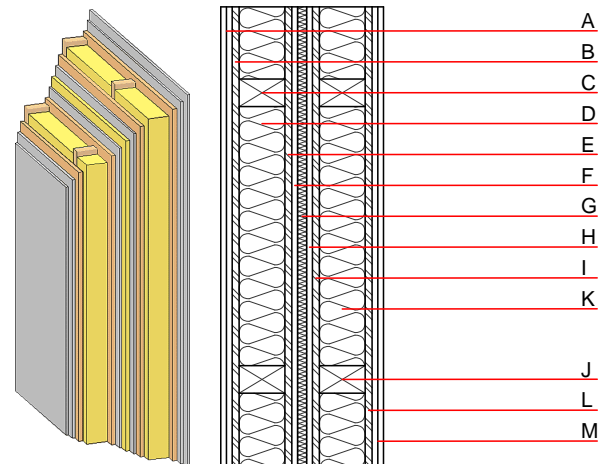


## Compartment wall - twrxo07b-03

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

### Performance rating

<b>Fire protection performance</b>	REI	90
apply to each individual load-bearing wall; the whole wall: EI90; maximum ceiling height = 3 m; maximum load $E_{d,fi} = 19,0 \text{ kN/m}$ Classified by HFA		
<b>Thermal performance</b>	U Diffusion	0.17 W/(m <sup>2</sup> K) suitable
Calculated by HFA		
<b>Acoustic performance</b>	$R_w$ (C;C <sub>tr</sub> ) $L_{n,w}$ (C <sub>i</sub> )	60(-3;-10) dB
Assessed by MA39		
<b>Mass per unit area</b>	m	122.50 kg/m <sup>2</sup>
Calculation based on gypsum plaster board type DF		



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
			$\lambda$	$\mu$ min – max	$\rho$	c	
A	25.0	gypsum plaster board type DF (2x12,5 mm) or	0.250	10	800	1.050	A2
A	25.0	gypsum fibre board (2x12,5 mm)	0.320	21	1000	1.100	A2
B	15.0	OSB	0.130	200	600	1.700	D
C	100.0	construction timber (60/100; e=*)	0.120	50	450	1.600	D
D	100.0	cellulose fibre [0,040; R=55]	0.040	1 - 2	55	2.000	B
E	15.0	OSB	0.130	200	600	1.700	D
F	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
F	12.5	gypsum fibre board	0.320	21	1000	1.100	A2
G	20.0	mineral wool [040; ≥16; <1000°C]	0.040	1	16	1.030	A1
H	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
H	12.5	gypsum fibre board	0.320	21	1000	1.100	A2
I	15.0	OSB	0.130	200	600	1.700	D
J	100.0	construction timber (60/100; e=*)	0.120	50	450	1.600	D
K	100.0	cellulose fibre [0,040; R=55]	0.040	1 - 2	55	2.000	B
L	15.0	OSB	0.130	200	600	1.700	D
M	25.0	gypsum plaster board type DF (2x12,5 mm) or	0.250	10	800	1.050	A2
M	25.0	gypsum fibre board (2x12,5 mm)	0.320	21	1000	1.100	A2

### Sustainability rating (per m<sup>2</sup>)

#### Database ecoinvent

O13<sub>Kon</sub> 33.9

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		0.194	0.083	4,14E-6	0.048	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	290.658	1534.255	1824.913	726.520	43.364	769.884