

## External wall - awropo17a-05

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

### Performance rating

Fire protection performance	REI from inside	60
	REI from outside	90
maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 19,2 kN/m		
Classified by HFA		

Thermal performance	U	0.21 W/(m <sup>2</sup> K)
	Diffusion	suitable

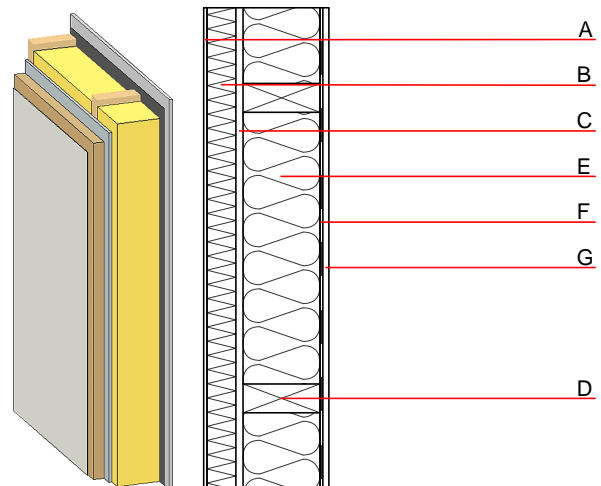
Calculated by HFA

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

Assessed by MA39

Mass per unit area	m	66.50 kg/m <sup>2</sup>
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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	7.0	plaster	1.000	10 - 35	2000	1.130	A1
B	60.0	wood-fibre insulation board WF-PT [045; 180]	0.045	5 - 7	180	2.100	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 sd≥ 3m			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 m<sup>2</sup>)

#### Database ecoinvent

013 <sub>Kon</sub>	40.1
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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		0.170	0.060	2,73E-6	0.043	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	107.580	302.907	410.487	502.778	21.724	524.502