

## External wall - awrho09a-02

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 kN/m		
Classified by HFA		

Thermal performance	U	0.14 W/(m <sup>2</sup> K)
	Diffusion	suitable

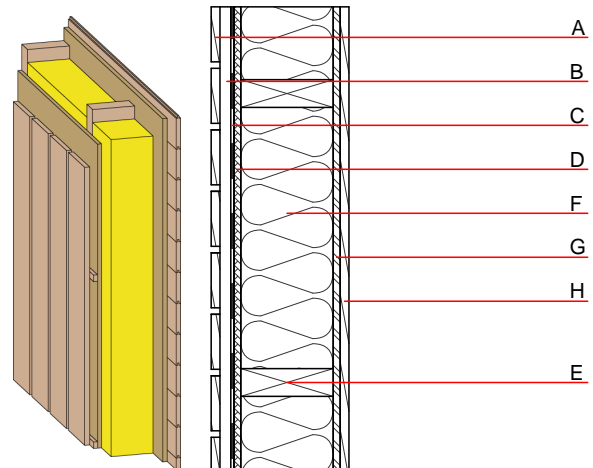
Calculated by HFA

Acoustic performance	$R_w$ (C;C <sub>tr</sub> )	45(-2;-6) dB
	$L_{n,w}$ (C <sub>i</sub> )	

with closed wooden facade  $R_w$  von 48 (-2; -8)

Assessed by TGM

Mass per unit area	m	58.10 kg/m <sup>2</sup>
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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
			$\lambda$	$\mu$ min – max	$\rho$	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	280.0	construction timber (60/-; e=625)	0.120	50	450	1.600	D
F	280.0	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	19.0	planking tongue and groove	0.120	50	450	1.600	D

### Sustainability rating (per m<sup>2</sup>)

#### Database ecoinvent

013<sub>kon</sub> 35.4

Calculated by IBO

## Details of sustainability rating

### Database ecoinvent

Lifecycle (Phases)	GWP [kg CO <sub>2</sub> -e.]	AP [kg SO <sub>2</sub> -e.]	EP [kg PO <sub>4</sub> -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.181	0.082	2,85E-6	0.034	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	160.558	875.262	1035.820	560.097	38.887	598.984