

### External wall - awropo01a-05

external wall, timber frame construction, not ventilated, without dry lining, with rendering, other surface

#### Performance rating

<b>Fire protection performance</b>	REI from inside	60
	REI from outside	60
maximum ceiling height = 3 m; maximum load $E_{d,fi} = 19,2 \text{ kN/m}$		
Classified by HFA		

<b>Thermal performance</b>	U	0.20 $\text{W}/(\text{m}^2\text{K})$
	Diffusion	suitable

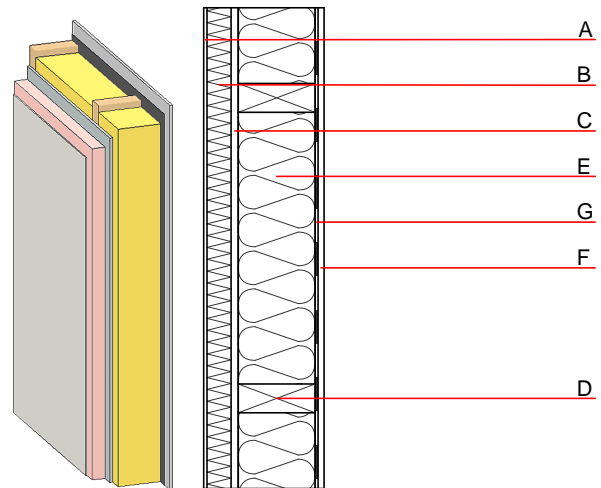
Calculated by HFA

<b>Acoustic performance</b>	$R_w (C; C_{tr})$	44(-2;-6) dB
	$L_{n,w} (C_i)$	

Assessed by MA39

<b>Mass per unit area</b>	m	45.20 $\text{kg}/\text{m}^2$
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Calculation based on GF



Note: e=625

#### 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	4.0	plaster	1.000	10 - 35	2000	1.130	A1
B	50.0	Polystyrene EPS-F [0,040]	0.040	20 - 50	17	1.450	E
C	15.0	gypsum fibre board	0.320	21	1000	1.100	A2
D	160.0	construction timber (60/..; e=*)	0.120	50	450	1.600	D
E	160.0	mineral wool [038; ≥33; ≥1000°C]	0.038	1	33	1.030	A1
F		vapour barrier $s_d \geq 13\text{m}$			1000		
G	12.5	gypsum fibre board or	0.320	21	1000	1.100	A2
G	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2

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

##### Database ecoinvent

013<sub>Kon</sub> 29.0

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		0.115	0.036	1,53E-6	0.043	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	34.465	125.783	160.248	326.245	36.048	362.293