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Designation: awmhhi04a-01
Last updated: 8/5/24
Source: Holzforschung Austria
Editor: HFA, PLB

External wall - awmhhi04a-01

external wall, solid wood construction, ventilated, with dry lining, with cladding, clay

Performance rating

Fire protection performance	**REI from inside**	90
	REI from outside	60

maximum ceiling height = 3 m; maximum load Ed,fi = 35,0 kN/lfm
Classified by HFA

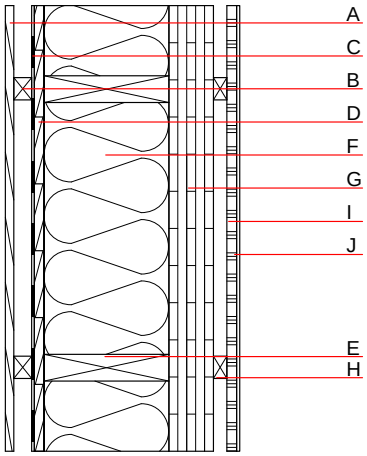
Thermal performance	**U**	0.13 W/(m²K)
	Diffusion	suitable

Calculated by IBO

Acoustic performance	**R_w ($C;C_{tr}$)**	45(-1;-4) dB
	$L_{n,w}$ (C_I)	

Assessed by HFA

Mass per unit area	**m**	112.90 kg/m²



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	c	EN
A	19.0	larch wood external wall cladding, e.g. clapboard facade	0.120	50	450	1.600	D
B	40.0	spruce wood ventilation	0.120	50	450	1.600	D
C		wind barrier (building papers)			1000		
D	24.0	planking spruce wood diagonal formwork	0.120	50	450	1.600	D
E	280.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
F	280.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
G	100.0	cross laminated timber 5-ply (top layer at least 20 mm) joints airtight	0.130	50	500	1.600	D
H	30.0	spruce wood battens vertical / air layer	0.120	50	450	1.600	D
I	22.0	clay board	0.353	5 - 10	1450	1.100	A1
J	5.0		0.810	10	1700	0.930	A1

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$	26.7

Calculated by IBO

Details of sustainability rating

Database ecoinvent

Lifecycle (Phases)	GWP [kg CO_2-e.]	AP [kg SO_2-e.]	EP [kg PO_4-e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.183	0.079	3,31E-6	0.058	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	176.030	1463.978	1640.007	604.799	30.999	635.799