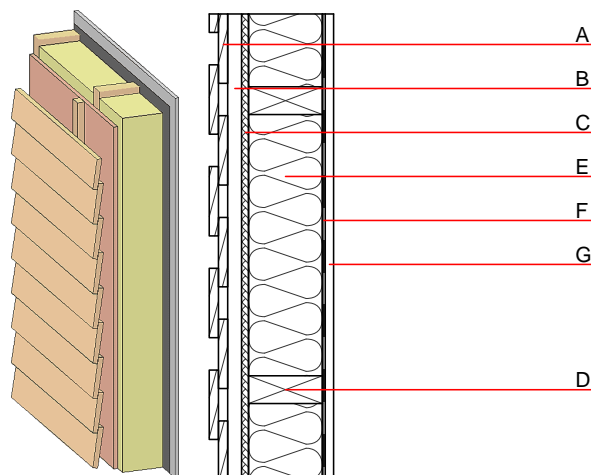


External wall - awrhho05b-05

external wall, timber frame construction, ventilated, without dry lining, with cladding, other surface

Performance rating

| | | |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------|
| Fire protection performance | REI from inside | 60 |
| | REI from outside | 30 |
| maximum ceiling height = 3 m; maximum load $E_{d,fi} = 25,0 \text{ kN/m}$ Classified by HFA | | |
| Thermal performance | U | 0.27 W/(m ² K) |
| | Diffusion | suitable |
| Calculated by HFA | | |
| Acoustic performance | $R_w (C; C_{tr})$ | 45(-2;-8) dB |
| | $L_{n,w} (C_i)$ | |
| Battens for the ventilation space screwed onto the structural timber result in an $R_w(C;C_{tr})=41(-1;-7)$ dB Assessed by MA39 | | |
| Mass per unit area | m | 31.60 kg/m ² |
| Calculation based on GF | | |



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 EN |
|---|-----------|---------------------------------------------------------|---------------------|--------------------------------|--------|-------|------------------------|
| | | | λ | $\mu \text{ min} - \text{max}$ | ρ | c | |
| A | 24.0 | larch wood external wall cladding | 0.155 | 150 | 600 | 1.600 | D |
| B | 30.0 | spruce wood battens offset (30/50; 30/80) - ventilation | 0.120 | 50 | 450 | 1.600 | D |
| C | 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 [038; ≥33; ≥1000°C] | 0.038 | 1 | 33 | 1.030 | A1 |
| F | | vapour barrier sd≥ 1m | | | 1000 | | |
| G | 18.0 | gypsum fibre board or | 0.320 | 21 | 1000 | 1.100 | A2 |
| G | 18.0 | gypsum plaster board type DF | 0.250 | 10 | 800 | 1.050 | A2 |

Sustainability rating (per m²)

Database ecoinvent

013_{Kon} 24.5

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 | | 0.126 | 0.043 | 1,42E-6 | 0.043 | |

| Lifecycle (Phases) | PERE [MJ] | PERM [MJ] | PERT [MJ] | PENRE [MJ] | PENRM [MJ] | PENRT [MJ] |
|-----------------------|--------------|--------------|--------------|---------------|---------------|---------------|
| A1 - A3 | 99.570 | 509.797 | 609.367 | 338.969 | 22.510 | 361.479 |