EGGER fire protection constructions

Tested and classified wood components for wall, roof and ceiling
Overview of tested and classified wood components for wall, roof and ceiling

1 General appraisal certificates (abP) for wood construction in line with state building codes  Page 4

2 Classification reports for wood construction according to EN 13501-2 for resistance to fire  Page 14

3 Classification report for EGGER OSB concerning the fire protection effect of K210 and K230 cladding according to EN 13501-2 + A1 (2009)  Page 28

4 Component penetrations / fire protection bulkheads – Tested fire protection solutions with Hilti  Page 29
The tables below provide a summary of constructions classified in Germany for wood construction with EGGER OSB, EGGER DHF and EGGER Timber according to general appraisal certificates (abP).

Please contact our Technical Support to obtain the complete abP.

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Explanations regarding the tables

Sheathing:

- **GKB** plasterboard according to EN 520, type A
- **GKF** plaster sheet, fire protection sheet according to EN 520, type DF
- **GF** gypsum fibreboard
- **OSB** Oriented Strand Board according to EN 300 or abZ Z-9.1-566
- **DHF** Vapour-permeable wood fibreboard according to EN 622-5 or abZ Z-9.1-454

Insulation:

- **FL/HF** Hemp according to ETA 05/0037
- **GW** Glass wool according to EN 13162
- **SchW** Sheep wool according to ETA 05/0021
- **SW** Stone wool according to EN 13162
- **WF** Wood-fibre insulating board according to EN 13171
- **ZF** Cellulose insulation according to CUP 12.01/02
- **RG** Rockwool granulate (A1)
Basic structure walls

Basic structure ceiling/roof
Inner values count – OSB and DHF.
Load-bearing timber panel walls exposed to fire on one side with fire resistance duration F 60-B fire protection class according to DIN 4102-2:1977

<table>
<thead>
<tr>
<th>Structure of the wall construction</th>
<th>Fire protection class according to DIN 4102-2:1977</th>
</tr>
</thead>
<tbody>
<tr>
<td>Layer</td>
<td>Fire exposure A → B F 60-B</td>
</tr>
<tr>
<td></td>
<td>Fire exposure B → A F 60-B</td>
</tr>
<tr>
<td>Sheathing A</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>STO mineral base plastering according to DIN 18550-1/2 ≥ 7 mm</td>
</tr>
<tr>
<td>B</td>
<td>STO wood fibre M050 ≥ 45 kg/m3 ≥ 50 mm</td>
</tr>
<tr>
<td>C</td>
<td>Wood stands, S10 or C24 ≥ 60 × 100 mm</td>
</tr>
<tr>
<td>D</td>
<td>Glass wool ≥ 11 kg/m3 ≥ 100 mm</td>
</tr>
<tr>
<td>Sheathing B</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>EGGER OSB 3 or OSB 4 TOP ≥ 15 mm</td>
</tr>
<tr>
<td>F</td>
<td>GKF type DF ≥ 12,5 mm</td>
</tr>
<tr>
<td>maximum admissible load</td>
<td>admissible tension in the post s ≤ 2,0 N/mm²</td>
</tr>
<tr>
<td>maximum wall height</td>
<td>5,000 mm</td>
</tr>
<tr>
<td>maximum axis distance a</td>
<td>625 mm</td>
</tr>
<tr>
<td>admissible fasteners for the sheathing</td>
<td>≥ 40 mm jag bolts, a ≤ 150 mm</td>
</tr>
<tr>
<td>Noise protection according to DIN 4109-33:2016</td>
<td>50 dB (-1;-5) Tab. 6, Z. 9</td>
</tr>
</tbody>
</table>

basics:
- Test reports of Holzforschung Austria
- Test reports of MFPA Leipzig

abP no.: P-SAC-02/III-746
valid until: 26 March 2020 (extension requested)
# Load-bearing timber panel walls exposed to fire on one side with fire resistance duration REI 30, REI 60 and REI 90 fire protection class according to DIN 4102-2:1977

**abP no.:** P-SAC-02/III-752  
**valid until:** 14 October 2020 (extension required)  
**Basics:** Test reports of Holzforschung Austria  
Test reports of MFPA Leipzig  
Test report of MPA Braunschweig, IBMB  
Expert opinion MFPA Leipzig, GS-3.2/16-141-1

## Structure of the wall construction

<table>
<thead>
<tr>
<th>Layer</th>
<th>Wall structure no.</th>
<th>Fire exposure A → B</th>
<th>Fire exposure B → A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>F 30-B</td>
<td>F 30-B</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>F 30-B</td>
<td>F 60-B</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>F 30-B</td>
<td>F 60-B</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>F 60-B</td>
<td>F 60-B</td>
</tr>
</tbody>
</table>

### Sheet B  
- **A**  
  - GKF type DF according to EN 520  
  - GF according to EN 15283-2  
  - Installation level, 60×40 mm batten (non-insulated or with GW11 fully insulated)  
  - ≥ 15 mm

- **B**  
  - EGGER OSB 3 or OSB 4 TOP  
  - ≥ 15 mm  
  - ≥ 15 mm  
  - ≥ 15 mm

- **C**  
  - Glass wool ≥ 11 kg/m³  
  - ≥ 160 mm

- **D**  
  - Solid structural timber – post, S10 or C24  
  - ≥ 60 × 160 mm  
  - ≥ 60 × 160 mm  
  - ≥ 60 × 160 mm  
  - ≥ 60 × 160 mm

### Sheet F  
- **A**  
  - GKF type DF according to EN 520  
  - ≥ 12.5 mm  

- **B**  
  - EGGER DHF  
  - ≥ 15 mm

- **C**  
  - Glass wool ≥ 11 kg/m³  
  - ≥ 160 mm

- **D**  
  - Solid structural timber – post, S10 or C24  
  - ≥ 60 × 160 mm  
  - ≥ 60 × 160 mm  
  - ≥ 60 × 160 mm  

