

## External wall - awrohi01a-10

external wall, timber frame construction, not ventilated, with 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  $E_{d,fi} = 19,2 \text{ kN/m}$   
Classified by HFA

**Thermal performance**  
U 0.19 W/(m<sup>2</sup>K)  
Diffusion suitable

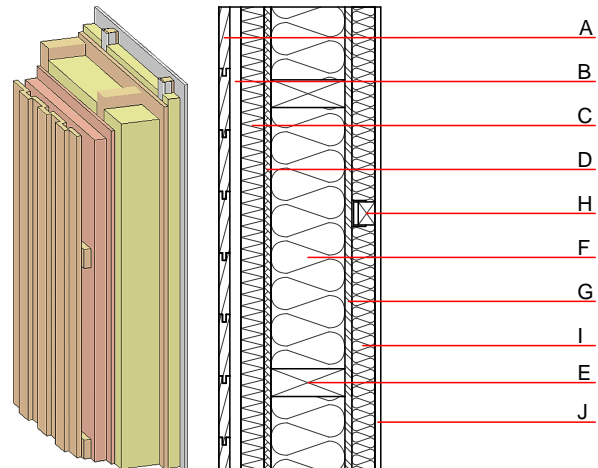
Calculated by HFA

**Acoustic performance**  
 $R_w (C; C_{tr})$  54(-3;-9) dB  
 $L_{n,w} (C_i)$

battens for the dry lining mounted offset without using resilient clips will result in  $R_w(C; C_{tr})=51(-2;-7) \text{ dB}$   
Assessed by MA39

**Mass per unit area** m 71.50 kg/m<sup>2</sup>

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 EN
			$\lambda$	$\mu \text{ min} - \text{max}$	$\rho$	c	
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	sheep wool [0,041; R=26]	0.041	1	30	1.720	E
G	15.0	OSB (sealed with airtight tape)	0.130	200	600	1.700	D
H	40.0	spruce wood battens offset mounted on resilient clips	0.120	50	450	1.600	D
I	40.0	sheep wool [0,041; R=26] or air layer in type 02	0.041	1	30	1.720	E
J	12.5	gypsum fibre board or	0.320	21	1000	1.100	A2
J	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> 21.7

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		0.110	0.046	2,34E-6	0.025	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	126.873	899.858	1026.731	433.753	29.972	463.725