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Designation: awrhhi17a-01
Last updated: 8/5/24
Source: Holzforschung Austria
Editor: HFA, PLB

External wall - awrhhi17a-01

external wall, timber frame construction, ventilated, with dry lining, with cladding, clay

Performance rating

Fire protection performance	**REI from inside**	60
	REI from outside	30

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

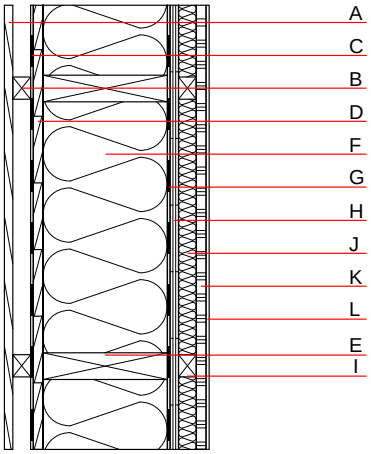
Thermal performance	**U**	0.13 W/(m²K)
	Diffusion	suitable

Calculated by IBO

Acoustic performance	**R_w ($C;C_{tr}$)**	46(-2;-7) dB
	$L_{n,w}$ (C_I)	

frequency range 50-3500: $C_{50\text{-}3500}$ -4 dB; $C_{tr\ 50\text{-}3500}$ -12 dB
Assessed by HFA

Mass per unit area	**m**	83.50 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 battens vertical (30/60); ventilation	0.120	50	450	1.600	D
C		wind barrier sd ≤ 0,3m			1000		
D	24.0	planking spruce wood	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	Cellulose fibre [038; 50]	0.038	1	50	2.000	E
G		vapour barrier sd≥ 6m			1000		
H	16.0	particleboard	0.130	50 - 100	700	1.700	D
I	40.0	spruce wood (60/60) vertical on resilient clips, e=626	0.120	50	450	1.600	D
J	40.0	sheep wool [040; 30]	0.040	1	30	1.720	E
K	22.0	clay board or	0.353	5 - 10	1450	1.100	A1
L	5.0		0.810	10	1700	0.930	A1

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$	16.0

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		0.120	0.051	2,28E-6	0.026	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	157.393	989.491	1146.884	346.467	23.003	369.470