### Notes  
- If several construction materials are specified per layer, they can be used alternatively.

### Basics  
- Test reports of Holzforschung Austria  
- Test reports of MFPA Leipzig  
- Test report of MPA Braunschweig, IBMB  
- Expert opinion MFPA Leipzig, GS-3.2/16-141-1
<table>
<thead>
<tr>
<th>Layer†</th>
<th>Wall structure no.</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire exposure A → B</td>
<td>F 60-B</td>
<td>F 60-B</td>
<td>F 60-B</td>
<td>F 60-B</td>
<td>F 90-B</td>
<td></td>
</tr>
<tr>
<td>Fire exposure B → A</td>
<td>F 60-B</td>
<td>F 60-B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheathing A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>GKF type DF according to EN 520</td>
<td>≥ 12,5 mm</td>
<td>≥ 12,5 mm</td>
<td>≥ 12,5 mm</td>
<td>≥ 2 × 12,5 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GF according to EN 15283-2</td>
<td>≥ 15 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Installation level, 60×40 mm batten (non-insulated or with GW11 fully insulated)</td>
<td>≥ 40 mm non-insulated</td>
<td>≥ 40 mm (insulated)</td>
<td></td>
<td>≥ 7 mm</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>≥ 15 mm</td>
<td>≥ 15 mm</td>
<td>≥ 15 mm</td>
<td>≥ 15 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EGGER DHF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Glass wool ≥ 11 kg/m³</td>
<td>≥ 60 mm</td>
<td>≥ 100 mm</td>
<td>≥ 60 mm</td>
<td>≥ 60 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cellulose insulation ≥ 50 kg/m³</td>
<td>≥ 160 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Solid structural timber – post, S10 oder C24</td>
<td>≥ 60 × 160 mm</td>
<td>≥ 60 × 100 mm</td>
<td>≥ 60 × 160 mm</td>
<td>≥ 60 × 100 mm</td>
<td>≥ 60 × 100 mm</td>
</tr>
<tr>
<td>Sheathing B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>EGGER DHF</td>
<td></td>
<td></td>
<td></td>
<td>≥ 15 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>≥ 15 mm</td>
<td>≥ 15 mm</td>
<td>≥ 12 mm</td>
<td>≥ 15 mm</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>GKF type DF according to EN 520</td>
<td>≥ 12,5 mm</td>
<td></td>
<td></td>
<td>≥ 2 × 12,5 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GF</td>
<td>≥ 15 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>maximum wall height</td>
<td>5,000 mm</td>
<td>5,000 mm</td>
<td>5,000 mm</td>
<td>5,000 mm</td>
<td>5,000 mm</td>
<td></td>
</tr>
<tr>
<td>maximum axis distance</td>
<td>625 mm</td>
<td>625 mm</td>
<td>625 mm</td>
<td>625 mm</td>
<td>625 mm</td>
<td></td>
</tr>
<tr>
<td>admissible fasteners for the sheathing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>≥ 40 mm jag bolts, a ≤ 150 mm</td>
<td></td>
</tr>
<tr>
<td>Noise protection according to DIN 4109-33:2016 Rated noise insulation Rw(C;Ctr)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notes</td>
<td>† If several construction materials are specified per layer, they can be used alternatively.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Structure of the wall construction

<table>
<thead>
<tr>
<th>Layer $^0$</th>
<th>Wall structure no.</th>
<th>Fire exposure sheathing A $\rightarrow$ B</th>
<th>Fire exposure sheathing B $\rightarrow$ A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td></td>
<td>F90-B</td>
<td>F90-B</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td></td>
<td>F90-B</td>
<td>F30-B inside</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td></td>
<td>Mineralic plaster</td>
<td></td>
</tr>
<tr>
<td><strong>D</strong></td>
<td></td>
<td>STEICO protect</td>
<td></td>
</tr>
<tr>
<td><strong>E</strong></td>
<td></td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td></td>
</tr>
<tr>
<td><strong>F</strong></td>
<td></td>
<td>GKF type DF according to EN 520</td>
<td></td>
</tr>
</tbody>
</table>

### Sheathing A

- A: GKF type DF according to EN 520
  - 2 x 15 mm
- Mineralic plaster
- 5 mm
- STEICO protect
- 60 mm

### Sheathing B

- B: EGGER OSB 3 or OSB 4 TOP
  - 12 mm

### Sheathing C

- C: STEICO-flex ≥ 47 kg/m³
  - 160 mm
- STEICO-zell ≥ 47 kg/m³
  - 160 mm

### Sheathing D

- D: Solid structural timber - studs S10 or C24
  - 60 mm x 160 mm
- Solid structural timber - studs S10 or C24
  - 60 mm x 160 mm

### Sheathing E

- E: EGGER OSB 3 or OSB 4 TOP
  - 12 mm

### Sheathing F

- F: GKF type DF according to EN 520
  - 2 x 15 mm
- GKF type A according to EN 520
  - 9,5 mm

### Specifications

- **Maximum wall height**: ≤ 5,000 mm
- **Maximum axis distance a**: 625 mm
- **Admissible fasteners**: Clamps, wood screws, drywall screws
- **Maximum admissible load**: 22,5 kN/m

### Comments

1) or closed wooden facade
2) not required from the point of view of fire protection
3) The construction materials per layer A-F, can be used alternatively
Non-load bearing partition walls exposed to fire on one side in lightweight construction of fire resistance duration EI 30, EI 60 and EI 90, with EGGER Ergo Board construction boards on metal studs

<table>
<thead>
<tr>
<th>Layer</th>
<th>Sheathing A</th>
<th>Fire protection class according to DIN 4102-1:1977 and EN 4103-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>GKF type DF according to EN 520</td>
<td>F 30-AB / EI 30</td>
</tr>
<tr>
<td></td>
<td>GKF type A according to EN 520</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>EGGER Ergo Board</td>
<td>F 60-AB / EI 60</td>
</tr>
<tr>
<td>C</td>
<td>Mineral wool 40 kg/m³</td>
<td>F 90-AB / EI 90</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Metal studs CW 75 × 50 mm, d= 0,6 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metal studs CW 100 × 50 mm, d= 0,6 mm</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>EGGER Ergo Board</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GKF type DF according to EN 520</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GKF type A according to EN 520</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Metal studs CW 75 × 50 mm, d= 0,6 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metal studs CW 100 × 50 mm, d= 0,6 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>admissible installation sector according to DIN 4103-1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>maximum wall height</td>
<td></td>
</tr>
<tr>
<td></td>
<td>admissible fasteners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Noise protection according to DIN 4109-33:2016</td>
<td></td>
</tr>
</tbody>
</table>

abP-no.: P-SAC-02/III - 804 Ä
valid until: 06. January 2021
Basics: Test reports MFPA Leipzig
Other: MFPA expertise no. GS 2.1/15-022 and GS 3.2/16-142-1
Wood beam ceiling / exposed beam ceiling with exposed beam bearing exposed to fire on one side with fire resistance duration F 30-B with EGGER OSB 4 TOP as load-bearing sheathing

abP no.: P-SAC-02/III - 522  
valid until: 01 May 2021  
Basics: Test reports of IBS Linz Test reports of MFPA Leipzig

<table>
<thead>
<tr>
<th>Layer</th>
<th>Fire exposure from below</th>
<th>Fire exposure from above</th>
<th>Fire protection class according to DIN 4102-2:1977</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>EGGER OSB 4 TOP flooring board</td>
<td>18 mm</td>
<td>F 30-B</td>
</tr>
<tr>
<td>B</td>
<td>Wood-fibre insulating board WF according to EN 13171, raw density ≥ 260 kg/m³</td>
<td>30 mm</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>EGGER OSB 4 TOP flooring board</td>
<td>30 mm</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Glue-laminated timber/solid structural timber beam layer according to statics</td>
<td>280 × 120 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>maximum ceiling span width</td>
<td>≤ 5.000 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Noise protection airborne sound test value Rw, P (C, Ctr) [dB]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>impact sound Ln,w(C) DIN 4109</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Decoupled wood beam ceiling with EGGER OSB 4 TOP of the fire resistance class F 90-B according to DIN 4102-2:1977

