

CLASSIFICATION OF THE FIRE RESISTANCE ACCORDING TO EN 13501-2: 2007

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Issued by:	Efectis Nederland BV Lange Kleiweg 5, 2288 GH Rijswijk P.O. Box 1090 2280 CB Rijswijk The Netherlands
Notified Body No:	1234
Name of the product:	Knauf ceiling with an aimed fire resistance of 60 minutes
Classification report No.:	2010-Efectis-R0221
Project number:	2009248
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This report is issued by the TNO company Efectis Nederland BV (previously **TNO** Centre for Fire Research). TNO decided, in response to international developments and requests by customers, to collaborate with two European Egolf partners, both highly experienced in fire safety: the Norwegian **Sintef/NBL** and the French **CTICM**. Thus, through scaling up, a more comprehensive service of high quality and a wider range of facilities can be offered. In order to achieve this, the fire safety related activities of the partners involved have been privatised in this collaboration. With respect to TNO this has led to the privatisation on the 1st of July of the activities of the TNO Centre for Fire Research via the establishment of the company Efectis Nederland BV.

This classification report contains 7 pages and can only be used completely.

1 Introduction

This classification report gives the classification of a Knauf ceiling system with a aimed fire resistance of 60 minutes, according the procedures given in EN 13501-2: 2007.

2 Details of the classified product

2.1 General

The element is defined as a suspended ceiling under an wooden floor construction with an aimed fire resistance of 60 minutes.

The build up was as follows:

2.1.1 Floor system

The floor consisted of the following components:

- Pine wooden beams, dimensions 70 x 220 mm, c.t.c. distance 700 mm;
- Pine wooden flooring, thickness 18 mm
- Knauf Brio 18 WF boards mounted on the pine wooden flooring with glue, screws and edge protection

2.1.2 Insulation between the beams

- Knauf Rockwool boards KD-040, thickness 80 mm, tightly fitted between the beams

2.1.3 Ceiling

- Resilient bars, c.t.c. distance 400 mm
- Edge profiles UD27/28 mounted with acoustic insulation tape
- Two layers of Knauf DF boards, thickness 12.5 mm each with trennfix on the edges

2.1.4 Fixing materials

- Quick screws 3,5 x 35 mm for mounting the resilient bars. 2 screws were placed in each wooden beam
- Fischer plug N6 x 60Z at c.t.c. distances of 500 mm for fixing the edge profiles to the aerated concrete framework

2.1.5 Electrical sockets

In the ceiling two electrical sockets with flexible PVC tube and wiring with welding caps were placed. In the electrical sockets Fire resistant Gerco slab was placed.

3 Test reports/extended application reports & test results in support of classification

3.1 Test report

<i>Name of the laboratory</i>	<i>Name of the assignor</i>	<i>Test reports application report Nos.</i>	<i>Test method application rules & date</i>
Efectis Nederland BV P.O. box 1090 2280 CB Rijswijk The Netherlands	Knauf BV	Efectis report 2010-Efectis-R0220	EN 1365-2: 1999

3.2 Test results

Table 3.1

- Load bearing capacity R	68 minutes
-	
- Integrity E sustained flaming gap gauge cotton pad	68 minutes reached due to end of load bearing capacity 68 minutes reached due to end of load bearing capacity 68 minutes reached due to end of load bearing capacity
- Insulation I	68 minutes reached due to end of integrity

4 Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with clause 7 of EN 13501-2:2007.

4.2 Classification

The element is classified according to the following combinations of performance parameters and classes as appropriate.

**Fire resistance classification:
REI 60**

4.2.1 Field of application

The test results are directly applicable to a similar floor / ceiling construction provided the following is true:

1. With respect to the structural building member:
The maximum moments and shear forces, which when calculated on the same basis as the test load shall not be greater than those tested. The load on the beams shall not be greater than 1.94 kN/m.
2. With respect to the cavity:
The height of the cavity, 200 mm, is equal to the height tested and no extra insulation is added to the cavity.

Regarding this field of application it is also required that construction elements, which are connected to the tested construction have a fire resistance which is at least equal to that of the floor / ceiling construction.

