External wall - awrhho08a-06

external wall, timber frame construction, ventilated, without dry lining, with cladding, other surface

Performance rating

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

maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 32,0 kN/m
Classified by HFA

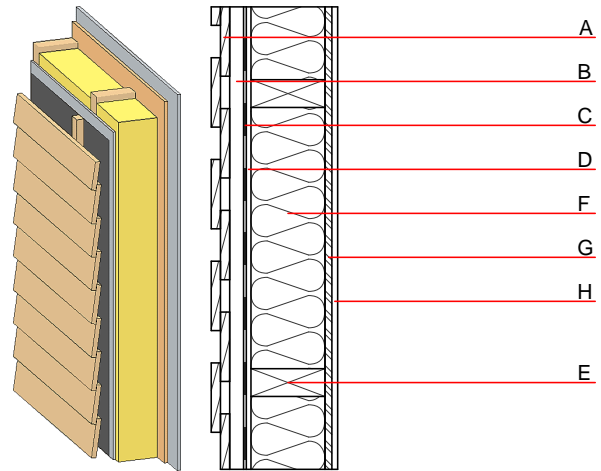| Thermal performance | U | 0.26 W/(m^{2}K) |
| | Diffusion | suitable |

Calculated by HFA

| Acoustic performance | R_w (C;C$_{tr}$) | 47(-2;-8) dB |
| | $L_{n,w}$ (C$_l$) | |

Battens for the ventilation space screwed onto the structural timber result in an Rw(C;Ctr)=43(-1;-7) dB
Assessed by MA39

| Mass per unit area | m | 50.50 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 performance | | | | Reaction to fire |
			λ	μ min – max	ρ	c	EN
A	24.0	larch wood external wall cladding	0.155	150	600	1.600	D
B	30.0	spruce wood battens offset (30/50; 30/80) - ventilation	0.120	50	450	1.600	D
C		wind barrier			1000		
D	12.5	gypsum fibre board	0.320	21	1000	1.100	A2
E	160.0	construction timber (60/..; e=*)	0.120	50	450	1.600	D
F	160.0	cellulose fibre [0,040; R=55]	0.040	1 - 2	55	2.000	B
G	15.0	OSB (sealed with airtight tape)	0.130	200	600	1.700	D
H	12.5	gypsum fibre board or	0.320	21	1000	1.100	A2
H	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2

Sustainability rating (per m^2)

Database ecoinvent

| OI3$_{Kon}$ | 15.5 |

Calculated by HFA

dataholz.eu

Designation: awrhho08a-06
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

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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		0.088	0.039	1,65E-6	0.018	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	106.659	590.271	696.930	287.936	17.244	305.180

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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