<table>
<thead>
<tr>
<th>Layer</th>
<th>Fire exposure from below</th>
<th>Fire exposure from above</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire protection class according to DIN 4102-2:1977</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F 90-B</td>
<td>F 90-B</td>
<td>F 90-B</td>
</tr>
<tr>
<td>F 30-B</td>
<td>F 60-B</td>
<td>F 60-B</td>
</tr>
</tbody>
</table>

### Structure of the wall construction

<table>
<thead>
<tr>
<th>Layer</th>
<th>Fire exposure from below</th>
<th>Fire exposure from above</th>
</tr>
</thead>
<tbody>
<tr>
<td>A EGGER OSB 4 TOP</td>
<td>≥ 18 mm</td>
<td>≥ 25 mm</td>
</tr>
<tr>
<td>Fermacell screed element</td>
<td></td>
<td>2 × 12.5 mm</td>
</tr>
<tr>
<td>B Bavaria Phonewell (not necessary from the point of view of fire protection)</td>
<td>≥ 15 mm</td>
<td>≥ 15 mm</td>
</tr>
<tr>
<td>C Wood fibreboard 260 kg/m³</td>
<td>≥ 30 mm</td>
<td>≥ 30 mm</td>
</tr>
<tr>
<td>Impact sound insulation board stone wool</td>
<td></td>
<td>≥ 30 mm</td>
</tr>
<tr>
<td>D EGGER OSB 4 TOP clamped in the beam layer, a = 150 mm</td>
<td>≥ 15 mm</td>
<td>≥ 15 mm</td>
</tr>
<tr>
<td>EGGER OSB 4 TOP large board clamped in beam layer, a = 150 mm</td>
<td>≥ 15 mm</td>
<td>≥ 15 mm</td>
</tr>
<tr>
<td>E Glue-laminated timber/solid structural timber beam layer according to static</td>
<td>≥ 280 × 120 mm</td>
<td>≥ 280 × 120 mm</td>
</tr>
<tr>
<td>F Glue-laminated timber/solid structural timber frontal edge board</td>
<td>≥ 280 × 120 mm</td>
<td>≥ 280 × 120 mm</td>
</tr>
<tr>
<td>G Overlay on wall elements decoupled</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>H Beam layer connected in front via joist hanger</td>
<td>≥ 200 × 100 mm</td>
<td>≥ 200 × 100 mm</td>
</tr>
<tr>
<td>I Clapboard siding, a = 400 mm</td>
<td>≥ 40 × 60 mm</td>
<td>≥ 40 × 60 mm</td>
</tr>
<tr>
<td>J Wood fibre insulation strip connected to the beam layer</td>
<td>≥ 20 mm</td>
<td>≥ 20 mm</td>
</tr>
<tr>
<td>K Cavity insulation Cellulose insulation Isofloc</td>
<td>≥ 100 mm</td>
<td>≥ 100 mm</td>
</tr>
<tr>
<td>L GF</td>
<td>≥ 15 mm</td>
<td>≥ 15 mm</td>
</tr>
<tr>
<td>M Fibreglass mesh</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>N GF</td>
<td>≥ 18 mm</td>
<td>≥ 18 mm</td>
</tr>
</tbody>
</table>

### Sheathing bottom

<table>
<thead>
<tr>
<th>Layer</th>
<th>Fire exposure from below</th>
<th>Fire exposure from above</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admissible installation sector (according to EN 1055)</td>
<td>Building class B2/C1</td>
<td></td>
</tr>
<tr>
<td>Maximum ceiling span width</td>
<td>Single span ≤ 7.0 m, double span ≤ 10.0 m</td>
<td></td>
</tr>
<tr>
<td>Admissible fasteners</td>
<td>To this end, please request the complete abP from EGGER</td>
<td></td>
</tr>
<tr>
<td>Noise protection airborne sound test value Rw,P (C; Ctr) [dB]</td>
<td>68 (-3; -10)</td>
<td></td>
</tr>
<tr>
<td>Airborne sound test value Rw,P (C; Ctr) [dB]</td>
<td>71 (-4; -10)</td>
<td></td>
</tr>
<tr>
<td>Impact sound range adjustment value Cl,50-2500 [dB]</td>
<td>≤ 46 (2) dB</td>
<td></td>
</tr>
</tbody>
</table>

### Basics

- Test reports of Holzforschung Austria
- Test reports of MFPA Leipzig
- Test report of MPA Braunschweig, IBMB
- Expert opinion MFPA Leipzig, GS-3.2/16-141-1
Classification reports for wood construction for resistance to fire according to EN 13501-2

Complete classification reports can be requested from the technical hotline in Wismar. Contact details are available on the last page of this document.

For structures classified according to EN 13501-2 in regards to reaction to fire, the following requirements apply:

**Sheathing:**

<table>
<thead>
<tr>
<th>Material</th>
<th>Mean raw density $\rho$</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>GKB Plasterboard</td>
<td>$\geq 600 \text{ kg/m}^3$</td>
<td></td>
</tr>
<tr>
<td>GKF Plaster sheet, fire protection sheet</td>
<td>$\geq 800 \text{ kg/m}^3$</td>
<td></td>
</tr>
<tr>
<td>GF Gypsum fibreboard</td>
<td>$\geq 1000 \text{ kg/m}^3$</td>
<td></td>
</tr>
<tr>
<td>HWP Wood-based panel (e.g., OSB)</td>
<td>$\geq 600 \text{ kg/m}^3$</td>
<td></td>
</tr>
</tbody>
</table>

**Dämmstoff:**

<table>
<thead>
<tr>
<th>Material</th>
<th>Mean raw density $\rho$</th>
<th>Requirement</th>
</tr>
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<tbody>
<tr>
<td>FL/HF Hemp</td>
<td>$\geq 30 \text{ kg/m}^3$</td>
<td></td>
</tr>
<tr>
<td>GW Glass wool</td>
<td>$\geq 11 \text{ kg/m}^3$</td>
<td></td>
</tr>
<tr>
<td>SchW Sheep wool</td>
<td>$\geq 16 \text{ kg/m}^3$</td>
<td></td>
</tr>
<tr>
<td>SW Stone wool</td>
<td>$\geq 30 \text{ kg/m}^3$</td>
<td></td>
</tr>
<tr>
<td>WF Wood fibre insulation</td>
<td>$\geq 45 \text{ kg/m}^3$</td>
<td></td>
</tr>
<tr>
<td>ZF Cellulose insulation</td>
<td>$\geq 50 \text{ kg/m}^3$</td>
<td></td>
</tr>
<tr>
<td>RG Rockwool granulate (A1)</td>
<td>$\geq 50 \text{ kg/m}^3$</td>
<td></td>
</tr>
</tbody>
</table>

The classification for the fire exposure of the side exposed to the fire applies to asymmetric sheathed wall structures (side I). In the case of symmetrically sheathed wall structures, the same fire resistance can be assumed for both sides in the case of one-sided wall exposure.

The classifications are based on ideal load conditions without precurvature. The static system of the testing configuration approximates Euler case 2 with a certain clamping action of the ceiling.

The classifications are done in line with paragraph 7.3.2 of the ONORM EN 13501-2.

