# dataholz.eu

Designation: Last updated: Source: Editor: awropo09a-11 8/2/23 Holzforschung Austria HFA, PLB

### External wall - awropo09a-11

external wall, timber frame construction, not ventilated, without dry lining, with rendering, other surface

Performance ratin	g			
Fire protection	REI from inside	60		
performance	REI from outside	60		
maximum ceiling height = Classified by HFA	= 3 m; maximum load E <sub>d,</sub>	<sub>fi</sub> = 32,0 kN/m		
Classified by HFA				
Germany				
F60 (from inside/from ou	utside)			
Load $E_{\rm d,fi}$ according to the	e German certification do	cument		
Corresponding proof: man	nufacturer-specific			
Thermal performance	U Diffusion	0.20 W∕(m <sup>2</sup> K) suitable		
Calculated by TUM	Diffusion	Sullable		
Acoustic performance	R <sub>w</sub> (C;C <sub>tr</sub> ) L <sub>n,w</sub> (C <sub>I</sub> )	50(-3;-11) dB		
Assessed by Müller-BBM				
Mass per unit area	m	59.20 kg∕m <sup>2</sup>		

Calculation based on gypsum plaster board type DF

#### 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	7.0	plaster	1.000	10 - 35	2000	1.130	A1
В	60.0	wood-fibre insulation board WF-PT [045; 180]	0.045	5 - 7	180	2.100	E
С	160.0	construction timber (60/; e=625)	0.120	50	450	1.600	D
D	160.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
Е	15.0	OSB (sealed with airtight tape)	0.130	200	600	1.700	D
F	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
F	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

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

34.7

 $\ensuremath{\text{OI3}_{\text{Kon}}}$  Calculated by HFA

#### Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	38.330
Biogenic carbon in kg CO2-e.	kg CO <sub>2</sub>	56.110
Energy use of Primary Energy	MJ	871.790
Share of renewable PE	%	36.29
Calculated by TUM		

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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		0.146	0.065	2,91E-6	0.021	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[M]	[M]	[MJ]	[M]	[MJ]	[M]
A1 - A3	89.910	518.303	608.212	519.549	34.612	554.162

#### 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		0.098	0.020	4,60E-7	0.026	
C1 - C4		0.003	0.000	4,14E-8	0.000	
A1 - C4		0.103	0.022	5,08E-7	0.026	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[M]	[M]	[LM]	[LM]	[MJ]	[M]
A1 - A3	314.201	808.607	1123.423	529.787	44.188	574.050
C1 - C4	1.776	-803.401	-801.461	20.415	-42.595	-19.980
A1 - C4	316.357	5.465	322.803	555.432	1.645	562.710