

Designation: awropi11a-03 8/2/23 Last updated:

Holzforschung Austria Source:

Editor: HFA, SP

External wall - awropi11 a-03

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

Performance rating

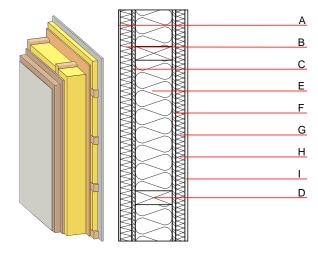
REI from inside 60 Fire protection performance RFI from outside 60 maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 32,0 kN/m Classified by HFA

| Thermal performance | U Diffusion | 0.16 W/(m ² K) suitable |
|----------------------|---------------------------------------------------------------------------|------------------------------------|
| Calculated by HFA | | |
| Acoustic performance | R _w (C;C _{tr}) L _{n,w} (C _l) | 53(-3;-8) dB |

Vertical battens for the dry lining screwed onto the ledger beams lead to an Rw(C;Ctr)=50(-1;-5) dB Assessed by MA39

Mass per unit area 68.10 kg/m^2

Calculation based on gypsum plaster board type DF



Note: e=625

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

| | Thickness | Building material | Thermal per | rformance | | | Reaction to fire |
|---|-----------|----------------------------------------------------------|-------------|-------------|------|-------|------------------|
| | | | λ | μ min – max | ρ | С | EN |
| Α | 10.0 | plaster | 1.000 | 10 - 35 | 2000 | 1.130 | A1 |
| В | 50.0 | wood wool composite boards | 0.090 | 2 - 5 | 370 | 2.000 | В |
| С | 15.0 | fibreboard (MDF) | 0.140 | 11 | 600 | 1.700 | D |
| D | 200.0 | construction timber (60/; e=*) | 0.120 | 50 | 450 | 1.600 | D |
| E | 200.0 | 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 | 40.0 | mineral wool [040; ≥16; <1000°C] or air layer in type 02 | 0.040 | 1 | 16 | 1.030 | A1 |
| I | 12.5 | gypsum plaster board type DF or | 0.250 | 10 | 800 | 1.050 | A2 |
| 1 | 12.5 | gypsum fibre board | 0.320 | 21 | 1000 | 1.100 | A2 |

Sustainability rating (per m²)

Database ecoinvent

33.1 OI3_{Kon}

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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 | | 0.146 | 0.062 | 2,72E-6 | 0.022 | |
| | | | | | | |
| Lifecycle | PERE | PERM | PERT | PENRE | PENRM | PENRT |
| (Phases) | [MJ] | [MJ] | [MJ] | [MJ] | [MJ] | [MJ] |
| A1 - A3 | 98.862 | 591.868 | 690.730 | 506.529 | 29.196 | 535.726 |