EGGER Eurospan E1 P5, included in the classification reports 443/2014/25 to 443/2014/29, may be replaced on the side that is away from the fire with EGGER OSB and EGGER DHF of the same thickness and density ($\geq 600 \text{ kg/m}^3$) as well as the same fire resistance for timber frame ceilings / roof elements. These board materials should be considered of equal value.
Basic structure walls

I - side exposed to fire
II - side away from fire

Basic structure ceiling/roof

I - bottom side exposed to fire
II - top side away from fire
Load-bearing walls exposed to fire on one side with fire resistance duration REI 30 fire protection class according to EN 13501-2

Customer no.: Classification reports of Holzforschung Austria
Classification reports of MPA Braunschweig, IBMB

<table>
<thead>
<tr>
<th>Layer</th>
<th>Structure of the wall construction</th>
<th>Fire protection class according to EN 13501-2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>valid until</td>
<td>March2024</td>
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<tr>
<td></td>
<td>Fire exposure one side I → II</td>
<td>REI 30</td>
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<tr>
<td>A</td>
<td>Batten solid wood vertical, 20 mm joint</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Batten solid wood horizontal, a = 420 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GKF type DF according to EN 520</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GF according to EN 15283-2</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>≥ 19 mm</td>
</tr>
<tr>
<td></td>
<td>EGGER DHF</td>
<td>≥ 20 mm</td>
</tr>
<tr>
<td></td>
<td>Glass wool EN 13162, ≥ 11 kg/m³</td>
<td>≥ 160 mm</td>
</tr>
<tr>
<td></td>
<td>Stone wool EN 13162, ≥ 30 kg/m³</td>
<td>160 mm</td>
</tr>
<tr>
<td></td>
<td>cellulose according to CUP 12.01/02, ≥ 50 kg/m³</td>
<td>160 mm</td>
</tr>
<tr>
<td></td>
<td>wood fibre EN 13171, ≥ 45 kg/m³</td>
<td>160 mm</td>
</tr>
<tr>
<td></td>
<td>hemp HF according to ETA 05/0037, ≥ 30 kg/m³</td>
<td>160 mm</td>
</tr>
<tr>
<td></td>
<td>sheep wool according to ETA 05/0021, ≥ 16 kg/m³</td>
<td>160 mm</td>
</tr>
<tr>
<td>C</td>
<td>Solid structural timber – studs, S10 or C24</td>
<td>≥ 60 × 160 mm</td>
</tr>
<tr>
<td>D</td>
<td>EGGER DHF</td>
<td>≥ 15 mm</td>
</tr>
<tr>
<td></td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>≥ 15 mm</td>
</tr>
<tr>
<td></td>
<td>GKF type DF according to EN 520</td>
<td>≥ 12,5 mm</td>
</tr>
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<td></td>
<td>GF according to EN 15283-2</td>
<td>≥ 12,5 mm</td>
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<tr>
<td>E</td>
<td>GKF type DF according to EN 520</td>
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<td></td>
<td>GF according to EN 15283-2</td>
<td>≥ 12,5 mm</td>
</tr>
<tr>
<td>F</td>
<td>GKF type DF according to EN 520</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GF according to EN 15283-2</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Ventilated facade</td>
<td>admissible</td>
</tr>
<tr>
<td></td>
<td>maximum admissible load</td>
<td>32 kN/lfm</td>
</tr>
<tr>
<td></td>
<td>maximum wall height</td>
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<tr>
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<td>maximum axis distance a</td>
<td>625 mm</td>
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<tr>
<td></td>
<td>admissible fasteners</td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>³If several construction materials are specified per layer, they can be used alternatively.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>²or closed wooden facade</td>
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</table>
### Structure of the wall construction

<table>
<thead>
<tr>
<th>Layer</th>
<th>Classification report no.</th>
<th>Fire protection class according to EN 13501-2</th>
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</thead>
<tbody>
<tr>
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<td>REI 30</td>
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<tr>
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<td>2586/2018/20</td>
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<td>2586/2018/21</td>
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<td>Fire exposure one side I → II</td>
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<td>March 2024</td>
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<td></td>
<td>March 2024</td>
</tr>
<tr>
<td></td>
<td></td>
<td>unlimited</td>
</tr>
<tr>
<td></td>
<td>I - side exposed to fire</td>
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<tr>
<td></td>
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<td>A</td>
<td>Batten solid wood vertical, 20 mm joint</td>
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<td>Batten solid wood horizontal, a = 420 mm</td>
<td>50 × 30 mm</td>
</tr>
<tr>
<td></td>
<td>GKF type DF according to EN 520</td>
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<tr>
<td></td>
<td>GF according to EN 15283-2</td>
<td>12,5 mm</td>
</tr>
<tr>
<td>B</td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>≥ 15 mm</td>
</tr>
<tr>
<td></td>
<td>EGGER DHF</td>
<td>≥ 15 mm</td>
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<tr>
<td>C</td>
<td>Glass wool EN 13162, ≥ 11 kg/m³</td>
<td>≥ 160 mm</td>
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<tr>
<td></td>
<td>Stone wool EN 13162, ≥ 30 kg/m³</td>
<td>≥ 160 mm</td>
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<tr>
<td></td>
<td>cellulose according to CUP 12.01/02, ≥ 50 kg/m³</td>
<td>≥ 160 mm</td>
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<tr>
<td></td>
<td>woodfibre EN 13171, ≥ 45 kg/m³</td>
<td>≥ 160 mm</td>
</tr>
<tr>
<td></td>
<td>hemp HF according to ETA 05/0037, ≥ 30 kg/m³</td>
<td>≥ 160 mm</td>
</tr>
<tr>
<td></td>
<td>sheep wool according to ETA 05/0021</td>
<td>≥ 160 mm</td>
</tr>
<tr>
<td>D</td>
<td>Solid structural timber – studs</td>
<td>≥ 60 x 160 mm</td>
</tr>
<tr>
<td></td>
<td>EGGER DHF</td>
<td>≥ 9 mm ³</td>
</tr>
<tr>
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<td>GKF type DF according to EN 520</td>
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<tr>
<td>E</td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>≥ 15 mm</td>
</tr>
<tr>
<td></td>
<td>EGGER DHF</td>
<td>≥ 9 mm ³</td>
</tr>
<tr>
<td>F</td>
<td>GKF type DF according to EN 520</td>
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<td></td>
<td>GF according to EN 15283-2</td>
<td>≥ 12,5 mm</td>
</tr>
<tr>
<td>G</td>
<td>Ventilated facade</td>
<td>admissible</td>
</tr>
<tr>
<td></td>
<td>maximum wall height</td>
<td>3.000 mm</td>
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<tr>
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<td>maximum axis distance a</td>
<td>625 mm</td>
</tr>
<tr>
<td></td>
<td>admissible fasteners</td>
<td>clamps</td>
</tr>
</tbody>
</table>

### Notes

- If several construction materials are specified per layer, they can be used alternatively.
- or closed wooden facade
- not required from the point of view of fire protection
Perfect fit – room-highformats save time and money.
Load-bearing walls exposed to fire on one side with fire resistance duration REI 45 fire protection class according to EN 13501-2

