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Designation: Last updated: Source: Editor: awroho03a-04 8/2/23 Holzforschung Austria HFA, SP

External wall - awroho03a-04

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

Performance rating

Fire protection performance	REI from inside REI from outside	60 30		
maximum ceiling height = Classified by HFA	= 3 m; maximum load E _{d,i}	_{fi} = 32,0 kN/m		
Thermal performance	U	0.20 W∕(m ² K)		
	Diffusion	suitable		
Calculated by HFA				
Acoustic performance	R _w (C;C _{tr})	51(-2;-7) dB		
	L _{n,w} (C _l)			
Vertical external battens	screwed onto the ledger b	beams lead to an		
Rw(C;Ctr)=47(-1;-5) dB Assessed by MA39				
Mass per unit area	m	71.50 kg/m ²		
Calculation based on GF				
			Note: e=625	

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

	Thickness	Building material	Thermal per	rformance			Reaction to fire
			λ	µ min – max	ρ	с	EN
Ą	24.0	larch wood external wall cladding	0.155	150	600	1.600	D
В	65.0	spruce wood cross battens	0.120	50	450	1.600	D
С	50.0	wood wool composite boards	0.090	2 - 5	370	2.000	В
D	16.0	particleboard	0.130	50 - 100	700	1.700	D
E	160.0	construction timber (60/; e=*)	0.120	50	450	1.600	D
F	160.0	mineral wool [035; 50; <1000 °C]	0.035	1	50	1.030	A1
G	12.0	particleboard	0.130	50 - 100	700	1.700	D
Η		vapour barrier sd≥ 10m			1000		
I	12.5	gypsum fibre board or	0.320	21	1000	1.100	A2
1	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2

Sustainability rating (per m²)

Database ecoinvent

OI3_{Kon}

Calculated by HFA

43.6

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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		0.188	0.083	3,39E-6	0.036	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(21)	[MJ]	[M]	[MJ]	[LM]	[MJ]	[M]
(Phases)	[1113]					

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.