

## External wall - awrho13a-02

external wall, timber frame construction, ventilated, without dry lining, with cladding, other surface

### Performance rating

**Fire protection performance**  
 REI from inside 60  
 REI from outside 60  
 maximum ceiling height = 3 m; maximum load  $E_{d,fi} = 23,4 \text{ kN/m}$   
 Classified by HFA

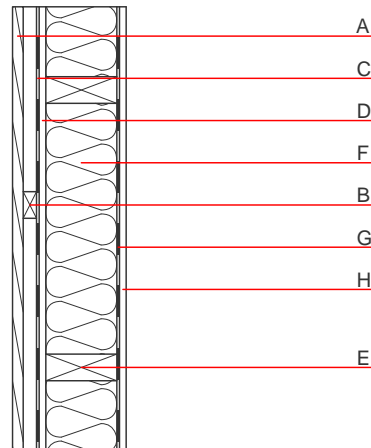
**Thermal performance**  
 U 0.26  $\text{W}/(\text{m}^2\text{K})$   
 Diffusion suitable

Calculated by IBO

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

The acoustic insulation assessment is based on a length-related flow resistance of  $r \geq 5 \text{ kPa.s/m}^2$ . If this value is lower for the insulation material used, the  $R_w$  value is reduced by 3dB.  
 Assessed by TGM

**Mass per unit area** m 57.40  $\text{kg/m}^2$



### 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
			$\lambda$	$\mu \text{ min} - \text{max}$	$\rho$	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		wind barrier			1000		
D	15.0	Rigips Riduro	0.250	4 - 10	1000	1.050	A2
E	160.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
F	160.0	Hemp insulation [040; 30]	0.040	1 - 2	30	2.200	E
G		vapour barrier $sd \geq 2\text{m}$			1000		
H	15.0	Rigips Riduro	0.250	4 - 10	1000	1.050	A2

### Sustainability rating (per $\text{m}^2$ )

#### Database ecoinvent

$OI3_{kon}$  15.6

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		0.071	0.034	1,79E-6	0.016	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	76.371	475.413	551.784	298.377	19.006	317.383