4.3 Limitations

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



P.W.M. Kortekaas
signed



S. Lutz
approved

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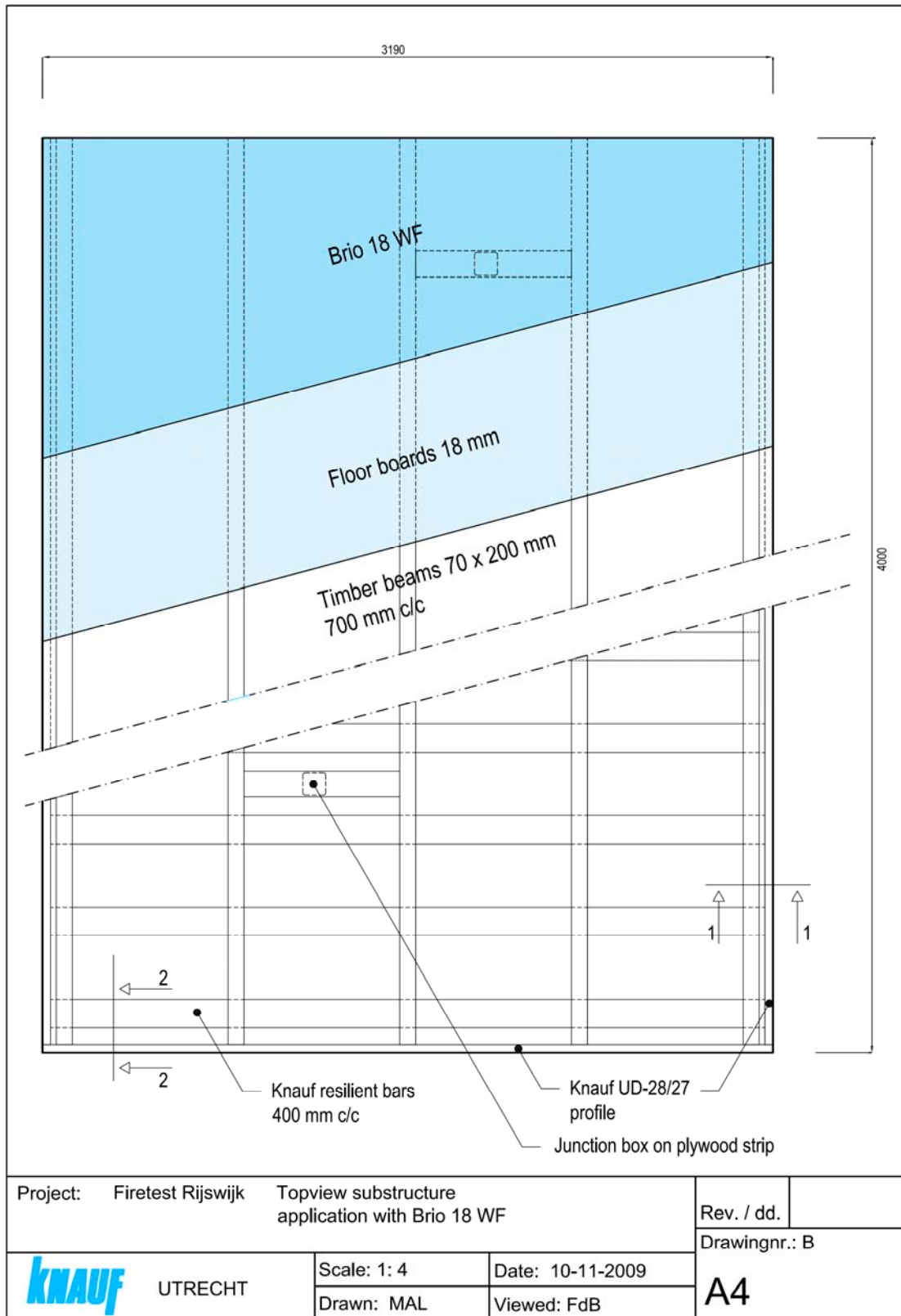
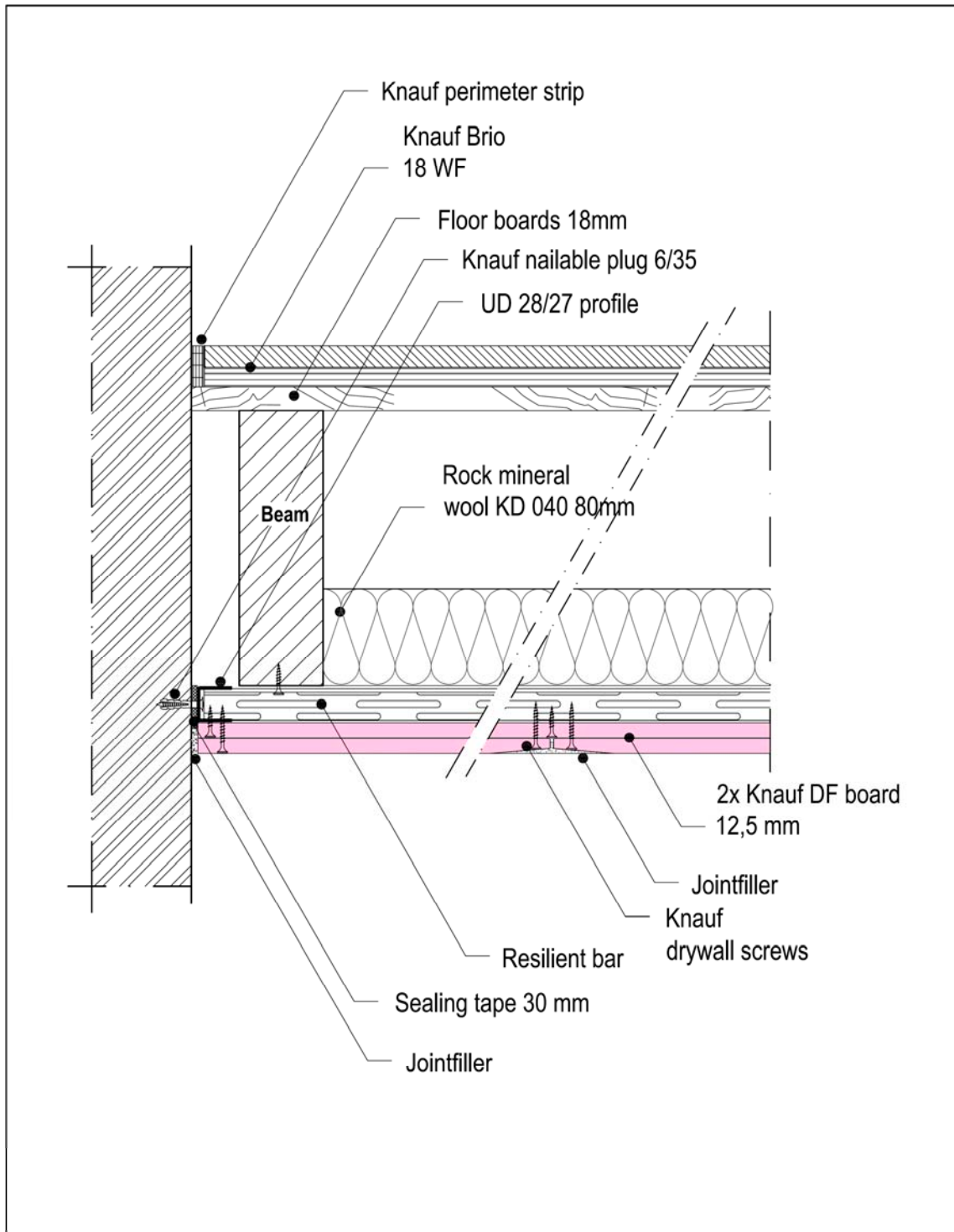


