dataholz.eu

Designation: awropo16a-04
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

# External wall - awropo16a-04

external wall, timber frame construction, not ventilated, without dry lining, with rendering, other surface

## Performance rating

| | | |
|---|---|---|
| **Fire protection performance** | **REI from inside** | 60 |
| | **REI from outside** | 60 |

maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 32,0 kN/m
Classified by HFA

| | | |
|---|---|---|
| **Thermal performance** | **U** | 0.20 W/(m²K) |
| | **Diffusion** | suitable |

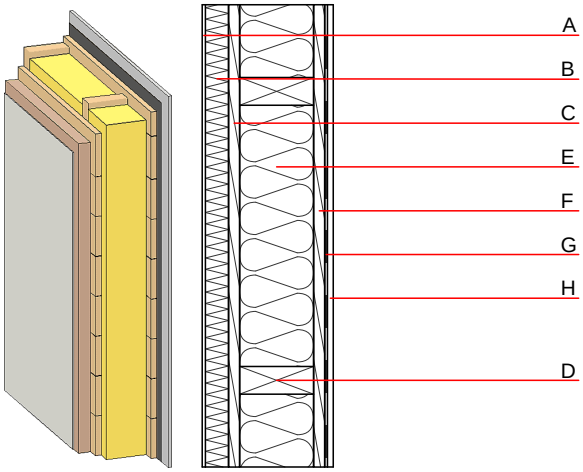
Calculated by HFA

| | | |
|---|---|---|
| **Acoustic performance** | **$R_w$ ($C;C_{tr}$)** | 52(-3;-8) dB |
| | **$L_{n,w}$ ($C_I$)** | |

Assessed by MA39

| | | |
|---|---|---|
| **Mass per unit area** | **m** | 72.80 kg/m² |

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 performance | | | | Reaction to fire |
|---|---|---|---|---|---|---|---|
| | | | λ | μ min – max | ρ | c | EN |
| A | 10.0 | plaster | 1.000 | 10 - 35 | 2000 | 1.130 | A1 |
| B | 50.0 | wood wool composite boards | 0.090 | 2 - 5 | 370 | 2.000 | B |
| C | 24.0 | planking spruce wood | 0.120 | 50 | 450 | 1.600 | D |
| D | 160.0 | construction timber (60/..; e=*) | 0.120 | 50 | 450 | 1.600 | D |
| E | 160.0 | mineral wool [035; 50; <1000°C] | 0.035 | 1 | 50 | 1.030 | A1 |
| F | 24.0 | planking spruce wood | 0.120 | 50 | 450 | 1.600 | D |
| G | | vapour barrier sd≥ 7m | | | 1000 | | |
| H | 12.5 | gypsum plaster board type DF or | 0.250 | 10 | 800 | 1.050 | A2 |
| H | 12.5 | gypsum fibre board | 0.320 | 21 | 1000 | 1.100 | A2 |

## Sustainability rating (per m²)

**Database ecoinvent**

| | |
|---|---|
| **$OI3_{Kon}$** | 38.5 |

Calculated by HFA

## Details of sustainability rating

**Database ecoinvent**

| Lifecycle (Phases) | GWP [kg $CO_2$-e.] | AP [kg $SO_2$-e.] | EP [kg $PO_4$-e.] | ODP [kg R11-e.] | POCP [kg Ethen-e.] | |
|---|---|---|---|---|---|---|
| A1 - A3 | | 0.175 | 0.077 | 3,36E-6 | 0.030 | |

| Lifecycle (Phases) | PERE [MJ] | PERM [MJ] | PERT [MJ] | PENRE [MJ] | PENRM [MJ] | PENRT [MJ] |
|---|---|---|---|---|---|---|
| A1 - A3 | 111.641 | 618.899 | 730.540 | 575.376 | 4.764 | 580.141 |