

Compartment wall - twrxo07b-02

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

Performance rating

Fire protection performance 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

Thermal performance U Diffusion 0.17 W/(m²K) suitable

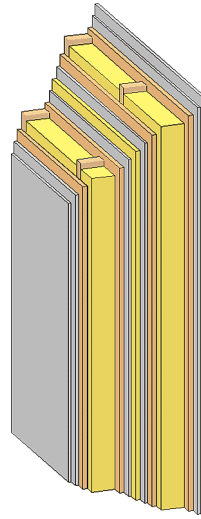
Calculated by HFA

Acoustic performance $R_w (C; C_{tr})$ 60(-3;-10) dB
 $L_{n,w} (C_i)$

Assessed by MA39

Mass per unit area m 114.90 kg/m²

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
			λ	μ min – max	ρ	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	mineral wool [038; ≥ 33 ; $\geq 1000^\circ\text{C}$]	0.038	1	33	1.030	A1
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 ; $< 1000^\circ\text{C}$]	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	mineral wool [038; ≥ 33 ; $\geq 1000^\circ\text{C}$]	0.038	1	33	1.030	A1
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 m²)

Database ecoinvent

OI3_{Kon} 47.8

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		0.210	0.075	3,68E-6	0.062	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	160.923	743.284	904.207	698.135	43.364	741.500