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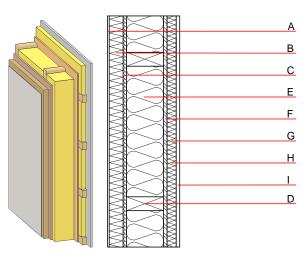
Designation: Last updated: Source: Editor: awropi16b-02 8/2/23 Holzforschung Austria HFA, SP

External wall - awropi16b-02

external wall, timber frame construction, not ventilated, with dry lining, with rendering, other surface

Performance rating

| Fire protection performance maximum ceiling height = Classified by HFA | REI from inside REI from outside = 3 m; maximum load E _{d;} | 60 60 ï = 32,0 kN∕m |
|---|--|---------------------------------------|
| Thermal performance Calculated by HFA | U Diffusion | 0.19 W∕(m ² K) suitable |
| Acoustic performance | R _w (C;C _{tr}) L _{n,w} (C _l) | 51(-2;-9) dB |
| Vertical battens for the dr Rw(C;Ctr)=49(-1;-7) dB Assessed by MA39 | y lining screwed onto the | ledger beams lead to an |
| Mass per unit area | m | 74.70 kg∕m² |



Calculation based on gypsum plaster board type DF

Note: e=625 ; H=without insulation

Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

| | Thickness | Building material | Thermal per | formance | | | Reaction to fire |
|---|-----------|--|-------------|-------------|------|-------|------------------|
| | | | λ | µ min – max | ρ | с | EN |
| A | 7.0 | plaster | 1.000 | 10 - 35 | 2000 | 1.130 | A1 |
| В | 60.0 | wood-fibre insulation board WF-PT [045; 180] | 0.045 | 5 - 7 | 180 | 2.100 | E |
| С | 15.0 | fibreboard (MDF) | 0.140 | 11 | 600 | 1.700 | D |
| D | 160.0 | construction timber (60/; $e=*$) | 0.120 | 50 | 450 | 1.600 | D |
| E | 160.0 | mineral wool [040; ≥16; <1000°C] | 0.040 | 1 | 16 | 1.030 | A1 |
| F | 15.0 | OSB (sealed with airtight tape) | 0.130 | 200 | 600 | 1.700 | D |
| G | 40.0 | spruce wood cross battens (a=400) or battens offset) | 0.120 | 50 | 450 | 1.600 | D |
| Н | | air layer | 0.000 | 1 | 1 | 1.008 | |
| I | 15.0 | gypsum plaster board type DF or | 0.250 | 10 | 800 | 1.050 | A2 |
| | 15.0 | gypsum fibre board | 0.320 | 21 | 1000 | 1.100 | A2 |

Sustainability rating (per m²)

Database ecoinvent

OI3_{Kon} Calculated by HFA 39.7

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Details of sustainability rating

Database ecoinvent

| Lifecycle | GWP | AP | EP | ODP | POCP | |
|-----------|--------------------------|--------------------------|--------------------------|-------------|---------------|---------|
| (Phases) | [kg CO ₂ -e.] | [kg SO ₂ -e.] | [kg PO ₄ -e.] | [kg R11-e.] | [kg Ethen-e.] | |
| A1 - A3 | | 0.171 | 0.075 | 3,18E-6 | 0.025 | |
| | | | | | | |
| Lifecycle | PERE | PERM | PERT | PENRE | PENRM | PENRT |
| (Phases) | [LM] | [MJ] | [MJ] | [LM] | [M] | [MJ] |
| | | 706.384 | 816.657 | 608.609 | 58.943 | 667.552 |

dataholz.eu – Catalogue of timber building materials, components and component connections reviewed to consider thermal, acoustic, fire performance requirements and ecological drivers for timber construction released by accredited testing institutes. These datasheets will generally be accepted as proofs of compliance by building authorities.