

## External wall - awrho12a-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  $E_{d,fi} = 32 \text{ kN/m}$   
 Classified by HFA

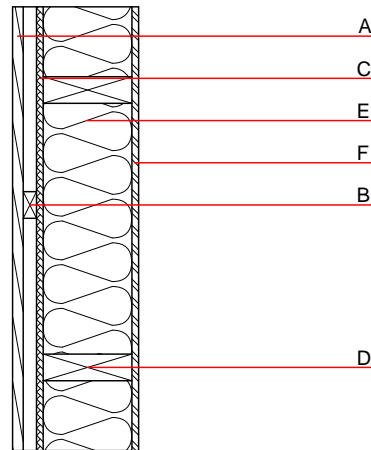
Thermal performance	U	0.21 W/(m <sup>2</sup> K)
	Diffusion	suitable

Calculated by HFA

Acoustic performance	$R_w (C; C_{tr})$	45(-2;-8) dB
	$L_{n,w} (C_i)$	

If battens for the dry lining are carried out vertically and screwed to the structural timber the result is  $R_w \geq 42 \text{ dB}$   
 Assessed by HFA

Mass per unit area	m	53.40 kg/m <sup>2</sup>
--------------------	---	-------------------------



### 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	30.0	spruce wood battens offset (30/50; 30/80) - ventilation	0.120	50	450	1.600	D
C	15.0	fibreboard (MDF)	0.140	11	600	1.700	D
D	200.0	construction timber (60/...; e=625)	0.120	50	450	1.600	D
E	200.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	E
F	16.0	Kronospan OSB-Firestop	0.110	150 - 170	660	1.700	B

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

#### Database ecoinvent

OL3 <sub>Kon</sub>	14.8
--------------------	------

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		0.103	0.043	1,37E-6	0.021	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	70.700	800.414	871.113	290.847	30.578	321.424