
RESISTANCE TO FIRE CLASSIFICATION REPORT No. EUI-26-000060

**CLASSIFICATION OF FIRE RESISTANCE
IN ACCORDANCE WITH BS EN 13501-2:2023**

Sponsor:	KINGSPAN INSULATION LTD Torvale Industrial Estate HR6 9LA PembrIDGE UNITED KINGDOM
Prepared by:	EFFECTIS UK & IRELAND Wentloog Corporate Park, Wentloog Ave, CARDIFF CF3 2ER, County Cardiff UNITED KINGDOM
Product name:	Non-load bearing metal frame wall construction with Kingspan K-Roc Mineral Wool and AlphaCore Pad.
Classification report No.:	EUI-25-000060
Issue number:	1
Date of issue:	7 th of April 2026

This classification report consists of 6 pages and may only be used or reproduced in its entirety.

1. DOCUMENT TRACKING

Revision Index.	Modification	Comments	Date		
0	Original document	/	7 th of April 2026	Writer	AAB (AHMADS)
				Approver	MKE

2. INTRODUCTION

This classification report defines the resistance to fire classification assigned to an asymmetrical non-loadbearing wall in accordance with the procedure given in BS EN 13501-2:2023.

3. DETAILS OF CLASSIFIED PRODUCT

3.1. GENERAL

The element, a non-load bearing metal frame wall construction with Kingspan K-Roc Mineral Wool and AlphaCore Pad.

3.2. DESCRIPTION

The element, a non-load bearing metal frame wall construction with Kingspan K-Roc Mineral Wool and AlphaCore Pad, is described below or is described in the reports provided in support of classification listed in section 4.1.

3.2.1. Framing System

The sample frame was made of a steel framing system. The sample frame was made from six studs, with a head and base track.

The head track reference U104067180 (KINGSPAN), had a size of 104mm x 67mm x 1.8mm (Depth x Flange x Gauge), and a length of 3000mm. The head track was secured to the rig by a masonry screws reference Anchor 4H57 (Tapcon), with a size of 6mm x 57mm (Ø x L), at 600mm centres with two screws per fixing.

The base track reference U1040505120 (KINGSPAN), had a size 104mm x 50mm x 1.2mm (Depth x Flange x Gauge), and a length of 3000mm. The base track was secured to the rig by a masonry screws reference Anchor 4H57 (Tapcon), with a size of 6mm x 57mm (Ø x L), at 600mm centres with two screws per fixing.

The studs reference C100050120 (KINGSPAN), had a size of 100mm x 50mm x 1.2mm (Depth x Flange x Gauge) and a height of 2980mm leaving 20mm to the web of the head track as a deflection head. The stud on the fixed edge was secured to the rig by masonry screws reference Anchor 4H57 (Tapcon), with a size of 6mm x 57mm (Ø x L), at 600mm centres with two screws per fixing.

The studs were secured to the head and base tracks by self-drilling screws reference 19mm self-drilling screw (EASYDRIVE), with a size of 5.5mm x 19mm (Ø x L), at 600mm centres.

A layer of 100mm stone wool K-Roc Framing Slab (KINGSPAN), with density of 28-32 kg/m³, was friction fitted within the steel frame between the studs.

The overall dimension of the frame was 3000mm x 3040mm x 104mm (w x h x th)..

3.2.2. Fireside

A layer of vapour barrier reference VISQUEEN Class B FR Vapour Check (VISQUEEN) of size 4m (w), cut down to 3m was fitted on top of the steel frame. Two sheets were required for this and there was a 75mm overlap between the sheets.

Next, there were two layers of 12.5mm plasterboard, reference 12.5mm Gyproc FireLine Board TE (British Gypsum). The inner layer had two full boards of size 1200mm x 2400mm x 12.5mm (w x h x th), and one cut board of size 600mm x 2400mm x 12.5mm (w x h x th). The outer layer had two full board of size 1200mm x 2400mm x 12.5mm (w x h x th), and one cut boards one of size 600mm x 2400mm x 12.5mm (w x h x th).

The two layers of plasterboard were staggered by 600mm vertically and 2400mm horizontally. The inner plasterboard layer horizontal joint was formed at 625mm height from the bottom of the wall. The outer plasterboard layer horizontal joint was formed 2400mm height from the bottom of the wall.

The inner layer of plasterboard was secured to the steel frame by reference 32mm drywall screw (TimberMate), at 300mm centres vertically, and 600mm horizontally.

Two fixing straps reference Gypframe GFS1 (British Gypsum), with a size of 70mm x 2400mm (w x L) and a gauge of 0.5mm, was fitted on the horizontal joint between the inner and outer layers of plasterboard, fixed with screws reference 19mm self-drilling screw (19mm self-drilling screw). They were overlapped. It was fitted 2400mm from the bottom.

