

## Compartment wall - twrxo03a-04

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

### Performance rating

**Fire protection performance** REI 45

apply to each of the load bearing walls; the whole wall: EI90; maximum ceiling height = 3 m; maximum load  $E_{d,fi} = 19,2 \text{ kN/m}$   
Classified by HFA

**Thermal performance** U 0.21 W/(m<sup>2</sup>K)  
Diffusion suitable

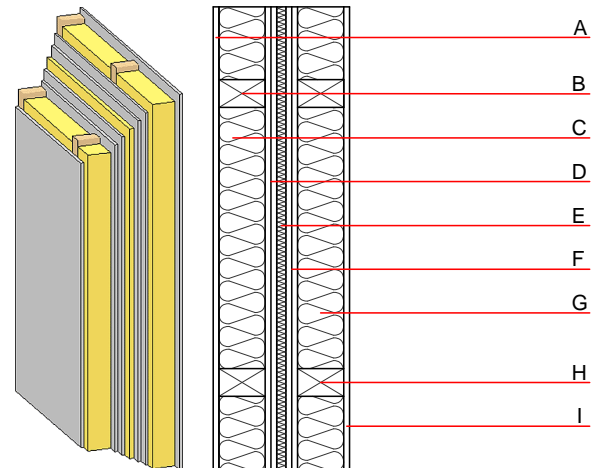
Calculated by HFA

**Acoustic performance**  $R_w (C; C_{tr})$  58(-3; 11) dB  
 $L_{n,w} (C_i)$

Assessed by MA39

**Mass per unit area** m 72.80 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
			$\lambda$	$\mu \text{ min} - \text{max}$	$\rho$	c	
A	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
A	12.5	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 (2x12,5 mm) or	0.250	10	800	1.050	A2
D	25.0	gypsum fibre board (2x12,5 mm)	0.320	21	1000	1.100	A2
E	20.0	mineral wool [040; $\geq 16$ ; <1000°C]	0.040	1	16	1.030	A1
F	25.0	gypsum plaster board type DF (2x12,5 mm) or	0.250	10	800	1.050	A2
F	25.0	gypsum fibre board (2x12,5 mm)	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	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
I	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

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

#### Database ecoinvent

013<sub>Kon</sub> 19.5

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		0.060	0.028	2,31E-6	0.011	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	42.862	223.822	266.683	338.615	0.651	339.266