Customer no.: Classification reports of Holzforschung Austria

<table>
<thead>
<tr>
<th>Layer ¹</th>
<th>Classification report</th>
<th>Fire protection class according to EN 13501-2</th>
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</thead>
<tbody>
<tr>
<td>I – side exposed to fire</td>
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<td>REI 45</td>
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<tr>
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<td>2586/2018/18</td>
<td>REI 45</td>
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<tr>
<td>I – side exposed to fire</td>
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<td>Batten solid wood vertical, 20 mm joint</td>
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<td>B</td>
<td>Batten solid wood horizontal, a = 420 mm</td>
<td>50 × 30 mm</td>
</tr>
<tr>
<td>B</td>
<td>GKF type DF according to EN 520</td>
<td>≥ 15 mm</td>
</tr>
<tr>
<td>B</td>
<td>GF according to EN 15283-2</td>
<td>≥ 12,5 mm</td>
</tr>
<tr>
<td>C</td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>≥ 9 mm</td>
</tr>
<tr>
<td>C</td>
<td>EGGER DHF</td>
<td>≥ 15 mm</td>
</tr>
<tr>
<td>C</td>
<td>Glass wool EN 13162, ≥ 11 kg/m³</td>
<td>≥ 160 mm</td>
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<tr>
<td>C</td>
<td>Stone wool EN 13162, ≥ 30 kg/m³</td>
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</tr>
<tr>
<td>C</td>
<td>Cellulose according to CUP 12.01/02, ≥ 50 kg/m³</td>
<td>≥ 160 mm</td>
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<tr>
<td>C</td>
<td>Woodfibre EN 13171, ≥ 45 kg/m³</td>
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</tr>
<tr>
<td>C</td>
<td>Hemp according to ETA 05/0037, ≥ 30 kg/m³</td>
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</tr>
<tr>
<td>C</td>
<td>Sheep wool ETA 05/0021 ≥ 16 kg/m³</td>
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</tr>
<tr>
<td>D</td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
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</tr>
<tr>
<td>D</td>
<td>GKF type DF according to EN 520</td>
<td>≥ 12,5 mm</td>
</tr>
<tr>
<td>D</td>
<td>GF according to EN 15283-2</td>
<td>≥ 12,5 mm</td>
</tr>
<tr>
<td>E</td>
<td>Solid structural timber – studs S10 or C24</td>
<td>≥ 60 × 160 mm</td>
</tr>
<tr>
<td>E</td>
<td>Solid structural timber – studs S10 or C24</td>
<td>≥ 60 × 100 mm</td>
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<tr>
<td>E</td>
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<td>F</td>
<td>EGGER DHF</td>
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<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>≥ 9 mm</td>
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<tr>
<td>F</td>
<td>GKF type DF according to EN 520</td>
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<tr>
<td>F</td>
<td>GF according to EN 15283-2</td>
<td>≥ 12,5 mm</td>
</tr>
<tr>
<td>H</td>
<td>Ventilated facade</td>
<td>admissible</td>
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<tr>
<td>H</td>
<td>maximum admissible load</td>
<td>32 kN/lfm</td>
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<td>maximum wall height</td>
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<tr>
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<td>maximum axis distance a</td>
<td>625 mm</td>
</tr>
<tr>
<td>H</td>
<td>admissible fasteners</td>
<td></td>
</tr>
<tr>
<td>remarks</td>
<td>²If several construction materials are specified per layer, they can be used alternatively.</td>
<td></td>
</tr>
<tr>
<td>remarks</td>
<td>³or closed wooden facade</td>
<td></td>
</tr>
</tbody>
</table>
### Structure of the wall construction

<table>
<thead>
<tr>
<th>Layer</th>
<th>I - side exposed to fire</th>
<th>II - side away from fire</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Fire protection class according to EN 13501-2</td>
</tr>
<tr>
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<td>REI 60 ³⁾</td>
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<tr>
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<td>REI 60 ⁴⁾</td>
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<tr>
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<td>REI 60 ⁴⁾</td>
</tr>
</tbody>
</table>

#### Layer A
- **Classifications**: REI 60
- **Description**: GF according to EN 15283-2

#### Layer B
- **Classifications**: REI 60
- **Description**: Batten solid wood horizontal \( a = 315 \text{ mm} \)
- **Classifications**: REI 60
- **Description**: GF according to EN 15283-2 \( \geq 12.5 \text{ mm} \)

#### Layer C
- **Classifications**: REI 60
- **Description**: EGGER OSB 3 or OSB 4 TOP \( \geq 19 \text{ mm} \)
- **Classifications**: REI 60
- **Description**: EGGER DHF \( \geq 15 \text{ mm} \)

#### Layer D
- **Classifications**: REI 60
- **Description**: Glass wool EN 13162, \( \geq 11 \text{ kg/m}^3 \)
- **Classifications**: REI 60
- **Description**: Stone wool EN 13162, \( \geq 30 \text{ kg/m}^3 \)
- **Classifications**: REI 60
- **Description**: Woodfibre EN 13171, \( \geq 45 \text{ kg/m}^3 \)
- **Classifications**: REI 60
- **Description**: Hemp according to ETA 05/0037, \( \geq 30 \text{ kg/m}^3 \)
- **Classifications**: REI 60
- **Description**: Sheep wool, according to ETA 05/0021 \( \geq 16 \text{ kg/m}^3 \)

#### Layer E
- **Classifications**: REI 60
- **Description**: Solid structural timber – studs S10 or C24
- **Dimension**: 60 × 160 mm

#### Layer F
- **Classifications**: REI 60
- **Description**: EGGER OSB 3 or OSB 4 TOP \( \geq 19 \text{ mm} \)
- **Classifications**: REI 60
- **Description**: GKF type DF according to EN 520
- **Classifications**: REI 60
- **Description**: GKF type DF according to EN 520

#### Layer G
- **Classifications**: REI 60
- **Description**: GKF type DF according to EN 520
- **Classifications**: REI 60
- **Description**: GKF type DF according to EN 520

#### Layer H
- **Classifications**: REI 60
- **Description**: Mineral plaster system

#### Maximum admissible load
- **Classifications**: REI 60
- **Description**: 32 kN/lfm
- **Classifications**: REI 60
- **Description**: 32 kN/lfm
- **Classifications**: REI 60
- **Description**: 32 kN/lfm
- **Classifications**: REI 60
- **Description**: 101 kN/lfm

#### Maximum wall height
- **Classifications**: REI 60
- **Description**: 3.000 mm
- **Classifications**: REI 60
- **Description**: 3.000 mm
- **Classifications**: REI 60
- **Description**: 3.000 mm
- **Classifications**: REI 60
- **Description**: 3.000 mm

#### Maximum axis distance \( a \)
- **Classifications**: REI 60
- **Description**: 625 mm
- **Classifications**: REI 60
- **Description**: 625 mm
- **Classifications**: REI 60
- **Description**: 625 mm
- **Classifications**: REI 60
- **Description**: 625 mm

### Comments
- ¹⁾If several construction materials are specified per layer, they can be used alternatively.
- ²⁾as partition wall, when symmetrically sheathed according to the verified side exposed to the fire.

