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Designation: iwrxxo01a-04
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, PLB

Internal wall - iwrxxo01a-04

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

Performance rating

Fire protection performance — **REI** — 30

maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 19,2 kN/m
Classified by MA39
Classified by HFA

Germany

F30

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

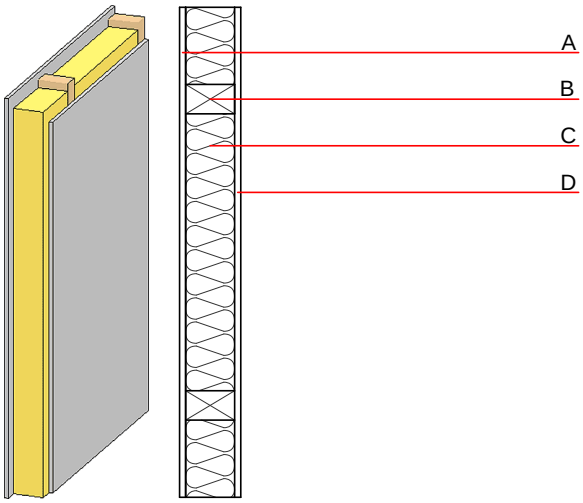
Corresponding proof: manufacturer-specific

Acoustic performance — **R_w ($C;C_{tr}$)** **$L_{n,w}$ (C_I)** — 38(-3;-8) dB

Assessed by Müller-BBM

Mass per unit area — **m** — 28.80 kg/m²

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	12.5	gypsum plaster board type DF	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 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	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2
D	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$ — 7.8

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**	142.440
Share of renewable PE	**%**	25.98

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		0.033	0.014	8,40E-7	0.005	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	23.340	129.300	152.640	126.561	0.000	126.561

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		0.018	0.004	1,80E-7	0.002	
C1 - C4		0.004	0.004	6,33E-8	0.000	
A1 - C4		0.025	0.008	2,58E-7	0.003	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	36.105	166.714	203.224	86.830	1.934	88.810
C1 - C4	0.145	-81.676	-81.531	8.142	-0.050	8.090
A1 - C4	37.008	85.557	122.969	105.430	1.988	107.460