

External wall - awrho09a-06

external wall, timber frame construction, ventilated, without 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 $E_{d,fi} = 32 \text{ kN/m}$
 Classified by HFA

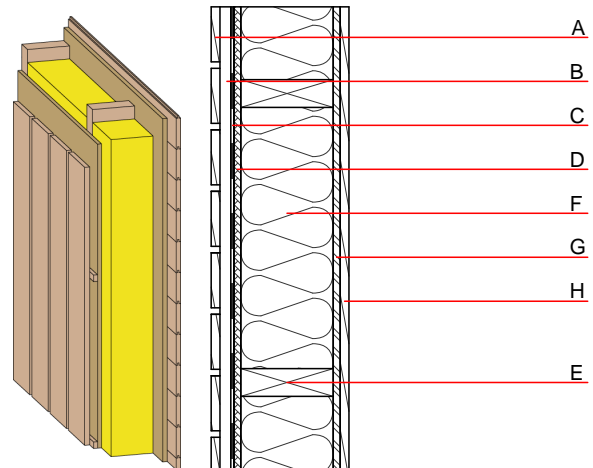
Thermal performance
 U 0.20 $\text{W}/(\text{m}^2\text{K})$
 Diffusion suitable

Calculated by HFA

Acoustic performance
 $R_w (C; C_{tr})$ 43(-2;-6) dB
 $L_{n,w} (C_i)$

with closed wooden facade R_w von 46 (-2; -8)
 Assessed by TGM

Mass per unit area m 59.10 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 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	200.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
F	200.0	Wood fibre insulation [039; 50]	0.039	1 - 2	50	2.100	E
G	15.0	OSB	0.130	200	600	1.700	D
H	19.0	planking tongue and groove	0.120	50	450	1.600	D

Sustainability rating (per m^2)

Database ecoinvent

OI3_{Kon} 18.9

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		0.117	0.052	1,81E-6	0.026	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	153.229	960.630	1113.859	388.702	52.892	441.593