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Designation: Last updated: Source: Editor: awrhhi11a-05 8/2/23 Holzforschung Austria HFA, PLB

External wall - awrhhi11a-05

external wall, timber frame construction, ventilated, with dry lining, with cladding, other surface

Performance rating

Fire protection performance	REI from inside REI from outside	30 30	
maximum ceiling height = Classified by HFA	= 3 m; maximum load E _{d,f}	i = 19,2 kN∕m	
Germany			
F30 (from inside/from ou	tside)		
Load $E_{d,fi}$ according to the	e German certification doo	tument	
Corresponding proof: mar	ufacturer-specific		
Thermal performance	U Diffusion	0.18 W∕(m ² K) suitable	
Calculated by TUM			
Acoustic performance	R _w (C;C _{tr}) L _{n,w} (C _l)	59(-1;-6) dB	
Assessed by Müller-BBM			
Mass per unit area	m	66.70 kg/m ²	



Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

	Thickness	Building material	Thermal per	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		wind barrier			1000		
D	12.5	gypsum fibre board	0.320	21	1000	1.100	A2
Е	200.0	construction timber (60/; e=625)	0.120	50	450	1.600	D
F	200.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
G		vapour barrier sd≥ 5m			1000		
Н	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2
I	40.0	spruce wood cross battens (a=400) \ge 40mm	0.120	50	450	1.600	D
J	40.0	Wood fibre insulation [039; 45] ≥40mm	0.039	1 - 2	45	2.100	E
К	12.5	gypsum plaster board type A	0.250	4 - 10	680	1.050	A2

Sustainability rating (per m²)

Database ecoinvent		Database GaBi (ÖKOBAUDAT)				
OI3 _{Kon}	22.6	Built-in renewable materials	kg	39.360		
Calculated by HFA		Biogenic carbon in kg CO ₂ -e.	kg CO ₂	57.140		
		Energy use of Primary Energy Share of renewable PE	MJ %	996.410 39.40		
		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 ₂ -e.]	[kg SO ₂ -e.]	[kg PO ₄ -e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.110	0.046	2,28E-6	0.006	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[M]	[LM]	[LM]	[MJ]	[MJ]
A1 - A3	96.582	620.923	717.506	400.196	27.501	427.697

Database GaBi (ÖKOBAUDAT)

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO ₂ -e.]	[kg SO ₂ -e.]	[kg PO ₄ -e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.112	0.024	7,36E-7	0.023	
C1 - C4		0.004	0.001	1,29E-7	0.000	
A1 - C4		0.120	0.026	8,87E-7	0.024	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[LM]	[LM]	[LM]	[LM]	[MJ]	[MJ]
A1 - A3	389.628	1060.998	1450.332	558.008	78.144	636.240
C1 - C4	1.812	-1045.564	-1043.750	30.134	-41.098	-10.960
A1 - C4	392.578	16.212	408.497	603.830	37.202	641.120