Figure 4.1: Overview



Project: Firetest Rijswijk Detail 1

Rev. / dd.

Drawingnr.: 1B



UTRECHT

Scale: 1: 4

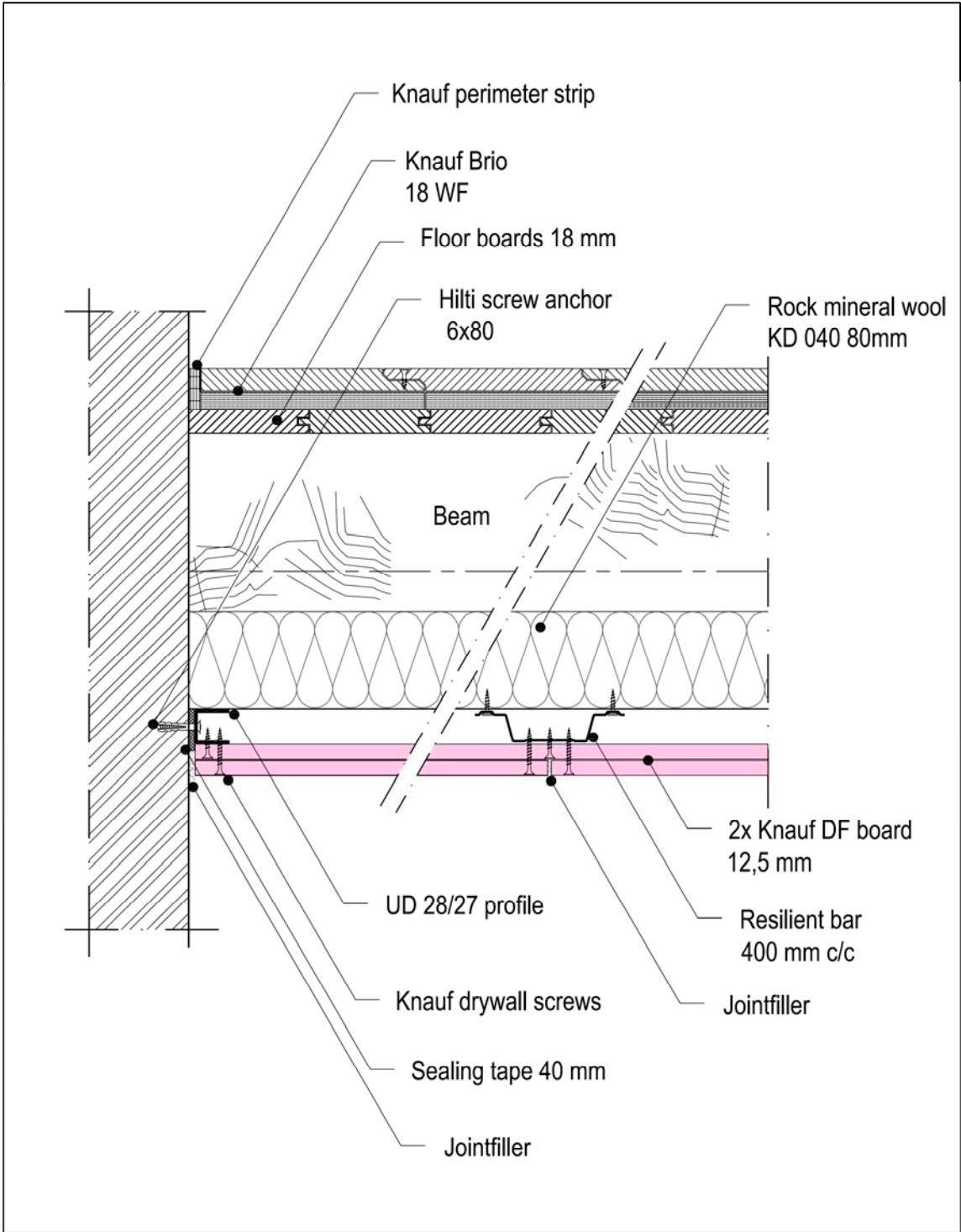
Date: 10-11-2009

Drawn: MAL

Viewed: FdB

A4

Figure 0.1: Detail 2




Project: Firetest Rijswijk		Detail 2		Rev. / dd.
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				Drawingnr.: 2B

Figure 11.3 : detail 2