

Internal wall - iwmxix03a-00

internal wall, solid wood construction, with dry lining, other surface

Performance rating

Fire protection performance REI 60
 resp. REI 30; maximum ceiling height = 3 m; maximum load $E_{d,fi} = 32 \text{ kN/m}$
 Classified by HFA

Germany

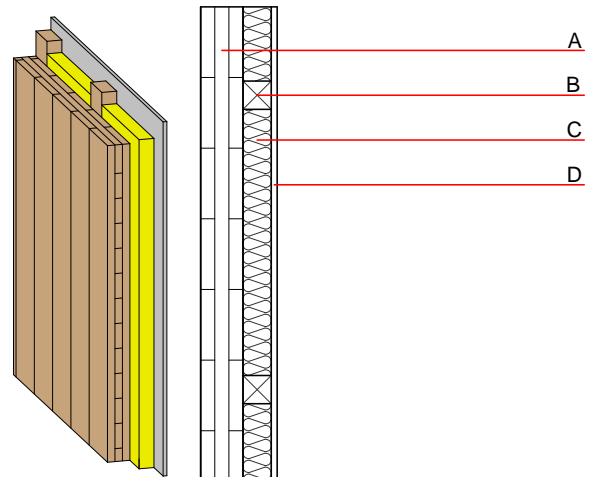
REI 60 resp. REI 30
 Load $E_{d,fi}$ according to the German certification document
 Corresponding proof: manufacturer-specific

Acoustic performance $R_w (C; C_{tr})$ 36(-2;-5) dB
 $L_{n,w} (C_i)$

Assessed by Müller-BBM

Mass per unit area m 60.20 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	$\mu \text{ min - max}$	ρ	c	
A	94.0	cross laminated timber	0.130	50	500	1.600	D
B	60.0	spruce wood battens (60/60; e=625)	0.120	50	450	1.600	D
C	60.0	mineral wool [040; 11; <1000°C]	0.040	1	11	1.030	A1
D	12.5	gypsum plaster board type DF or	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

O13_{Kon} 21.0

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials kg 48.910
Biogenic carbon in kg CO₂-e. kg CO₂ 70.470
Energy use of Primary Energy MJ 539.440
Share of renewable PE % 37.55

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		0.117	0.049	2,16E-6	0.037	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	34.563	690.129	724.691	395.218	16.150	411.368

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		0.076	0.014	2,49E-6	0.013	
C1 - C4		0.002	0.001	1,40E-7	0.000	
A1 - C4		0.079	0.015	2,64E-6	0.014	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	201.650	834.970	1034.560	318.900	10.700	329.080
C1 - C4	0.530	-829.500	-828.980	12.440	0.000	12.440
A1 - C4	202.550	5.730	206.220	336.890	10.750	347.110