

### External wall - awrhho09a-03

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

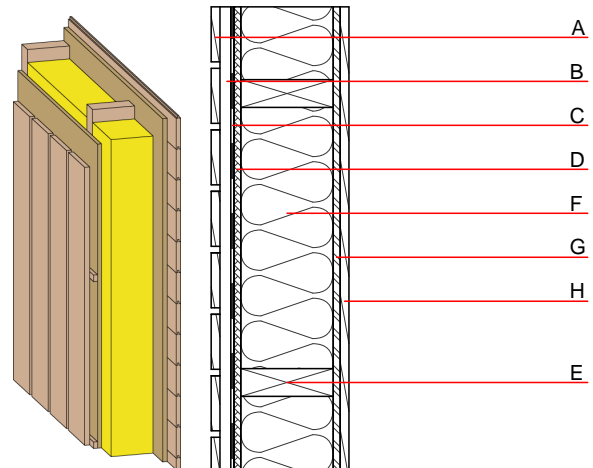
#### Performance rating

**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 0.20  $\text{W}/(\text{m}^2\text{K})$   
 Diffusion suitable  
 Calculated by HFA

**Acoustic performance**  
 $R_w (C;C_{tr})$  43(-2;-5) dB  
 $L_{n,w} (C_i)$   
 with closed wooden facade  $R_w$  von 46 (-2; -7)  
 Assessed by TGM

**Mass per unit area** m 59.10  $\text{kg}/\text{m}^2$



#### 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; 30/80) - ventilation	0.155	150	600	1.600	D
C		wind barrier			1000		
D	15.0	fibreboard (MDF)	0.140	11	600	1.700	D
E	200.0	construction timber (60/...; e=625)	0.120	50	450	1.600	D
F	200.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	E
G	15.0	OSB	0.130	200	600	1.700	D
H	19.0	planking tongue and groove	0.120	50	450	1.600	D

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

##### Database ecoinvent

$OI3_{Kon}$  17.3

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		0.118	0.051	1,63E-6	0.025	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	146.950	913.742	1060.692	336.308	38.887	375.195