

External wall - awropi31a-08

external wall, timber frame construction, not ventilated, with 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 $E_{d,fi}$ = 32,0 kN/m

Classified by HFA

Thermal performance	U	0.12 W/(m ² K)
	Diffusion	suitable

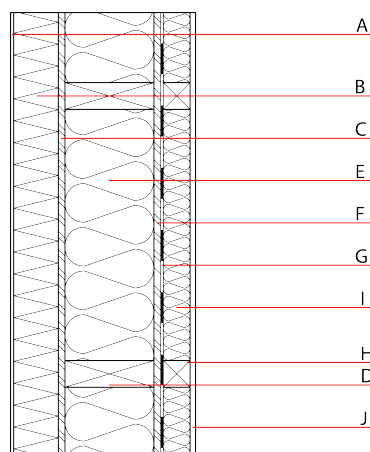
Calculated by HFA

Acoustic performance	R_w (C;C _{tr})	61 (-5;-13) dB
	$L_{n,w}$ (C _i)	

frequency range 50-3500: C50-3500 -13 dB; C_{tr} 50-3500 -26 dB

Assessed by HFA

Mass per unit area	m	73.10 kg/m ²
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Note: I: 75 mm mineral wool, 25 mm air layer

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	100.0		0.040	1	100	1.030	A1
C	15.0	OSB	0.130	200	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	0.130	200	600	1.700	D
G		vapour barrier sd \geq 14m					
H	100.0	CW profile freestanding					
I	75.0	mineral wool [040; 11; <1000°C]	0.040	1	11	1.030	A1
J	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
J	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

013_{Kon} 57.9

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		0.269	0.094	3,25E-6	0.076	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	118.570	576.046	694.617	678.345	28.482	706.827