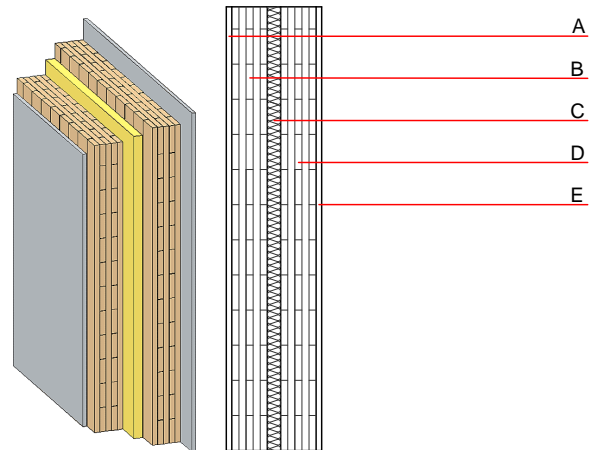


Compartment wall - twmxxo03a-01

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

Performance rating

| | | |
|--|------------------|--------------------------------------|
| Fire protection performance | REI | 60 |
| maximum ceiling height = 3 m; maximum load $E_{d,fi} = 35,0 \text{ kN/m}$ Classified by HFA | | |
| Thermal performance | U | 0.29 $\text{W}/(\text{m}^2\text{K})$ |
| | Diffusion | suitable |
| Calculated by HFA | | |
| Acoustic performance | $R_w (C;C_{tr})$ | 60 dB |
| | $L_{n,w} (C_i)$ | |
| Assessed by TU-GRAZ | | |
| Mass per unit area | m | 121.60 kg/m^2 |
| Calculation based on gypsum plaster board type DF | | |



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
 $C=2 \times 30 \text{ mm}$, $A/E=12,5$

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 | $\mu \text{ min - max}$ | ρ | c | |
| A | 12.5 | gypsum plaster board type DF | 0.250 | 10 | 800 | 1.050 | A2 |
| A | 12.5 | gypsum fibre board | 0.320 | 21 | 1000 | 1.100 | A2 |
| B | 78.0 | solid glued wood (e.g. cross laminated timber) | 0.130 | 50 | 500 | 1.600 | D |
| C | 60.0 | impact sound absorbing subflooring MW-T | 0.035 | 1 | 68 | 1.030 | A1 |
| D | 78.0 | solid glued wood (e.g. cross laminated timber) | 0.130 | 50 | 500 | 1.600 | D |
| E | 12.5 | gypsum plaster board type DF | 0.250 | 10 | 800 | 1.050 | A2 |
| E | 12.5 | gypsum fibre board | 0.320 | 21 | 1000 | 1.100 | A2 |

Sustainability rating (per m^2)

Database ecoinvent

013_{kon} 49.3

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 | | 0.243 | 0.105 | 4,51E-6 | 0.065 | |

| Lifecycle (Phases) | PERE [MJ] | PERM [MJ] | PERT [MJ] | PENRE [MJ] | PENRM [MJ] | PENRT [MJ] |
|-----------------------|--------------|--------------|--------------|---------------|---------------|---------------|
| A1 - A3 | 53.531 | 1067.040 | 1120.571 | 815.280 | 26.802 | 842.082 |