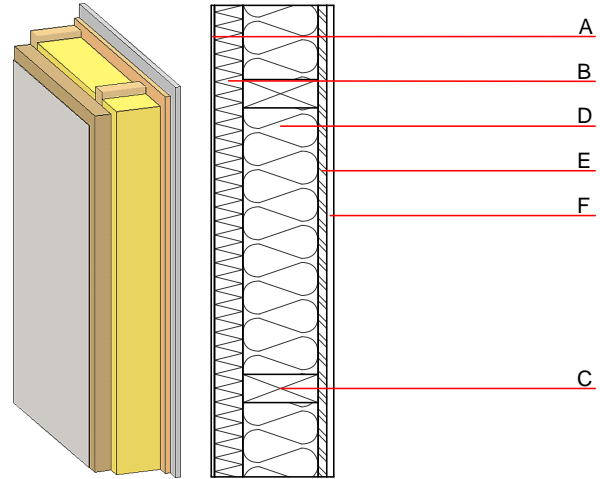


**External wall - awropo09b-05**

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	90
maximum ceiling height = 3 m; maximum load $E_{d,fi} = 32,0 \text{ kN/m}$ Classified by HFA		
<b>Thermal performance</b>	U	0.20 $\text{W}/(\text{m}^2\text{K})$
	Diffusion	suitable
Calculated by HFA		
<b>Acoustic performance</b>	$R_w (C; C_{tr})$	49(-2;-7) dB
	$L_{n,w} (C_i)$	
Assessed by MA39		
<b>Mass per unit area</b>	m	60.40 $\text{kg}/\text{m}^2$
Calculation based on gypsum plaster board type DF		



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	160.0	construction timber (60/..; e=*)	0.120	50	450	1.600	D
D	160.0	mineral wool [038; ≥33; ≥1000°C]	0.038	1	33	1.030	A1
E	18.0	OSB (sealed with airtight tape)	0.130	200	600	1.700	D
F	15.0	gypsum plaster board type DF or	0.250	10	800	1.050	A2
F	15.0	gypsum fibre board	0.320	21	1000	1.100	A2

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

Database ecoinvent

$OI3_{Kon}$  40.5

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		0.180	0.067	2,76E-6	0.047	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	95.081	547.606	642.687	544.865	36.781	581.646