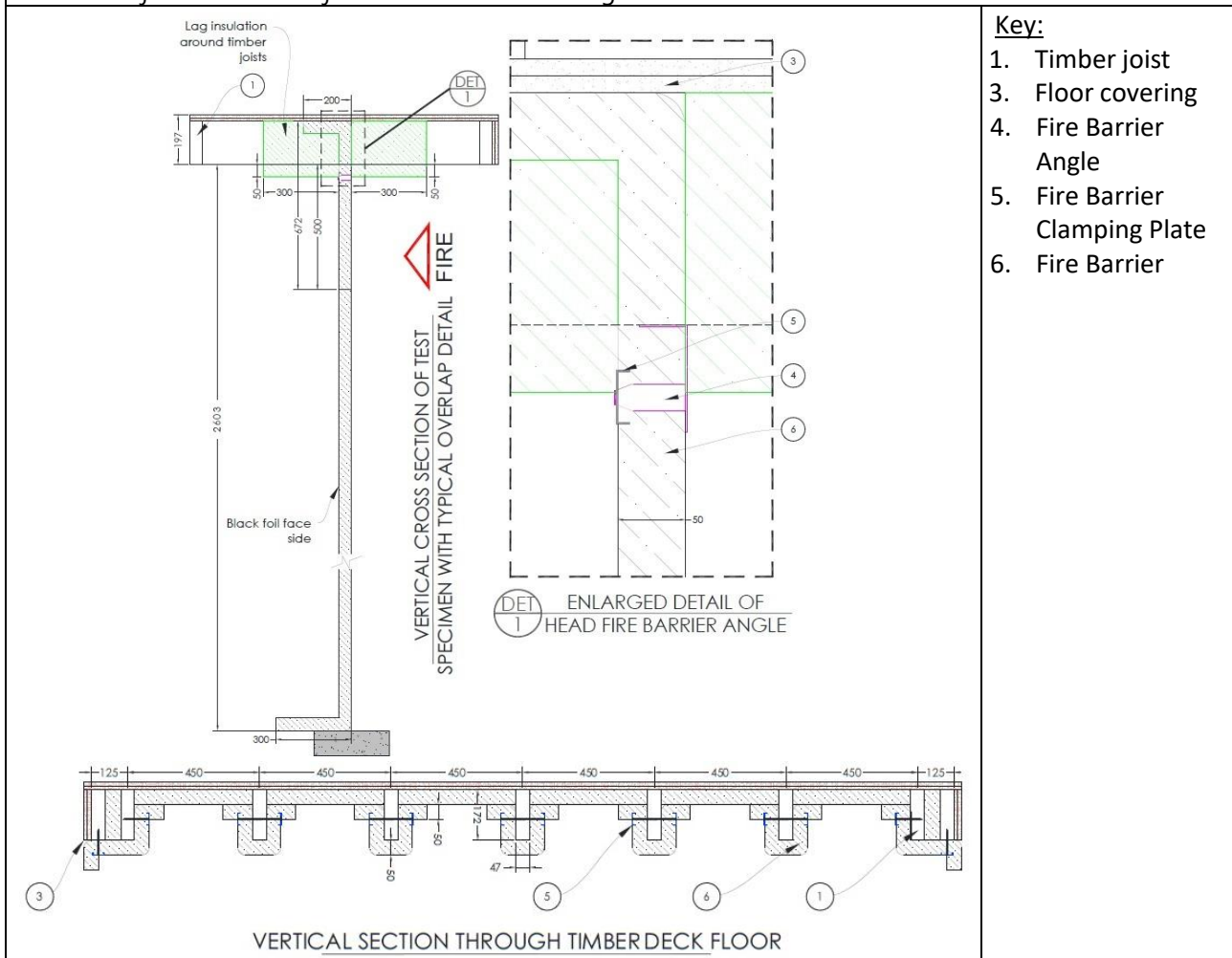
**50mm ROCKWOOL® Fire Barrier EN when fixed to perpendicular timber trusses**

Fire Barrier EN fixed to the soffit of horizontal timber joists and vertical edges of the supporting construction with ROCKWOOL® Fire Barrier support angles and clamping plate.

Joists installed at 450mm centres and constructed out of minimum 172mm deep x 47mm wide timber with a nominal density of 444kg/m<sup>3</sup>.

Each timber joist is wrapped back on each face with 300mm sections of fire barrier, which is fixed back using clamping plate and wood screws.

All vertical joints were butt jointed and stitched using 0.9mm steel wire at max. 150mm centres.



50mm ROCKWOOL® Fire Barrier EN when fixed up to perpendicular timber trusses.

