

Designation: iwmxxi03a-01 Last updated: 8/2/23

Source: Holzforschung Austria

Editor: HFA, PLB

# Internal wall - iwmxxi03a-01

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

# Performance rating

Fire protection REI 60 performance

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

Germany

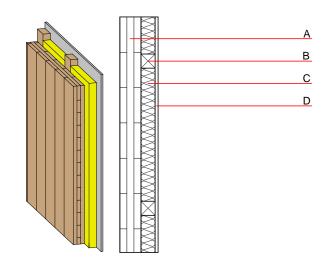
REI 30

Load E<sub>d.fi</sub> according to the German certification document

Corresponding proof: manufacturer-specific

Acoustic performance  $R_w$  (C;C<sub>tr</sub>)  $R_w$  (C;C<sub>tr</sub>)  $R_w$  (C<sub>1</sub>)  $R_v$  (C<sub>1</sub>)  $R_$ 

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
			λ	μ min – max	ρ	С	EN
Α	94.0	cross laminated timber	0.130	50	500	1.600	D
В	60.0	spruce wood battens (60/60; e=625)	0.120	50	450	1.600	D
С	60.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	E
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 m<sup>2</sup>)

Database econvent		Database GaBi (OKOBAUDAT)				
OI3 <sub>Kon</sub>	19.5	Built-in renewable materials	kg	52.420	_	
Calculated by HFA		Biogenic carbon in kg CO <sub>2</sub> -e.	kg CO <sub>2</sub>	74.870		
calculated by TITA		Energy use of Primary Energy	MJ	519.520		
		Share of renewable PE	%	39.06		

Calculated by TUM

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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### Details of sustainability rating

#### Database ecoinvent

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO <sub>2</sub> -e.]	[kg SO <sub>2</sub> -e.]	[kg PO <sub>4</sub> -e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.115	0.048	2,07E-6	0.036	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	35.980	720.540	756.520	378.145	16.150	394.295

#### Database GaBi (ÖKOBAUDAT)

Lifecycle	GWP	AP	EP	ODP	POCP
(Phases)	[kg CO <sub>2</sub> -e.]	[kg SO <sub>2</sub> -e.]	[kg PO <sub>4</sub> -e.]	[kg R11-e.]	[kg Ethen-e.]
A1 - A3		0.064	0.013	2,42E-6	0.013
C1 - C4		0.003	0.002	1,46E-7	0.000
A1 - C4		0.069	0.015	2,58E-6	0.013

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	202.040	879.260	1079.250	298.090	8.050	305.620
C1 - C4	0.520	-829.500	-828.980	13.240	0.000	13.240
A1 - C4	202.950	50.020	250.920	316.570	8.100	324.140