

## External wall - awroho01a-06

external wall, timber frame construction, not 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 $E_{d,fi} = 32,0 \text{ kN/m}$ Classified by HFA		

Thermal performance	U	0.21 W/(m <sup>2</sup> K)
	Diffusion	suitable

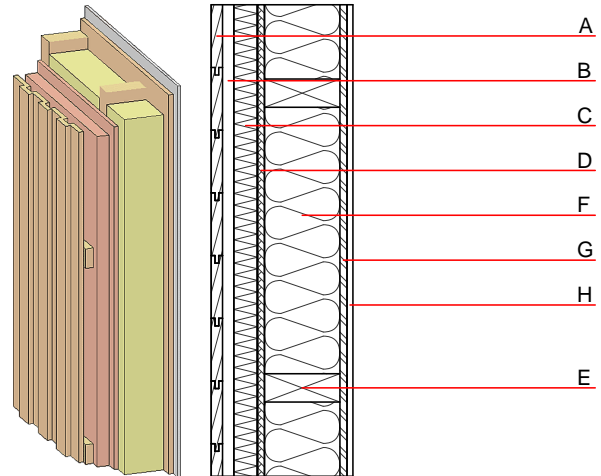
Calculated by HFA

Acoustic performance	$R_w (C; C_{tr})$	50(-2;-7) dB
	$L_{n,w} (C_i)$	

Assessed by MA39

Mass per unit area	m	76.40 kg/m <sup>2</sup>
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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	
			$\lambda$	$\mu \text{ min} - \text{max}$	$\rho$	c	EN	
A	24.0	larch wood external wall cladding	0.155	150	600	1.600	D	
B	24.0	spruce wood cross battens	0.120	50	450	1.600	D	
C	50.0	wood wool composite boards	0.090	2 - 5	370	2.000	B	
D	15.0	fibreboard (MDF)	0.140	11	600	1.700	D	
E	160.0	construction timber (60/-; e=*)	0.120	50	450	1.600	D	
F	160.0	cellulose fibre (040; E)	0.040	1 - 2	55	2.000	E	
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<sup>2</sup>)

#### Database ecoinvent

013<sub>Kon</sub> 19.7

Calculated by HFA

## 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		0.114	0.046	1,94E-6	0.022	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	126.398	833.521	959.919	376.698	28.891	405.590