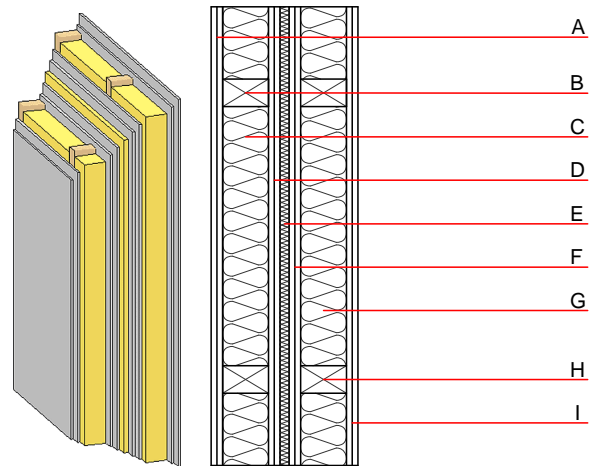


## Compartment wall - twrxo03b-04

compartment wall, timber frame construction, without dry lining, double-layer, Gipsplatte

### Performance rating

<b>Fire protection performance</b>	REI	60
apply to each individual load-bearing wall; the whole wall: EI90; maximum ceiling height = 3 m; maximum load $E_{d,fi} = 50,0 \text{ kN/m}$ Classified by MA39 Classified by HFA		
<b>Thermal performance</b>	U Diffusion	0.20 $\text{W}/(\text{m}^2\text{K})$ suitable
Calculated by HFA		
<b>Acoustic performance</b>	$R_w (C;C_{tr})$ $L_{n,w} (C_i)$	59(-2;10) dB
Assessed by MA39		
<b>Mass per unit area</b>	m	92.80 $\text{kg}/\text{m}^2$
Calculation based on gypsum plaster board type DF		



Note: layer A, D, F, I: planking 2x12,5mm; 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
			$\lambda$	$\mu \text{ min} - \text{max}$	$\rho$	c	
A	25.0	gypsum plaster board type DF or	0.250	10	800	1.050	A2
A	25.0	gypsum fibre board	0.320	21	1000	1.100	A2
B	100.0	construction timber (60/100; e=*)	0.120	50	450	1.600	D
C	100.0	sheep wool [0,041; R=26]	0.041	1	30	1.720	E
D	25.0	gypsum plaster board type DF or	0.250	10	800	1.050	A2
D	25.0	gypsum fibre board	0.320	21	1000	1.100	A2
E	20.0	mineral wool [040; $\geq 16$ ; $< 1000^\circ\text{C}$ ]	0.040	1	16	1.030	A1
F	25.0	gypsum plaster board type DF or	0.250	10	800	1.050	A2
F	25.0	gypsum fibre board	0.320	21	1000	1.100	A2
G	100.0	construction timber (60/100; e=*)	0.120	50	450	1.600	D
H	100.0	sheep wool [0,041; R=26]	0.041	1	30	1.720	E
I	25.0	gypsum plaster board type DF or	0.250	10	800	1.050	A2
I	25.0	gypsum fibre board	0.320	21	1000	1.100	A2

### Sustainability rating (per $\text{m}^2$ )

#### Database ecoinvent

$\text{O13}_{\text{kon}}$  24.4

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		0.071	0.034	2,87E-6	0.012	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	47.048	223.822	270.869	418.000	0.651	418.651