Internal wall - iwrxxo01b-04

internal wall, timber frame construction, without dry lining, other surface

Performance rating

Fire protection performance   **REI**   60

maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 50,0 kN/m
Classified by MA39
Classified by HFA

Germany

F30/F60 (depending on the corresponding proof)

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

Corresponding proof: F30: DIN 4102-4:2016-05, Tabelle 10.5,Zeile 5; F60: DIN 4102-4:2016-05, Tablle 10.5, Zeile 10 (if gypsum plaster board type DF or gypsum fibre board 15 mm inside) or manufacturer-specific

Acoustic performance	R_w (C;C$_{tr}$)	43(-1;-5) dB
	$L_{n,w}$ (C$_l$)	

Assessed by Müller-BBM

Mass per unit area   **m**   48.80 kg/m^2

Calculation based on gypsum plaster board type DF
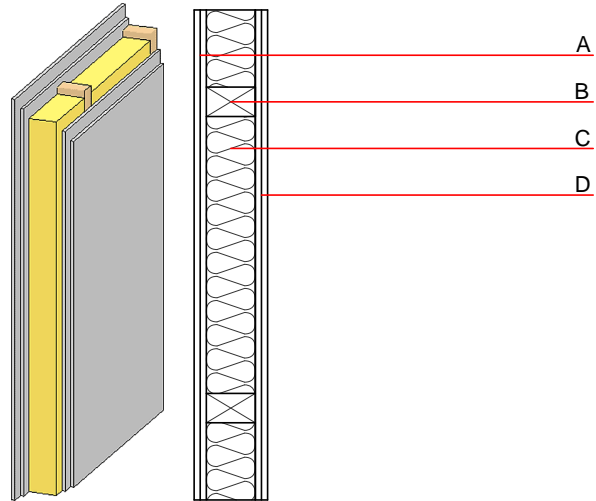
Note: The fire resistance is only valid when wall is used as partition with only one side exposed to fire.
(B=60/100); e=625

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	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	100.0	construction timber (60/100 or 60/160; e=*)	0.120	50	450	1.600	D
C	100.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	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

Sustainability rating (per m^2)

Database ecoinvent

OI3$_{Kon}$ 12.4

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	10.610
Biogenic carbon in kg CO$_2$-e.	kg CO$_2$	14.270
Energy use of Primary Energy	MJ	246.820
Share of renewable PE	%	19.70

Calculated by TUM

dataholz.eu

Designation: iwrxxo01b-04
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

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Details of sustainability rating

Database ecoinvent

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO$_2$-e.]	[kg SO$_2$-e.]	[kg PO$_4$-e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.043	0.020	1,39E-6	0.006	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	27.400	129.300	156.700	203.202	0.000	203.202

Database GaBi (ÖKOBAUDAT)

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO$_2$-e.]	[kg SO$_2$-e.]	[kg PO$_4$-e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.028	0.006	2,03E-7	0.003	
C1 - C4		0.006	0.004	1,15E-7	0.001	
A1 - C4		0.040	0.012	3,50E-7	0.005	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	46.680	177.060	224.140	160.140	4.310	164.490
C1 - C4	0.220	-81.680	-81.460	14.420	-0.050	14.370
A1 - C4	48.610	96.420	145.440	198.200	4.490	202.740

dataholz.eu – Catalogue of timber building materials, components and component connections reviewed to consider thermal, acoustic, fire performance requirements and ecological drivers for timber construction released by accredited testing institutes.
These datasheets will generally be accepted as proofs of compliance by building authorities.

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