

### External wall - awrho13a-03

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

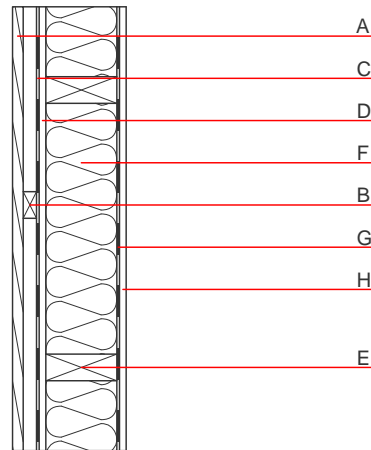
**Thermal performance** U 0.25  $\text{W}/(\text{m}^2\text{K})$   
 Diffusion suitable

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  $r \geq 5 \text{ kPa.s}/\text{m}^2$ . 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 58.70  $\text{kg}/\text{m}^2$



#### 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
			$\lambda$	$\mu$ min - 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	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	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

$013_{kon}$  15.5

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		0.072	0.033	1,78E-6	0.016	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	89.478	498.248	587.727	298.335	23.405	321.740