P.O. Box 554 | 2665 ZN Bleiswijk
Brandpuntlaan Zuid 16 | 2665 NZ Bleiswijk
The Netherlands
+31 88 3473 723
nederland@efectis.com

SUMMARY OF RESEARCH
Product properties

Determination of the fire resistance according to EN 1364-1:2015 of a non-loadbearing partition consisting of a metal profile system covered with type A plasterboard by Knauf, incorporated with electrical installations of the type HW52-F BW from ABB BV

SoR number	2018-Efectis-R002135-S
Report no.	2018-Efectis-R002135
Valid until	January 2024
Sponsor	ABB P.O. Box 104 6710 BC EDE The Netherlands
Date of Issue	January 2019
Number of pages	5

On behalf of ABB in Ede, the fire resistance was determined of a non-loadbearing partition of type W112 with type A plasterboard by Knauf, containing electrical installations of types HW52-F BW by ABB BV. The electrical installations are installed on both, exposed and non-exposed, sides.

The test is performed according to EN 1364-1:2015. Details and results are given in Efectis report 2018-Efectis-R002135 dated December 2018.

The main details of the investigated construction are summarized below:

- ✓ The partition of type “W112” by Knauf with A type EN 520 gypsum boards. Incorporated into the wall where electrical installations of type HW52-F BW from ABB BV.
- ✓ Inside the wall, glass wool insulation of type Sonepanel by Isover / Saint-Gobain was used.
- ✓ Electrical wires running from the electrical installations (inside of flexible tubing) were installed inside the wall.

Summary of test results for non-loadbearing partition of type “W112” by Knauf, containing electrical installations of types “HW52-F BW” by ABB

Criterion	**Time [minutes]**	**Test result**
Integrity **(E)**		
Cotton pad	77	Not applied
Gap gauge:		
∅ 6 mm	77	Not applied
∅ 25 mm	77	Not applied
Flames longer than 10 sec.	76	Detected
Insulation **(I)**		
Average temperature	77	No failure
Maximum temperature	75	Failure, TC 7
300ºC reached	77	No failure
Heat radiation **(W)**	62	0.51 kW/m^2*
*The heat radiation measuring equipment was removed at 62 minutes		
The heating was terminated after 77 minutes after consulting the client		
300ºC was not reached and radiation stayed below 6kW/m^2 for **E60, EI60 and EW60**		

Summary of test results for electrical installation of type “HW52-F BW”

Criterion	Time [minutes]	Test result
Integrity **(E)**		
Cotton pad	77	Not applied
Gap gauge ∅ 6 mm	77	Not applied
Gap gauge ∅ 25 mm	77	Not applied
Flames longer than 10 sec.	77	No failure
Insulation **(I)**		
Average temperature	77	No Failure
Maximum temperature	77	No Failure
Heat radiation **(W)**	62	0.51 kW/m^2*
*The heat radiation measuring equipment was removed at 62 minutes		

Summary of test results for electrical installation of type “HW52-F BW” mounted on exposed side and measured on wall at non-exposed side

Criterion	Time [minutes]	Test result
Integrity **(E)**		
Cotton pad	77	Not applied
Gap gauge ∅ 6 mm	77	Not applied
Gap gauge ∅ 25 mm	77	Not applied
Flames longer than 10 sec.	77	No failure
Insulation **(I)**		
Average temperature	77	No Failure
Maximum temperature	77	No Failure
Heat radiation **(W)**	62	0.51 kW/m^2*
*The heat radiation measuring equipment was removed at 62 minutes		

CLASSIFICATION ACCORDING TO EN 13501-2:2016

Classification according to EN 13501-2 is described in a separate report.
The non-load bearing wall incorporating the electrical installations of type HW52-F BW from ABB BV, can be classified as follows: **E60, EI60 and EW60.**

FIELD OF DIRECT APPLICATION OF TEST RESULTS

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 vertical joints, of the type tested;
h) the use of the tested hollow wall junction boxes at heights from 2600 mm to the bottom;
i) horizontal and/or vertical joints, of the type tested.

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.

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^2, which was satisfied for EW60. In any other case, no increase in width is allowed.

