# dataholz.eu

Designation: Last updated: Source: Editor: awrhho01a-09 8/2/23 Holzforschung Austria HFA, PLB

## External wall - awrhho01a-09

external wall, timber frame construction, ventilated, without dry lining, with cladding, other surface

## Performance rating

Fire protection	REI from inside	60
performance	REI from outside	30
maximum ceiling height = Classified by HFA	3 m; maximum load E <sub>d,f</sub>	ī = 32,0 kN∕m
Classified by HFA		
Germany		
F60 (from inside)/F30 (fro	om outside)	
Load E <sub>d,fi</sub> according to the	German certification doo	cument
Corresponding proof: man	ufacturer-specific	
Thermal performance	U Diffusion	0.25 W∕(m <sup>2</sup> K) suitable
Calculated by TUM		Sanabio
Acoustic performance	R <sub>w</sub> (C;C <sub>tr</sub> ) L <sub>n,w</sub> (C <sub>l</sub> )	47(-2;-8) dB
Assessed by Müller-BBM		
Mass per unit area	m	60.00 kg/m <sup>2</sup>
Calculation based on gyps	sum plaster board type D	F

## 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	
А	24.0	larch wood external wall cladding	0.155	150	600	1.600	D	
В	30.0	spruce wood battens offset (30/50; 30/80) - ventilation	0.120	50	450	1.600	D	
С	15.0	fibreboard (MDF)	0.140	11	600	1.700	D	
D	160.0	construction timber (60/; e=625)	0.120	50	450	1.600	D	
Е	160.0	mineral wool [040; 30; ≥1000°C]	0.040	1	30	1.030	A1	
F	15.0	OSB (sealed with airtight tape)	0.130	200	600	1.700	D	
G	15.0	gypsum plaster board type DF or	0.250	10	800	1.050	A2	
G	15.0	gypsum fibre board	0.320	21	1000	1.100	A2	

## Sustainability rating (per m<sup>2</sup>)

#### Database ecoinvent

OI3 <sub>Kon</sub>	25.9	Built-in renewable materials	kg kg CO <sub>2</sub> MJ	44.620 65.170 640.190
Calculated by HEA		Biogenic carbon in kg CO <sub>2</sub> -e.		
		Energy use of Primary Energy		
		Share of renewable PE	%	29.28
		Calculated by TUM		

Database GaBi (ÖKOBAUDAT)

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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		0.140	0.049	1,60E-6	0.047	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[M]	[M]	[M]	[LM]	[MJ]	[MJ]
A1 - A3	113.088	656.311	769.399	377.380	28.891	406.271

### 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		0.108	0.018	1,58E-6	0.028	
C1 - C4		0.002	0.002	8,96E-8	0.000	
A1 - C4		0.112	0.021	1,68E-6	0.028	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[M]	[M]	[M]	[LM]	[MJ]	[MJ]
A1 - A3	186.134	756.882	943.138	435.885	32.390	468.350
C1 - C4	0.922	-751.746	-750.825	10.800	-24.350	-13.550
A1 - C4	187.441	5.395	192.958	452.748	8.090	460.910