

External wall - awropo09a-13

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	60

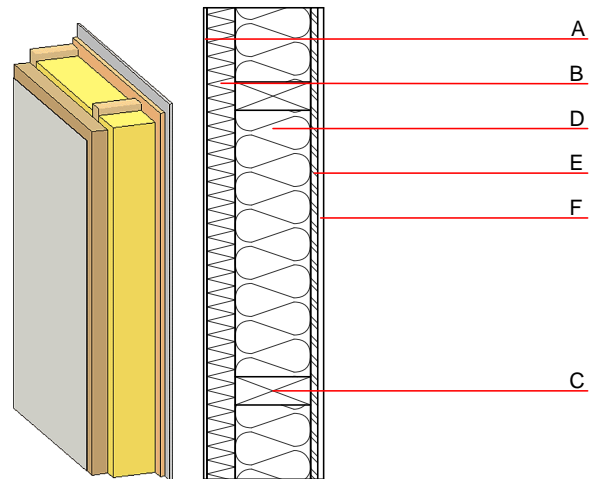
maximum ceiling height = 3 m; maximum load $E_{d,fi} = 32,0 \text{ kN/m}$
 Classified by HFA
 Classified by HFA

Thermal performance	U	0.17 W/(m ² K)
	Diffusion	suitable

Acoustic performance	R_w (C;C _{tr})	51(-3;11) dB
	$L_{n,w}$ (C _i)	

Mass per unit area	m	63.40 kg/m ²
---------------------------	---	-------------------------

Calculation based on gypsum plaster board type DF



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
			λ	μ min - max	ρ	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	200.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
D	200.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	E
E	15.0	OSB (sealed with airtight tape)	0.130	200	600	1.700	D
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 m²)

Database ecoinvent

O13_{Kon} 30.4

Calculated by HFA

Details of sustainability rating

Database ecoinvent

Lifecycle (Phases)	GWP [kg CO ₂ -e.]	AP [kg SO ₂ -e.]	EP [kg PO ₄ -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.142	0.061	2,69E-6	0.021	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	100.487	651.120	751.607	474.146	34.612	508.758