

Internal wall - iwmxxo01 b-00

internal wall, solid wood construction, without dry lining, other surface

Performance rating

Fire protection performance REI 90

maximum ceiling height = 3 m; maximum load $E_{d,fi} = 32,0$ kN/m
 Classified by MA39
 Classified by HFA

Germany

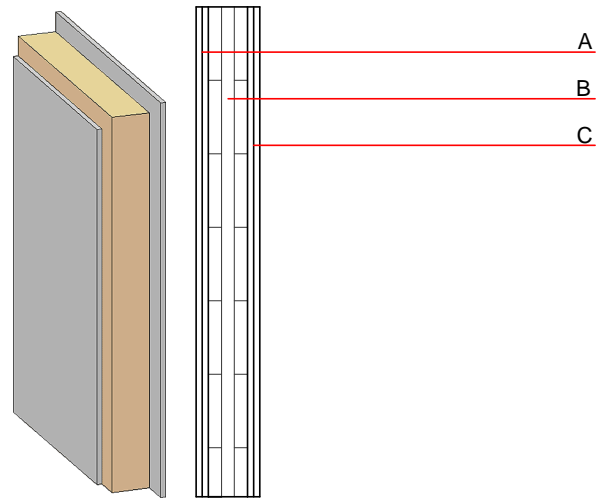
REI60
 Load $E_{d,fi}$ according to the German certification document
 Corresponding proof: manufacturer-specific

Acoustic performance $R_w (C; C_{tr})$ 38(-2;-5) dB
 $L_{n,w} (C_i)$

Assessed by TU-GRAZ
 Assessed by Müller-BBM

Mass per unit area m 79.00 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.

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 (2x... mm) or	0.250	10	800	1.050	A2
A	25.0	gypsum fibre board (2x...mm)	0.320	21	1000	1.100	A2
B	78.0	solid wood (e.g. cross laminated timber: thickness \geq 78mm; 3-ply at least, surface layer at least 25mm)	0.130	50	500	1.600	D
C	25.0	gypsum plaster board type DF (2x...mm) or	0.250	10	800	1.050	A2
C	25.0	gypsum fibre board (2x...mm)	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Databaseecoinvent

$OI3_{kon}$ 22.8

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	38.170
Biogenic carbon in kg CO ₂ -e.	kg CO ₂	54.950
Energy use of Primary Energy	MJ	541.040
Share of renewable PE	%	31.590

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	-33.573	0.105	0.043	2,60E-6	0.008	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	30.661	560.772	591.433	413.563	20.369	433.932

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	-44.120	0.061	0.013	2,00E-6	0.011	
C1 - C4	64.517	0.004	0.001	1,75E-7	0.000	
A1 - C4	21.845	0.071	0.015	2,20E-6	0.012	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	168.914	667.316	834.670	331.908	9.665	341.136
C1 - C4	0.488	-646.620	-646.132	17.299	0.000	17.299
A1 - C4	170.919	21.732	191.091	370.124	9.873	379.560