Configuration	Maximum Size	Fire Resistance Classification
Foil to single face (unexposed). Single 50mm barrier	2603 mm high x unlimited width	E60 / EI20

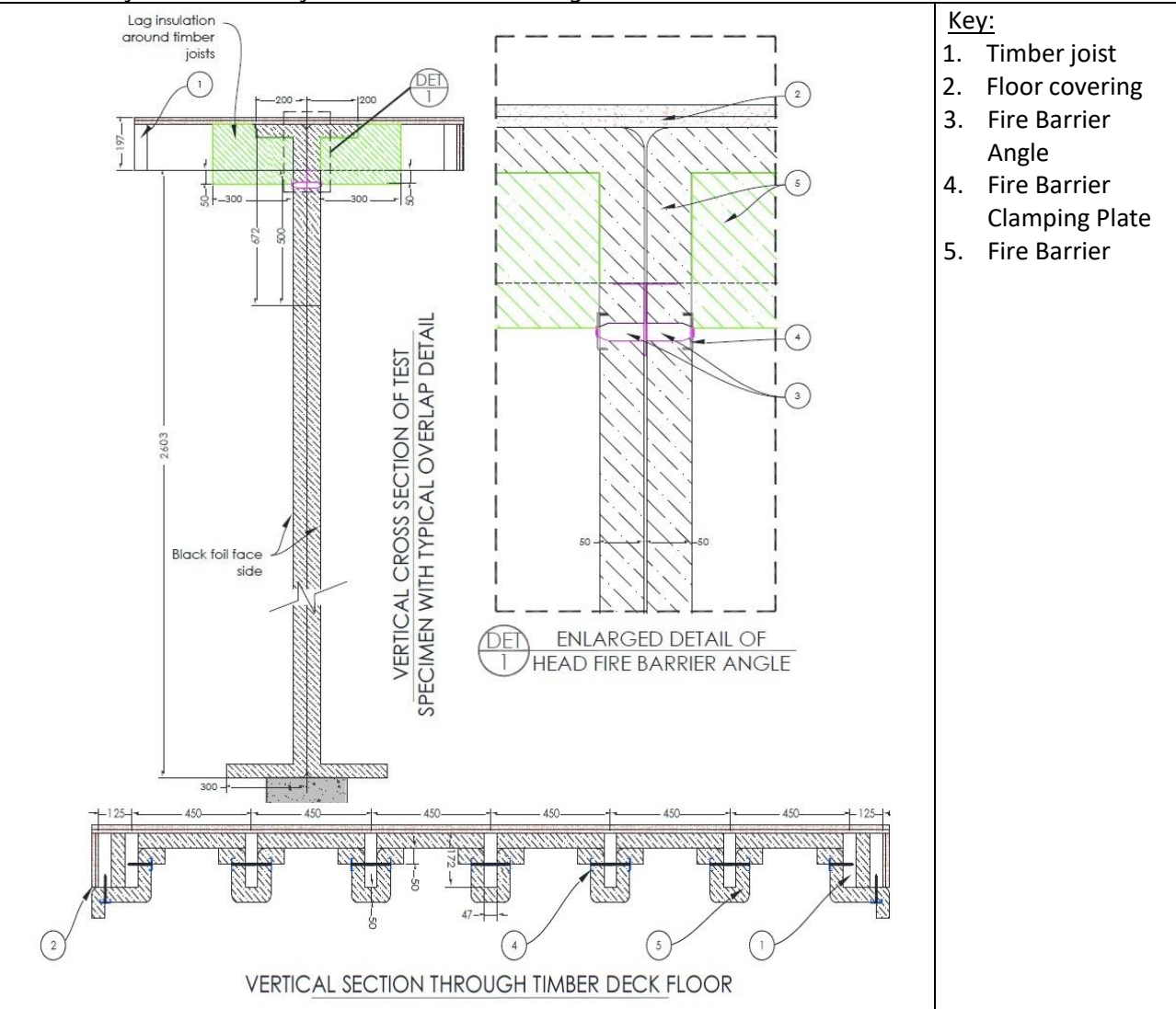


A double layer of Fire Barrier EN fixed to the soffit of horizontal timber joists with ROCKWOOL® Fire Barrier support angles and clamping plate.

Joists installed at 450mm centres and constructed out of minimum 172mm deep x 47mm wide timber with a nominal density of 444kg/m<sup>3</sup>.

Each timber joist is wrapped back on each face with 300mm sections of fire barrier, which is fixed back using clamping plate and wood screws.

All vertical joints were butt jointed and stitched using 0.9mm steel wire at max. 150mm centres.



50mm ROCKWOOL® Fire Barrier EN when fixed up to perpendicular timber trusses.