The outer layer of plasterboard was secured through the inner layer of plasterboard and the fixing strap at the horizontal joint to the steel frame by reference 42mm drywall screw (TIMCO), at 300mm centres vertically, and 600mm horizontally..

3.2.3. Non-fireside

On the non-fireside, a layer of 12.5mm sheathing board, reference A1 Cement board (Proctor). The sheathing board layer had had 2 full boards of size 1200mm x 2400mm x 12.5mm (w x h x th), and a cut board of size 600mm x 2400mm x 12.5mm (w x h x th). A horizontal joint was formed with a height of 2400mm from the bottom of the wall, with 2 cut boards of size 1200mm x 600mm x 12.5mm and one of size 600mm x 600mm x 12.5mm (w x h x th).

The sheathing board layer was secured to the steel frame by screws reference 19mm self-drilling screw (EasyDrive), with a size of 5.5 x 19 mm (Ø x L) at 250mm centres vertically and 600mm centres horizontally.

The boards had a gap between 3-5mm between them.

The entire face of the sheathing board wall was covered with breather membrane reference Wraptight (Proctor), with a width of 1.5m. This was self-adhesive and was applied with a minimum of 75mm overlap between each layer.

A layer of 50mm AlphaCore Pad (Kingspan) of size 1000mm x 600mm x 50mm (L x W x th.) was secured to the sample with a metal washer reference IDR – 70Xx70 – 6.8 (SFS) that was secured with screw reference SXC 5-6 3x100 (SFS) of size 6.3 mm x 100mm (Ø x L). In places where the AlphaCore Pad had to be cut to fit flush, it was sealed with tape reference COMPEGO Tape (COMPEGO).

A layer of insulation, reference 120mm Kingspan K-Roc RS (Kingspan) with a thickness of 120mm, was secured through the sheathing board to the steel frame. The external insulation was secured by screws reference SXC 5-6.3x220 (SFS), with a size of 6.3 mm x 220mm (Ø x L). The screws were inserted into a metal washer, reference IDR-70X70-6,8 (SFS) to firmly support the insulation. The screws were also inserted into a plastic washer reference ISP-18X28 (SFS) to support the insulation. The fixings were applied to the centre and at the horizontal joint between the insulation.

3.2.4. Finishing

Paper Joint Tape (GTEC) and joint filler Gyproc Promix lite (British Gypsum) were applied to the surface of the boards, joints, and screw heads, on the outer plasterboard layer fireside of the sample.

4. REPORTS AND RESULTS IN SUPPORT OF THIS CLASSIFICATION

4.1. REPORTS

Name of Laboratory	Name of sponsor	Report ref. no	Test standard and date / field of extended application standards and date
EFFECTIS UK/Ireland	KINGSPAN INSULATION LTD	EUI-25-V-000553-Revision 1	BS EN 1364-1:2015

4.2. RESULTS

Test method, number and date	No. of Tests	Parameter(s)	Results (Minutes)
BS EN 1364-1:2015 EUI-25-V-000553 25 th September 2025	1	Integrity - cotton pad - gap gauges - sustained flaming Insulation	99 99 99 99

5. CLASSIFICATION AND FIELD OF APPLICATION

5.1. REFERENCE OF CLASSIFICATION

This classification has been carried out in accordance with clause 7 of BS EN 13501-2:2023.

5.2. CLASSIFICATION

The element, a non-load bearing metal frame wall construction with Kingspan K-Roc Mineral Wool and AlphaCore Pad is classified according to the following combination of performance parameters and classes as appropriate:

R	E	I	W		t	t	-	M	S	-	C	IncSlow	sn	ef	r
	E	I			90										

**FIRE RESISTANCE
CLASSIFICATION**

EI 90

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

5.3. FIELD OF APPLICATION

According to the standard BS EN 1364-1:2015, this classification is valid for the following end use applications:

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:

- 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±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 of EN 1364-1:2015 with the installations not more than 500 mm from the top edge – not applicable~~
- j) horizontal and/or vertical joints, of the type tested

5.3.1. Supporting Construction

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.

5.3.2. Extension in 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. – not applicable~~

~~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/m². In any other case, no increase in width is allowed. – not applicable.~~

5.3.3. Extension in Height

The height of the construction may be increased by 1,0 m under the following conditions for EI90:

- 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.
- 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/m². In any other case, no increase in height is allowed. – not applicable.~~

6. LIMITATIONS

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

SIGNED

APPROVED


Abdulrahman ABDULGHANI

Project Leader
Signed by: Abdulrahman ABDULGHANI



Recoverable Signature


Maurice McKEE

Testing Technical Supervisor
Signed by: Maurice McKee