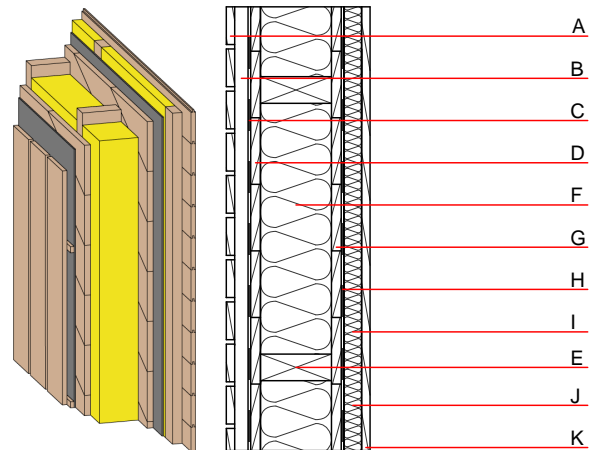


### External wall - awrhh10a-06

external wall, timber frame construction, not ventilated, with dry lining, with cladding, wooden surface

#### Performance rating

<b>Fire protection performance</b>	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		
<b>Thermal performance</b>	U	0.14 $\text{W}/(\text{m}^2\text{K})$
	Diffusion	suitable
Calculated by HFA		
<b>Acoustic performance</b>	$R_w (C;C_{tr})$	47(-2;-7) dB
	$L_{n,w} (C_i)$	
with closed Wood facade $R_w$ von 50 (-3; -10) Assessed by TGM		
<b>Mass per unit area</b>	m	66.60 $\text{kg}/\text{m}^2$



#### 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	19.0	larch wood external wall cladding (open) vertical	0.155	150	600	1.600	D
B	30.0	larch wood cross battens (30/50) - ventilation	0.155	150	600	1.600	D
C		wind barrier			1000		
D	22.0	planking spruce wood diagonal	0.120	50	450	1.600	D
E	240.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
F	240.0	Wood fibre insulation [039; 50]	0.039	1 - 2	50	2.100	E
G	22.0	planking spruce wood diagonal	0.120	50	450	1.600	D
H		vapour barrier $s_d \geq 5\text{m}$			1000		
I	40.0	spruce wood cross battens (a=400) or battens offset)	0.120	50	450	1.600	D
J	40.0	Wood fibre insulation [039; 50]	0.039	1 - 2	50	2.100	E
K	19.0	planking tongue and groove	0.120	50	450	1.600	D

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

##### Database ecoinvent

$O13_{kon}$  14.1

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		0.121	0.051	1,83E-6	0.007	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	79.718	1154.420	1234.138	360.416	30.302	390.718