---

**Customer no.:** Classification reports of Holzforschung Austria
<table>
<thead>
<tr>
<th>Layer</th>
<th>Classification report</th>
<th>Fire protection class according to EN 13501-2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>fire exposure one side I → II</td>
<td>REI 60</td>
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<td>A</td>
<td>GF according to EN 520</td>
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</tr>
<tr>
<td>B</td>
<td>Batten solid wood horizontal a = 315 mm</td>
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<td>GKF type DF according to EN 520</td>
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<td></td>
<td>GF according to EN 15283-2</td>
<td>18 mm</td>
</tr>
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<td>C</td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>≥ 15 mm</td>
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<td>D</td>
<td>Glass wool EN 13162, ≥ 11 kg/m³</td>
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<td></td>
<td>Cellulose according to CUP 12.01/02, ≥ 50 kg/m³</td>
<td>≥ 100 mm</td>
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<td></td>
<td>Woodfibre EN 13171, ≥ 45 kg/m³</td>
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<td>Hemp according to ETA 05/0037, ≥ 30 kg/m³</td>
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</tr>
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<td></td>
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<td>EGGER DHF</td>
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<td></td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>≥ 15 mm</td>
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<td></td>
<td>GKF type DF according to EN 520</td>
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<tr>
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<td>GF according to EN 15283-2</td>
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<tr>
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<td>Fibreboard WF according to EN 13171, ≥ 190 kg/m³</td>
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<td></td>
<td>GF according to EN 15283-2</td>
<td>15 mm</td>
</tr>
<tr>
<td>H</td>
<td>Mineral plaster system</td>
<td>admissible</td>
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<tr>
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<td>maximum axis distance a</td>
<td>admissible fasteners</td>
</tr>
<tr>
<td>Comments</td>
<td>¹If several construction materials are specified per layer, they can be used alternatively.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>²as partition wall, when symmetrically sheathed according to the verified side exposed to the fire.</td>
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<tr>
<td></td>
<td>*) valid only together with an Advisory opinion from HF Austria 1071/2020 - BH</td>
<td></td>
</tr>
</tbody>
</table>
### Load-bearing walls exposed to fire on one side with fire resistance duration REI 90 fire protection class according to EN 13501-2

**Customer no.:** Classification reports of Holzforschung Austria  
**Basis:** Test reports of IBS Linz Test reports of MA 39, Vienna

<table>
<thead>
<tr>
<th>Structure of the wall construction</th>
<th>Fire protection class according to EN 13501-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Layer 1)</td>
<td>Classification report</td>
</tr>
<tr>
<td></td>
<td>valid until</td>
</tr>
<tr>
<td>fire exposure one side I → II</td>
<td>REI 90 ²)</td>
</tr>
</tbody>
</table>

| Layer ²)                           | EGGER DHF                                   |
|                                    | EGGER OSB 3 or OSB 4 TOP                   |
|                                    | ≥ 15 mm                                    | ≥ 9 mm    | ≥ 9 mm    |
| I - side exposed to fire           |                                            |

| Layer 3)                           | Glass wool EN 13162, ≥ 11 kg/m³            |
|                                    | ≥ 60 mm                                    | ≥ 160 mm  |
|                                    | Stone wool EN 13762, ≥ 30 kg/m³            |
|                                    | ≥ 60 mm                                    | ≥ 160 mm  |
|                                    | cellulose according to CUP 12.01/02, ≤ 50 kg/m³ |
|                                    | ≥ 160 mm                                   | ≥ 160 mm  |
|                                    | Woodfibre EN 1371, ≥ 45 kg/m³              |
|                                    | hemp according to ETA 05/0037, ≥ 45 kg/m³  |
|                                    | sheep wool according to ETA 05/0021, ≥ 60 kg/m³ |
|                                    | Solid structural timber – studs S10 or C24 |
|                                    | ≥ 60 × 100 mm                              | ≥ 60 × 160 mm |
|                                    | ≥ 60 × 160 mm                              | ≥ 60 × 160 mm |

| Layer 4)                           | EGGER DHF                                   |
|                                    | EGGER OSB 3 or OSB 4 TOP                   |
|                                    | ≥ 15 mm                                    | ≥ 9 mm    |
| II - side away from fire           |                                            |

| Layer 5)                           | GKF type DF according to EN 520            |
|                                    | ≥ 12.5 mm                                  | ≥ 12.5 mm |
|                                    | GF according to EN 15283-2                 |
|                                    | ≥ 12.5 mm                                  |

| Notes                              | 1) If several construction materials are specified per layer, they can be used alternatively. |
|                                    | 2) as partition wall, when symmetrically sheathed according to the verified side exposed to the fire |
### Non-load bearing partition walls in lightweight construction of fire resistance duration EI 30 to EI 90 with EGGER Ergo Board construction boards on metal studs

**Customer no.:** KB 3.2/15-013-3 und KB 3.2/15-013-4  
**valid until:** unlimited  
**Basis:** Test reports MPFA Leipzig

<table>
<thead>
<tr>
<th>Layer</th>
<th>Fire exposure A → B / B → A</th>
<th>Fire protection class according to EN 13501-2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>EI 30</td>
</tr>
<tr>
<td>A</td>
<td>GKF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GKB</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>EGGER Ergo Board</td>
<td>≥ 12 mm</td>
</tr>
<tr>
<td>C</td>
<td>C Mineral wool SW 30</td>
<td>≥ 60 mm</td>
</tr>
<tr>
<td>D</td>
<td>Metal studs CW 75 × 50 mm, d = 0.6 mm</td>
<td>≥ 75 mm</td>
</tr>
<tr>
<td></td>
<td>Metal studs CW 100 × 50 mm, d = 0.6 mm</td>
<td>≥ 100 mm</td>
</tr>
<tr>
<td>E</td>
<td>EGGER Ergo Board</td>
<td>≥ 12 mm</td>
</tr>
<tr>
<td>F</td>
<td>GKF</td>
<td>≥ 15 mm</td>
</tr>
<tr>
<td></td>
<td>GKB</td>
<td>9.5 mm</td>
</tr>
<tr>
<td></td>
<td>admissible installation sector (according to DIN 4103-1)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>maximum wall height</td>
<td>≤ 4.000 mm</td>
</tr>
<tr>
<td></td>
<td>admissible fasteners noise insulation</td>
<td>Ergo Board: screws with milling head + HiLo thread ø 3.9 x 35 mm GKF/GKB drywall construction screws ø 3.5 x 35 mm</td>
</tr>
<tr>
<td></td>
<td>noise insulation Rw(C;Ctr) according to ISO 10140-2, rated after ISO 717-1)</td>
<td>51 (-4;-10) dB</td>
</tr>
</tbody>
</table>
# Structure of the wall construction

## Fire protection class according to EN 13501-2

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td></td>
<td></td>
<td>REI 30</td>
<td>REI 30</td>
<td>REI 30</td>
<td>REI 45</td>
</tr>
<tr>
<td>II</td>
<td></td>
<td></td>
<td>REI 30</td>
<td>REI 30</td>
<td>REI 30</td>
<td>REI 45</td>
</tr>
</tbody>
</table>

