External wall - awrhhi09a-00

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

Performance rating

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

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

Thermal performance	**U**	0.18 W/(m^{2}K)
	Diffusion	suitable

Calculated by HFA

Acoustic performance	R_w (C;C$_{tr}$)	45(-2;-7) dB
	$L_{n,w}$ (C$_I$)	

with closed wooden facade R_w von 48 (-3; -10)
Assessed by TGM

Mass per unit area	**m**	53.40 kg/m^2

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 (open) vertical	0.155	150	600	1.600	D
B	30.0	larch wood - cross battens (30/50; 30/80) - ventilation	0.155	150	600	1.600	D
C		wind barrier			1000		
D	15.0	fibreboard (MDF)	0.140	11	600	1.700	D
E	160.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
F	160.0	mineral wool [0,35; ≥20; <1000^C]	0.035	1	20	1.030	A1
G	15.0	OSB	0.130	200	600	1.700	D
H	40.0	spruce wood cross battens (a=400) or battens offset)	0.120	50	450	1.600	D
I	40.0	mineral wool [0,35; ≥20; <1000^C]	0.035	1	20	1.030	A1
J	19.0	planking tongue and groove	0.120	50	450	1.600	D

Sustainability rating (per m^2)

Database ecoinvent

OI3$_{Kon}$	27.0

Calculated by IBO

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dataholz.eu

Designation: awrhhi09a-00
Last updated: 8/2/23
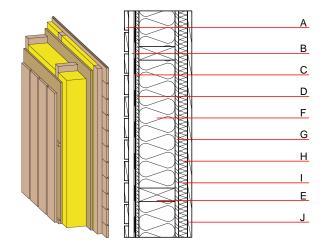Source: Holzforschung Austria
Editor: HFA, PLB

Page 2

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		0.154	0.061	2,07E-6	0.008	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	92.506	831.884	924.389	437.231	38.974	476.205

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.

Page 2