dataholz.eu

Designation: twrxxo07a-02
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

Compartment wall - twrxxo07a-02

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 $E_{d,fi}$ = 19,2 kN/m
Classified by MA39
Classified by HFA

Germany

F60

Load $E_{d,fi}$ according to the German certification document

Corresponding proof: DIN 4102-4, Tabelle 10.6, Zeile 14

Thermal performance — **U** — 0.18 W/(m²K)
Diffusion — suitable

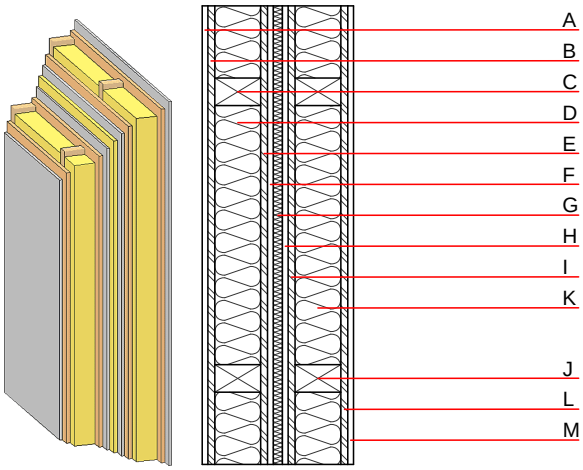
Calculated by HFA
Calculated by TUM

Acoustic performance — **R_w ($C;C_{tr}$)** — 59(-3;-10) dB
$L_{n,w}$ (C_I)

Assessed by MA39
Assessed by Müller-BBM

Mass per unit area — **m** — 93.90 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
			λ	μ min – max	ρ	c	EN
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	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 [040; 33; ≥1000°C]	0.040	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°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 [040; 33; ≥1000°C]	0.040	1	33	1.030	A1
L	15.0	OSB	0.130	200	600	1.700	D
M	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
M	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m^2)

Database ecoinvent

$OI3_{Kon}$	43.2

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	**kg**	45.460
Biogenic carbon in kg CO_2-e.	**kg CO_2**	69.430
Energy use of Primary Energy	**MJ**	973.960
Share of renewable PE	**%**	21.78

Calculated by TUM

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		0.199	0.070	3.13E-6	0.061	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	156.863	743.284	900.147	621.494	43.364	664.858

Database GaBi (ÖKOBAUDAT)

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		0.162	0.024	8.53E-7	0.047	
C1 - C4		0.005	0.003	1.07E-7	0.001	
A1 - C4		0.174	0.029	9.91E-7	0.049	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	208.777	807.557	1017.104	721.950	38.999	761.042
C1 - C4	1.826	-785.630	-783.808	17.803	-25.382	-7.579
A1 - C4	212.128	22.963	235.857	761.829	13.825	775.747