

## Compartment wall - twmxxo07b-02

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

### 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

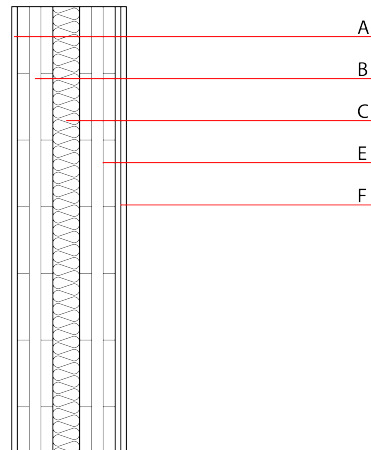
**Thermal performance** U Diffusion 0.35 W/(m<sup>2</sup>K) suitable

Calculated by HFA

**Acoustic performance**  $R_w (C; C_{tr})$  61(-5;-10) dB  
 $L_{n,w} (C_i)$

frequency range 50-3500:  $C_{50-3500} -6 \text{ dB}$ ;  $C_{tr,50-3500} -15 \text{ dB}$   
 Assessed by HFA

**Mass per unit area** m 116.80 kg/m<sup>2</sup>



**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
			$\lambda$	$\mu \text{ min - max}$	$\rho$	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 3-ply	0.130	50	500	1.600	D
C	40.0	mineral wool [0,35; $\geq 20$ ; $< 1000^\circ\text{C}$ ]	0.035	1	20	1.030	A1
E	80.0	cross laminated timber 3-ply	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<sup>2</sup>)

#### Database ecoinvent

O13<sub>kon</sub> 39.6

Calculated by HFA

**Details of sustainability rating**

Database ecoinvent

Lifecycle (Phases)	GWP [kg CO <sub>2</sub> -e.]	AP [kg SO <sub>2</sub> -e.]	EP [kg PO <sub>4</sub> -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.200	0.085	4,13E-6	0.061	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	50.512	1094.400	1144.912	729.621	27.489	757.110