Configuration	Maximum Size	Fire Resistance Classification
Foil to single face. Double 50mm barrier	2603 mm high x unlimited width	E120 / EI90

**50mm ROCKWOOL® Fire Barrier EN when fixed to a minimum 75mm thick plasterboard partition assembly, with incomplete boarding to the top of the wall**

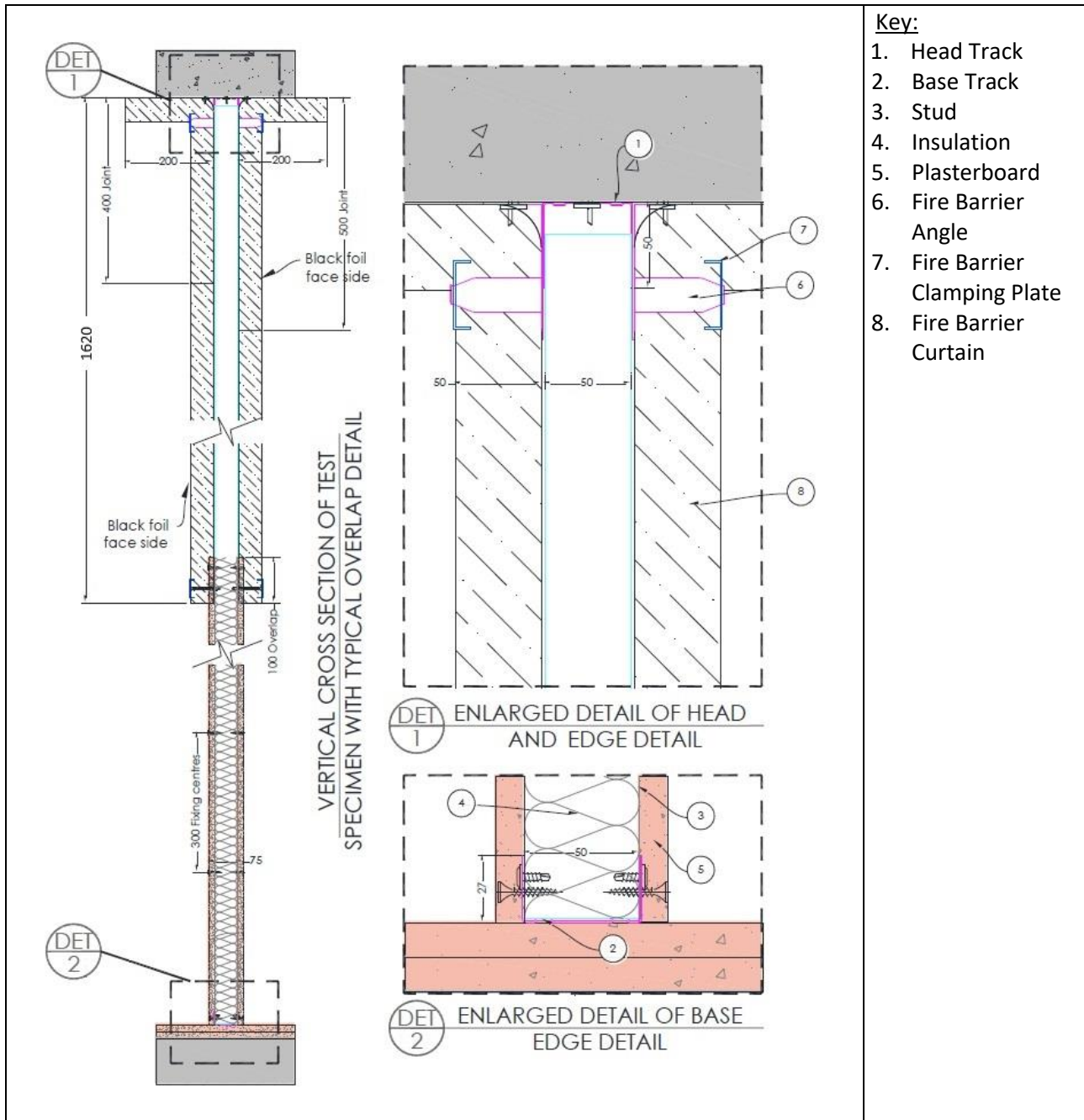
Fire Barrier EN is fixed with ROCKWOOL® Fire Barrier support angles and clamping plate to both faces of steel framework. The support angles are screw fixed to the supporting substrate using steel knock-in fixings at 600mm centres. The base of the barrier overlaps a plasterboard partition by 100mm and is secured with clamping plates which were screwed fixed back to the partition.

The plasterboard partition below the barrier has a nominal thickness of 75mm. The upper 1620mm (maximum) of the partition is left without boarding. The un-boarded steel frame is protected with a single layer of 50mm thick ROCKWOOL® Fire Barrier EN, on each face of the construction.

All vertical joints were butt jointed and stitched using 0.9mm steel wire at max. 150mm centres.

