

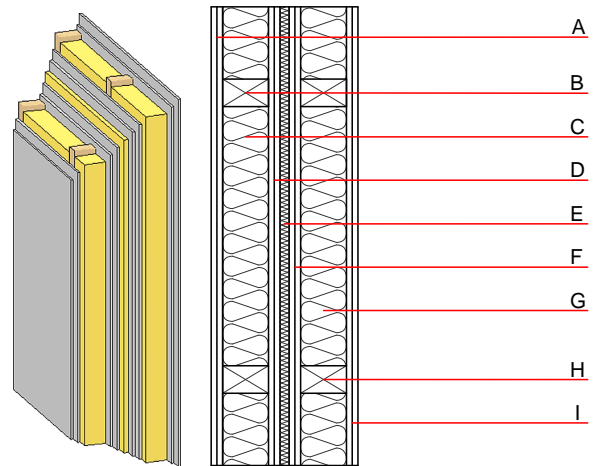
Compartment wall - twrxo03b-05

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

Performance rating

Fire protection performance	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		
Thermal performance	U Diffusion	0.20 $\text{W}/(\text{m}^2\text{K})$ suitable
Calculated by HFA		
Acoustic performance	$R_w (C;C_{tr})$ $L_{n,w} (C_i)$	59(-2;10) dB
Assessed by MA39		
Mass per unit area	m	98.00 kg/m^2

Calculation based on gypsum plaster board type DF



Note: layer A, D, F, I: planking 2x12,5mm; e=400

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	$\mu \text{ min} - \text{max}$	ρ	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	mineral wool [040; ≥ 16 ; $< 1000^\circ\text{C}$]	0.040	1	16	1.030	A1
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; ≥ 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	mineral wool [040; ≥ 16 ; $< 1000^\circ\text{C}$]	0.040	1	16	1.030	A1
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 m^2)

Database ecoinvent

013_{kon} 32.7

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		0.112	0.053	3,34E-6	0.018	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	67.386	245.670	313.056	514.097	0.000	514.097