

Internal wall - iwrxxo06a-03

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

Performance rating

Fire protection performance REI 60
 maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 19,2 kN/m
 Classified by MA39
 Classified by HFA

Germany

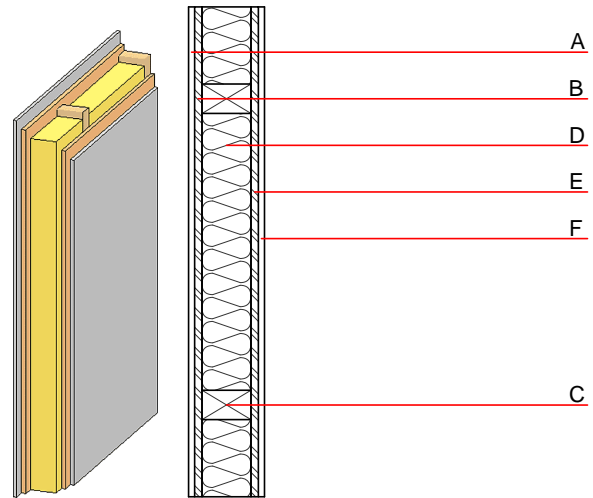
F60
 Load $E_{d,fi}$ according to the German certification document
 Corresponding proof: manufacturer-specific

Acoustic performance R_w ($C; C_{tr}$) 50 dB
 $L_{n,w}$ (C_i)

Assessed by Müller-BBM

Mass per unit area m 46.80 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.
 (C=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 EN
			λ	μ min – max	ρ	c	
A	12.5	gypsum fibre board or	0.320	21	1000	1.100	A2
A	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2
B	15.0	OSB	0.130	200	600	1.700	D
C	100.0	construction timber (60/100 or 60/160; e=*)	0.120	50	450	1.600	D
D	100.0	mineral wool [038; ≥33; ≥1000°C]	0.038	1	33	1.030	A1
E	15.0	OSB	0.130	200	600	1.700	D
F	12.5	gypsum fibre board or	0.320	21	1000	1.100	A2
F	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2

Sustainability rating (per m²)

Databaseecoinvent

O13_{Kon} 20.9
 Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	22.730
Biogenic carbon in kg CO ₂ -e.	kg CO ₂	34.720
Energy use of Primary Energy	MJ	480.720
Share of renewable PE	%	21.87

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		0.097	0.034	1,52E-6	0.030	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	78.053	371.642	449.694	302.515	21.682	324.197

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		0.078	0.012	4,12E-7	0.024	
C1 - C4		0.002	0.001	5,34E-8	0.000	
A1 - C4		0.084	0.014	4,81E-7	0.024	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	103.449	403.719	507.553	355.817	19.009	374.873
C1 - C4	0.908	-392.815	-391.908	8.801	-12.691	-3.890
A1 - C4	105.120	11.422	116.925	375.598	6.422	382.067