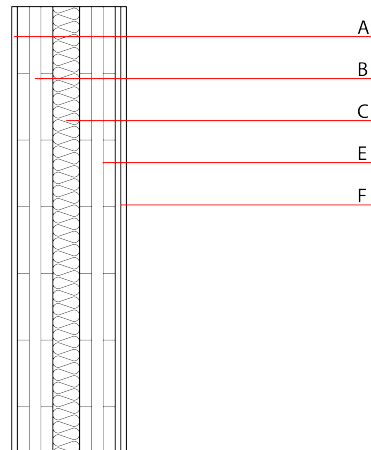


Compartment wall - twmxxo07b-03

compartment wall, solid wood construction, without dry lining, double-layer, other surface

Performance rating

| | | |
|---|---|--|
| Fire protection performance | REI | 60 |
| applies for each of the load-bearing walls; for the overall structure EI 90; maximum ceiling height = 3 m; maximum load $E_{d,fi} = 35,0 \text{ kN/m}$ Classified by HFA | | |
| Thermal performance | U Diffusion | 0.25 $\text{W}/(\text{m}^2\text{K})$ suitable |
| Calculated by HFA | | |
| Acoustic performance | R_w (C;C _{tr}) $L_{n,w}$ (C _i) | 64(-3;-8) dB |
| frequency range 50-3500: C ₅₀₋₃₅₀₀ -5 dB; C _{tr 50-3500} -16 dB Assessed by HFA | | |
| Mass per unit area | m | 117.60 kg/m^2 |



Note: Cross laminated timber

Var. 00-01: thickness $\geq 78\text{mm}$; 3-ply at least, surface layer at least 25mm

Var. 02: thickness $\geq 94,0\text{mm}$; 3-ply at least, surface layer at least 30mm

A and F: 2x12,5mm gypsum fibre board or gypsum plaster board type DF

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 | μ min – max | ρ | c | |
| A | 25.0 | gypsum plaster board type DF | 0.250 | 10 | 800 | 1.050 | A2 |
| A | 25.0 | gypsum fibre board | 0.320 | 21 | 1000 | 1.100 | A2 |
| B | 80.0 | cross laminated timber | 0.130 | 50 | 500 | 1.600 | D |
| C | 80.0 | mineral wool [0,35; ≥ 20 ; $< 1000^\circ\text{C}$] | 0.035 | 1 | 20 | 1.030 | A1 |
| D | | | | | | | |
| E | 80.0 | cross laminated timber | 0.130 | 50 | 500 | 1.600 | D |
| F | 25.0 | gypsum plaster board type DF (2x12,5) or | 0.250 | 10 | 800 | 1.050 | A2 |
| F | 25.0 | gypsum fibre board (2x12,5) | 0.320 | 21 | 1000 | 1.100 | A2 |

Sustainability rating (per m^2)

Database ecoinvent

OI3_{kon} 46.6

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 | -71.459 | 0.231 | 0.093 | 4,48E-6 | 0.014 | |

| Lifecycle (Phases) | PERE [MJ] | PERM [MJ] | PERT [MJ] | PENRE [MJ] | PENRM [MJ] | PENRT [MJ] |
|-----------------------|--------------|--------------|--------------|---------------|---------------|---------------|
| A1 - A3 | 96.035 | 1094.400 | 1190.435 | 804.066 | 27.489 | 831.555 |