### Notes

1) several construction materials are specified per layer, they can be used alternatively.
Ceilings exposed to fire from below only with dry screed structure of fire resistance duration REI 60 fire protection class according to EN 13501-2

<table>
<thead>
<tr>
<th>Layer</th>
<th>Structure of the wall construction</th>
<th>Fire protection class according to EN 13501-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Dry screed structure with EGGER OSB flooring boards</td>
<td>admissible, admissible</td>
</tr>
<tr>
<td>C</td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>22 mm, 22 mm</td>
</tr>
<tr>
<td>D</td>
<td>Ceiling beam</td>
<td>80 × 200 mm, 80 × 220 mm</td>
</tr>
<tr>
<td>E</td>
<td>Glass wool EN 13162, ≥ 11 kg/m³</td>
<td>200 Kmm</td>
</tr>
<tr>
<td></td>
<td>Stone wool EN 13162, ≥ 30 kg/m³</td>
<td>200 mm, 200 mm</td>
</tr>
<tr>
<td></td>
<td>Cellulose according to CUP 12.01/02, ≥ 50 kg/m³</td>
<td>200 mm</td>
</tr>
<tr>
<td></td>
<td>Woodfibre EN 13171, ≥ 45 kg/m³</td>
<td>200 mm</td>
</tr>
<tr>
<td></td>
<td>Hemp according to ETA 05/0037, ≥ 30 kg/m³</td>
<td>200 mm</td>
</tr>
<tr>
<td></td>
<td>Sheep wool according to ETA 05/0021 ≥ 16 kg/m³</td>
<td>200 mm</td>
</tr>
<tr>
<td>F</td>
<td>Batten a = 400 mm</td>
<td>22 × 80 mm</td>
</tr>
<tr>
<td>I</td>
<td>GKF type DF according to EN 520</td>
<td>12,5 mm</td>
</tr>
<tr>
<td></td>
<td>GF according to EN 15283-2</td>
<td>12,5 mm</td>
</tr>
<tr>
<td>J</td>
<td>GKF type DF according to EN 520</td>
<td>12,5 mm</td>
</tr>
<tr>
<td></td>
<td>GF according to EN 15283-2</td>
<td>12,5 mm</td>
</tr>
<tr>
<td></td>
<td>Maximum load</td>
<td>3,66 kN/m², 3,66 kN/m²</td>
</tr>
<tr>
<td></td>
<td>Maximum span width</td>
<td>5,000 mm, 5,000 mm</td>
</tr>
<tr>
<td></td>
<td>Maximum axis distance of the load-bearing structure</td>
<td>625 mm, 625 mm</td>
</tr>
<tr>
<td></td>
<td>Sound protection</td>
<td>&gt; 50 dB depending on dry screed</td>
</tr>
<tr>
<td></td>
<td>Airborne sound R’w according to DIN 4109-33 Info Service Wood Series 3, Part 3, Issue 3, May 1999</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impact sound L’n,w according to DIN 4109-33 Info Service Wood Series 3, Part 3, Issue 3, May 1999</td>
<td>&lt; 43 ... 56 dB depending on dry screed</td>
</tr>
</tbody>
</table>

Notes: If several construction materials are specified per layer, they can be used alternatively.
## Structure of the wall construction

### Fire protection class according to EN 13501-2

<table>
<thead>
<tr>
<th>Layer</th>
<th>Structure</th>
<th>Fire protection class</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Classification report no.</td>
<td>1446/2016/01, 1446/2016/03, 1446/2016/04</td>
</tr>
<tr>
<td></td>
<td>valid until:</td>
<td>June 2021, June 2021, June 2021</td>
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<tr>
<td></td>
<td>fire exposure one side I → II</td>
<td>REI 30, REI 30, REI 30</td>
</tr>
<tr>
<td>I - bottom side exposed to fire</td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>18 mm, 15 mm, 15 mm</td>
</tr>
<tr>
<td></td>
<td>EGGER DHF</td>
<td>20 mm, 15 mm, 15 mm</td>
</tr>
<tr>
<td></td>
<td>Glass wool EN 13162, ≥ 11 kg/m³</td>
<td>80 × 220 mm, 80 × 200 mm, 60 × 200 mm</td>
</tr>
<tr>
<td></td>
<td>Stone wool EN 13162, ≥ 30 kg/m³</td>
<td>200 mm, 200 mm</td>
</tr>
<tr>
<td></td>
<td>Cellulose according to CUP 12.01/02, ≥ 50 kg/m³</td>
<td>200 mm</td>
</tr>
<tr>
<td></td>
<td>Woodfibre EN 13171, ≥ 45 kg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hemp according to ETA 05/0037, ≥ 30 kg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sheep wool according to ETA 05/0021, ≥ 16 kg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Batten a = 400 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>27 mm spring rail between batten, ar = 315 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>15 mm, 12 mm</td>
</tr>
<tr>
<td></td>
<td>GKF type DF according to EN 520</td>
<td>12,5 mm</td>
</tr>
<tr>
<td></td>
<td>GF according to EN 15283-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GKF type DF according to EN 520</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GF according to EN 15283-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>maximum load</td>
<td>4,5 kN/m², 3 kN/m², 2,6 kN/m²</td>
</tr>
<tr>
<td></td>
<td>maximum span width</td>
<td>5,000 mm, 5,000 mm, 5,000 mm</td>
</tr>
<tr>
<td></td>
<td>maximum axis distance of the load-bearing structure</td>
<td>625 mm, 800 mm, 625 mm</td>
</tr>
</tbody>
</table>

### Notes

1) If several construction materials are specified per layer, they can be used alternatively.
### Structure of the wall construction

