

### External wall - awropi24a-03

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

#### Performance rating

<b>Fire protection performance</b>	REI from inside	30
	REI from outside	90
maximum ceiling height = 3 m; maximum load $E_{d,fi} = 32,0 \text{ kN/m}$		
Classified by HFA		

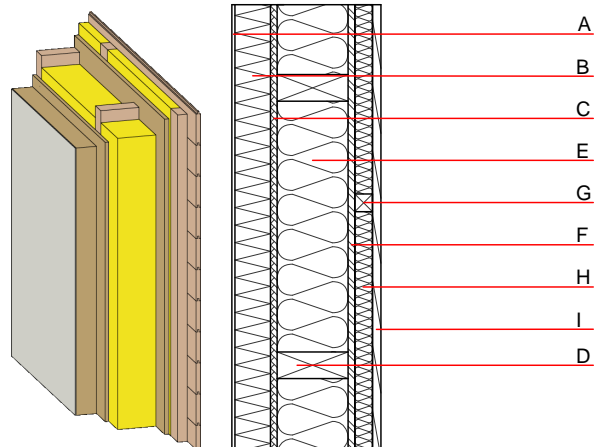
<b>Thermal performance</b>	U	0.13 $\text{W}/(\text{m}^2\text{K})$
	Diffusion	suitable

Calculated by HFA

<b>Acoustic performance</b>	$R_w (C; C_{tr})$	51 (-3;-9) dB
	$L_{n,w} (C_i)$	

Assessed by TGM

<b>Mass per unit area</b>	m	77.00 $\text{kg}/\text{m}^2$
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#### 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	7.0	plaster	1.000	10 - 35	2000	1.130	A1
B	80.0	WF-PT [042; 180]	0.042	3 - 7	180	2.100	E
C	15.0	fibreboard (MDF)	0.140	11	600	1.700	D
D	200.0	construction timber (60/...; e=625)	0.120	50	450	1.600	D
E	200.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	E
F	15.0	OSB (sealed with airtight tape)	0.130	200	600	1.700	D
G	40.0	spruce wood cross battens (a=400) or battens offset)	0.120	50	450	1.600	D
H	40.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	E
I	19.0	planking tongue and groove	0.120	50	450	1.600	D

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

##### Database ecoinvent

$OI3_{Kon}$	33.0
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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		0.175	0.075	2,83E-6	0.028	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	146.616	1004.576	1151.192	546.733	51.733	598.466