Gypsum based flexible wall partitions of a greater thickness may be used provided they are classified to EN 13501-2. Performance is limited to the classification of the flexible wall or the fire barrier, whichever is lowest.

See classification below.



50mm ROCKWOOL® Fire Barrier EN when fixed to a minimum 75mm thick plasterboard partition assembly, with incomplete boarding to the top of the wall

Configuration	Maximum Size	Fire Resistance Classification
Foil to single face. Double 50mm barrier	1620 mm high drop x unlimited width	<b>E120 / EI90*</b>

\*If the height of the partition is greater than 1500mm, classification is limited to the classification given to the partition, or the fire barrier, whichever is lowest.

### 4.3 Field of Application – Partitions

This classification is valid for the following end use applications (as defined in EN 1364-1: 2015, referencing the following appropriate clauses of EN 1364-1: 2015):

#### 13 Field of direct application of test results

##### 13.1 General

The results of the fire test are directly applicable to similar constructions where one or more of the changes listed below are made and the construction continues to comply with the appropriate design code for its stiffness and stability, except with respect to the construction types covered in Annex A and Annex B where specific direct field of application rules are given.

- a) decrease in height;
- b) increase in the thickness of the wall;
- c) increase in the thickness of component materials;
- d) decrease in linear dimensions of boards or panels but not thickness;
- e) decrease in stud spacing;
- f) decrease in distance of fixing centres;
- g) increase in the number of horizontal joints, of the type tested, when tested with one joint not more than  $(500 \pm 150)$  mm from the top edge;
- h) increase in the number of vertical joints, of the type tested;
- i) the use of installations such as electrical sockets, switches, etc. when tested as illustrated in Figures 9, 10 and 11 with the installations not more than 500 mm from the top edge;
- j) horizontal and/or vertical joints, of the type tested.

For framing systems or systems with visible profiles on the unexposed side, intended to be used for EI classification, no increase in width and depth is allowed in case no temperature measurements on the unexposed side of the profiles were made during the test.

The field of direct application for glazed elements or non-loadbearing walls incorporating glazing is given in Annex A.

The field of direct application for non-loadbearing external and internal walls designed to span horizontally between two independently proven fire resisting vertical structural elements is given in Annex B.

### 13.2 Extension of width

For test specimens tested without a supporting construction, the width of an identical construction may be increased if the specimen was tested at a minimum of nominally 3 m wide with one vertical edge without restraint.

For test specimens tested with a supporting construction, the width of an identical construction may be increased if the specimen was tested at a minimum of nominally 2,8 m wide with one vertical edge without restraint.

In case of EW classification, an increase in width of an identical construction is only allowed when the average unexposed surface temperature of any discrete area of the test specimen remains below 300 °C or the measured radiation remains below 6 kW/m<sup>2</sup>. In any other case, no increase in width is allowed.

### 13.3 Extension of height

The height of the construction may be increased by 1,0 m under the following conditions:

- a) minimum tested height is 3 m when tested without a supporting construction or 2,8 m when tested with a supporting construction
- b) the maximum deflection of the test specimen was not in excess of 100 mm (see 9.3)
- c) the expansion allowances are increased pro-rata

In case of EW classification, an increase in height of an identical construction is only allowed when the average unexposed surface temperature of any discrete area of the test specimen remains below 300 °C or the measured radiation remains below 6 kW/m<sup>2</sup>. In any other case, no increase in height is allowed.

### 13.4 Supporting constructions

The following rules for the field of application apply.

#### 13.4.1 Standard supporting constructions

a) For specimens tested in the test frame without any supporting construction, the result is applicable to high density rigid supporting constructions with at least the same fire resistance as the test specimen.

b) For specimens tested with any standard supporting construction as defined in EN 1363-1, the result is applicable to any other supporting construction of the same type (flexible or rigid) that has the same or a greater classified fire resistance (thicker, denser, more layers of boards, as appropriate) than the one used in the test and the same horizontal and/or vertical orientation, i.e.:

- only vertical if the specimen was tested with the standard supporting construction fixed along the vertical edge (see Figure 17, b1);
- only horizontal if the specimen was tested with the standard supporting construction fixed along the horizontal edge (see Figure 17, b2);
- both if the specimen was tested with the standard supporting construction fixed along both the horizontal and the vertical edge (see Figure 17, b3).

#### 13.4.2 Non-standard supporting constructions

The result of a test on a non-loadbearing wall tested in a non-standard supporting construction is only applicable to that construction.

## 5. Limitations

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

## 6. Signatories

Report by:

A handwritten signature in blue ink, appearing to read 'csweeney'.

Chris Sweeney  
Project Engineer  
Built Environment

Reviewed by:

A handwritten signature in blue ink, appearing to read 'chrisjohnson'.

Chris Johnson  
Senior Staff Engineer  
Built Environment

For and on behalf of UL International (UK) Ltd.