EXTENSION OF HEIGHT

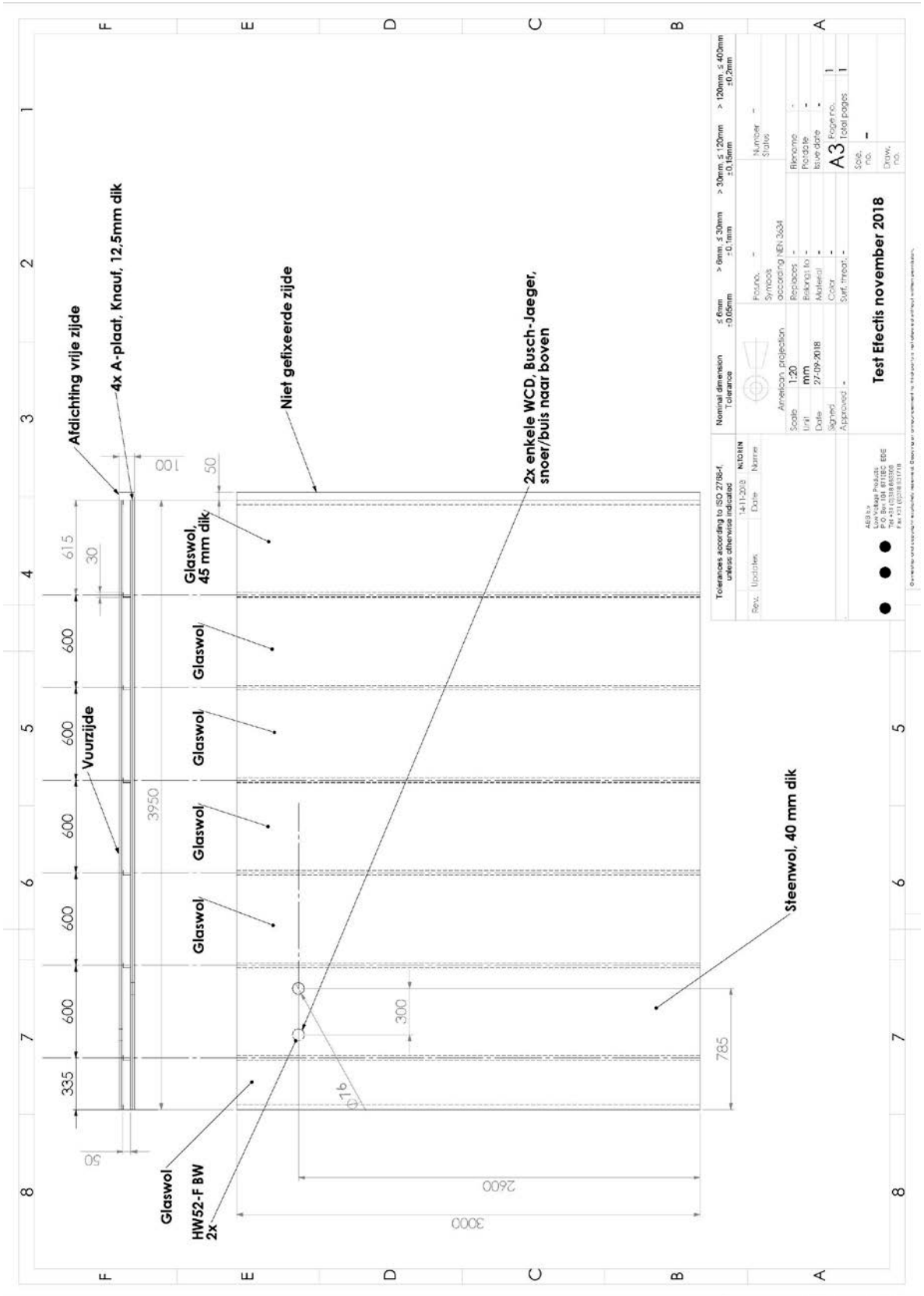
The height of the construction may be increased by 1.0 m under the following conditions:

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 applicable to maximum EI45 classification, not for longer times.

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^2, which was satisfied for EW60. In any other case, no increase in height is allowed.


Afdichting vrije zijde
4x A-plaat, Knauf, 12,5mm dik
Niet gefixeerde zijde
2x enkele WCD, Busch-Jaeger, snoer/buis naar boven
Glaswol, 45 mm dik
Glaswol
Vuurzijde
Steenwol, 40 mm dik
Glaswol
HW52-F BW 2x
100
50
615
30
600
3950
335
300
785
617
2600
3000
Test Efectis november 2018
A3