<table>
<thead>
<tr>
<th>Layer</th>
<th>Classification report no.</th>
<th>Fire protection class according to EN 13501-2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>443/2014/27</td>
<td>REI 45</td>
</tr>
<tr>
<td></td>
<td>1446/2016/02</td>
<td>REI 60</td>
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<td>443/2014/26</td>
<td>REI 60</td>
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<td>443/2014/28</td>
<td>REI 60</td>
</tr>
<tr>
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<td>valid until</td>
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<td>March 2024</td>
<td></td>
</tr>
<tr>
<td></td>
<td>fire exposure one side I → II</td>
<td></td>
</tr>
<tr>
<td>I - bottom side exposed to fire</td>
<td>REI 45</td>
<td>REI 60</td>
</tr>
<tr>
<td>I - Top side</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Roof covering</td>
<td>admissible</td>
</tr>
<tr>
<td>B</td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td>22 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REI 60</td>
</tr>
<tr>
<td></td>
<td>EGGER DHF</td>
<td>22 mm</td>
</tr>
<tr>
<td></td>
<td>roof covering</td>
<td>admissible</td>
</tr>
<tr>
<td></td>
<td>EGGER DHF</td>
<td>admissible</td>
</tr>
<tr>
<td></td>
<td>EGGER DHF</td>
<td>admissible</td>
</tr>
<tr>
<td></td>
<td>EGGER DHF</td>
<td>admissible</td>
</tr>
<tr>
<td>II - Top side</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Ceiling beam</td>
<td>120 x 360 mm</td>
</tr>
<tr>
<td>E</td>
<td>Glass wool EN 13162, ≥ 11 kg/m³</td>
<td>360 mm</td>
</tr>
<tr>
<td>E</td>
<td>Stone wool EN 13162, ≥ 30 kg/m³</td>
<td>360 mm</td>
</tr>
<tr>
<td>E</td>
<td>Cellulose according to CUP 12.01/02, ≥ 50 kg/m³</td>
<td>360 mm</td>
</tr>
<tr>
<td>E</td>
<td>Woodfibre EN 13171, ≥ 45 kg/m³</td>
<td>360 mm</td>
</tr>
<tr>
<td>E</td>
<td>Hemp according to ETA 05/0037, ≥ 30 kg/m³</td>
<td>360 mm</td>
</tr>
<tr>
<td>E</td>
<td>Sheep wool according to ETA 05/0021 ≥ 16 kg/m³</td>
<td>360 mm</td>
</tr>
<tr>
<td>F</td>
<td>Batten a = 400 mm</td>
<td>22 x 80 mm</td>
</tr>
<tr>
<td>G</td>
<td>27 mm spring rail between batten, a = 400 mm</td>
<td>22 x 80 mm</td>
</tr>
<tr>
<td>H</td>
<td>EGGER OSB 3 or OSB 4 TOP</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>GKF type DF according to EN 520</td>
<td>12,5 mm</td>
</tr>
<tr>
<td>I</td>
<td>GF according to EN 15283-2</td>
<td>12,5 mm</td>
</tr>
<tr>
<td>J</td>
<td>GKF type DF according to EN 520</td>
<td>12,5 mm</td>
</tr>
<tr>
<td>J</td>
<td>GF according to EN 15283-2</td>
<td>12,5 mm</td>
</tr>
<tr>
<td></td>
<td>maximum load</td>
<td>19,4 kN/m²</td>
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<tr>
<td></td>
<td>maximum span width</td>
<td>5.000 mm</td>
</tr>
<tr>
<td></td>
<td>maximum axis distance of the load-bearing structure</td>
<td>625 mm</td>
</tr>
</tbody>
</table>

**Notes**

1) If several construction materials are specified per layer, they can be used alternatively.
For multi-storey wood construction, the wood frame construction design directive has governed key fire protection requirements since 2002. Here the cladding criterion was introduced for the first time. Sheathing with a structural fire protection effect can also be relevant as a compensating measure in fire protection.

In cooperation with the SP Boras test institute (Sweden) with European accreditation, we have tested our OSB boards according to EN 13501-2 + A1:2009(E) in regards to the cladding criterion. As a result, we were able to obtain the following classifications for EGGER OSB:

- EGGER OSB 3 or OSB 4 TOP, straight edge, thickness ≥ 10 mm: K₁₁₀, K₂₁₀
- EGGER OSB 4 TOP, 2T&G, thickness ≥ 30 mm: K₁₁₀, K₂₃₀

OSB boards can be used in vertical, horizontal or tilted applications. According to requirement K₂₁₀ or K₂₃₀ all substrates (without air gap) are allowable as the substructure.

Screws were used for attachment during the tests.
For the solution of the legally required bulkheading of penetrations, the following options are available for timber construction in principle two approaches to a solution:

State of the art solutions

They are carried out according to the Lignum recommendations in Switzerland. For Germany the "Muster-Directive on fire protection requirements for highly fire-retardant components in timber construction". (M-HFHHolzR) states that openings for building services engineering "are made on all sides and throughout from non-combustible building materials" must be dressed. The lining "is to be lined with joint offset, step rebate or groove and to form spring connections" [§3.2 M-HFHHolzR]. "Are connected to the closing of the openings fire protection requirements, such as for [...] pipes or cable penetration seals, a corresponding proof of usability or applicability issued by the building authorities is available [...]".[§3.5 M-HFHHolzR]

Tested solutions

Tested designs based on e.g. ETA / KB / abP (DE) / VKF certificate (CH) for specific timber constructions in combination with Hilti fire protection products can be used with the corresponding proof of suitability can be executed. They speed up the installation on site or in the factory and simplify providing evidence to authorities and experts.

Application areas

Hilti products offer solutions for simple electrical insulation of cables, cable bundles and cable routes as well as empty tubes and empty tube bundles. For sanitary and heating applications, non-combustible pipes with and without insulation, metal composite pipes and a large number of sewage pipes are covered.

- Fire protection cable sleeve according to ETA-13/0704 or Z-19.53-2192
- Fire protection sleeve according to ETA-14/0085
- Fire protection bandage according to Z-19.53-2210 or ETA-10/0212
- Fire protection foam according to ETA-10/0109

Fire protection in wooden stud walls for electrical applications with HILTI fire protection stone CFS-BL P (state of the art)
<table>
<thead>
<tr>
<th>Fire protection stone CFS-BL P/CFS-BL*</th>
<th>Z-19.15-2088</th>
<th>*) ETA-13/0099</th>
<th>VKF 25015</th>
<th>VKF 24965</th>
<th>VKF 24963</th>
<th>VKF 24897</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire protection sleeve CFS-SL1) / CFS-SL GA2)</td>
<td>Z-19.53-2318</td>
<td>1) ETA-11/0153</td>
<td>VKF 22948</td>
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<td></td>
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</tr>
<tr>
<td>Fire protection cable collar CFS-CC</td>
<td>Z-19.53-2282</td>
<td>ETA-13/0704</td>
<td>VKF 22948</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Fire protection foam CFS-F FX / CP660</td>
<td>Z-19.53-2238</td>
<td>ETA-10/0109</td>
<td>VKF 19720</td>
<td>VKF 19719</td>
<td>VKF 19718</td>
<td>VKF 18805</td>
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<td>Fire protection sleeve CFS-C P / CP644</td>
<td>Z-19.15-1781</td>
<td>ETA-10/0404</td>
<td>VKF 14108</td>
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<td>Fire protection collar CFS-C EL</td>
<td>Z-19.53-2192</td>
<td>ETA-14/0085</td>
<td>VKF 25625</td>
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<td>Fire protection endless collar</td>
<td>Z-19.53-2210</td>
<td>ETA-10/0212</td>
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</tr>
<tr>
<td>Egger abP or classification report (KB)</td>
<td>State of the art according to M-HFHHolzR</td>
<td>Tested solution from Hilti</td>
<td></td>
<td></td>
<td></td>
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</tr>
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<td>-------------------------------------------</td>
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<tr>
<td><strong>Wall components</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-SAC-02/III-752 – Wall construction 1</td>
<td>●</td>
<td></td>
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<tr>
<td>P-SAC-02/III-752 – Wall construction 4</td>
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<tr>
<td>P-SAC-02/III - 804 Å – F30</td>
<td>●</td>
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<tr>
<td>P-SAC-02/III - 804 Å – F60 / F90</td>
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<tr>
<td>KB (HFA) 2586/2018/17</td>
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