

External wall - awrhi09a-07

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

Performance rating

Fire protection performance	REI from inside	60
	REI from outside	30

maximum ceiling height = 3 m; maximum load $E_{d,fi} = 32 \text{ kN/m}$

Classified by HFA

Thermal performance	U	0.19 W/(m ² K)
	Diffusion	suitable

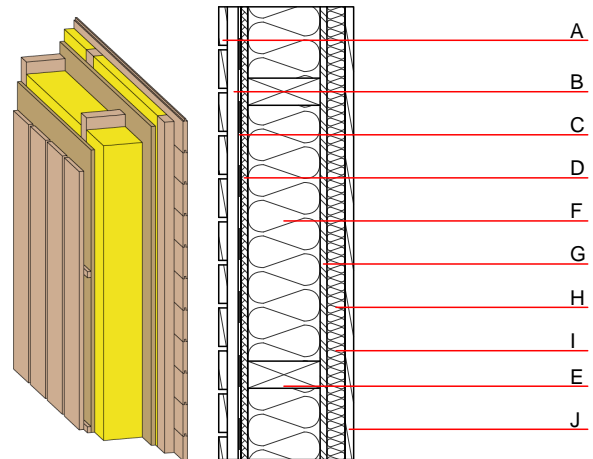
Calculated by HFA

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	56.10 kg/m ²
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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 EN
			λ	$\mu \text{ min} - \text{max}$	ρ	c	
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 [038; ≥33; ≥1000°C]	0.038	1	33	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 [038; ≥33; ≥1000°C]	0.038	1	33	1.030	A1
J	19.0	planking tongue and groove	0.120	50	450	1.600	D

Sustainability rating (per m²)

Database ecoinvent

013 _{Kon}	35.0
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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		0.206	0.061	1,73E-6	0.036	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	89.893	831.884	921.777	441.163	38.974	480.138