

## External wall - awmopi01a-05

external wall, solid wood construction, not ventilated, with dry lining, with rendering, other surface

### Performance rating

**Fire protection performance**  
REI from inside 90  
REI from outside 90  
maximum ceiling height = 3 m; maximum load  $E_{d,fi} = 35,0 \text{ kN/m}$   
Classified by HFA

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

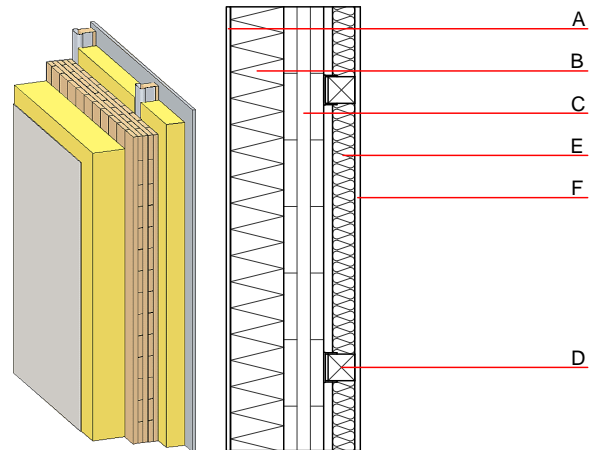
Calculated by HFA

**Acoustic performance**  
 $R_w (C; C_{tr})$  50 dB  
 $L_{n,w} (C_i)$

$R_w + C_{tr} \geq 42$   
Assessed by TU-GRAZ

**Mass per unit area** m 108.70  $\text{kg}/\text{m}^2$

Calculation based on gypsum plaster board type DF



Note: Attention: REI90 (from inside) in Germany possible with 2x12,5mm gypsum plaster board type DF/gypsum fibre board

### 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	15.0	plaster	1.000	10 - 35	2000	1.130	A1
B	100.0	multilayer wood wool composite board (WW-MW-WW) ETICS insulation panel	0.049	2 - 5	130	1.000	B
C	100.0	cross laminated timber	0.130	50	500	1.600	D
D	70.0	spruce wood battens (60/60) mounted on resilient clips; e=660	0.120	50	450	1.600	D
E	50.0	mineral wool [040; $\geq 16$ ; $< 1000^\circ\text{C}$ ]	0.040	1	16	1.030	A1
F	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
F	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

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

#### Database ecoinvent

$OI3_{kon}$  68.7

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		0.323	0.112	4,31E-6	0.106	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	56.049	738.292	794.341	853.946	17.808	871.754