

Our reference 2016-Efectis-R000823/BGG/TNL
Project number ENL-16-000777

Bleiswijk (NL), 14th July 2016

Comparison of test methods EN 1634-1(2014) and BS 476:Part 22(1987), applied to Gorter Roof Hatch RHTEI

Dear Mr.

You have requested Efectis Netherlands BV to assess the test results obtained according to EN 1634-1:2014 for the Gorter Roof Hatch of type RHTEI. Your specific request is to assess the test results in the sense of BS 476:Part 22 (version 1987).

1. BASIS FOR THE ASSESSMENT

For the present assessment, the following test report has been used:

- Efectis NL test report 2015-Efectis-R001575

Efectis NL test report 2015-Efectis-R001575

A Gorter Roof Hatch, type RHTEI
Hatch lid external dimensions : 2225 x 1225 x 90 mm (l x w x h)
150 mm aerated concrete supporting construction
Test method : EN 1634-1:2014 (standard fire curve)
Heated from below
Test date : 15th December 2015
Test duration : 134 minutes
Test results:

Integrity (E)	134 minutes
Thermal insulation (I ₁)	121 minutes
Thermal insulation (I ₂)	121 minutes
Heat radiation (W)	not measured

Photo 1 shows the test specimen at the start of the fire test.



Photo 1

2. ASSESSMENT

You have requested Efectis Netherlands BV to assess the fire resistance in the sense of BS 476:Part 22 (1987). For this assessment, Efectis NL has compared to respective test methods; i.e.

Efectis NL test report 2011-Efectis-R0495[Rev.1]

Test method used :	EN 1634-1:2014
Test method assessed :	BS 476:Part 22 (1987)

There are the following differences and similarities in both test methods:

1. The way of constructing and mounting the test specimen is the same.
2. The thermocouples which are required to measure the furnace gas temperatures are different (wire thermocouples in the BS vs. plate thermometers in EN). It is considered that the plate thermometers are “slower” in reaction time during heating. Therefore, the EN method is considered as more severe.
3. The heating curve as well as the pressure difference in the furnace are similar (i.e. standard fire curve (ISO 834) and 20 Pa for horizontal separating elements, respectively).
4. The thermocouples to measure the surface temperature at the unexposed side are similar. Also, the locations for the measurements are similar. Therefore, the value for the *Thermal insulation* criterion determined acc. EN 1634-1:2014 will also be valid for BS 476:Part 22:1987.
5. The definition for the *Integrity* criterion is the same in both standards.

3. CONCLUSION

It is assessed by Efectis Netherlands BV that the fire resistance of 120 minutes of the Gorter Roof Hatch RHTEI, as described in Efectis NL test report 2015-Efectis-R001575, will also be valid in the sense of BS 476:Part22(1987).

4. VALIDITY

Due to developments in European legislations and the influence this has on the assessment of fire resistance, the present assessment letter is valid until end-July 2019.

Best regards,



Dr. G. van den Berg
Senior project leader resistance to fire



S. Lutz
Project leader smoke control & fire resistance