

External wall - awropi31b-02

external wall, timber frame construction, not ventilated, with dry lining, with rendering, Gipsplatte

Performance rating

Fire protection performance	REI from inside	90
	REI from outside	30

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

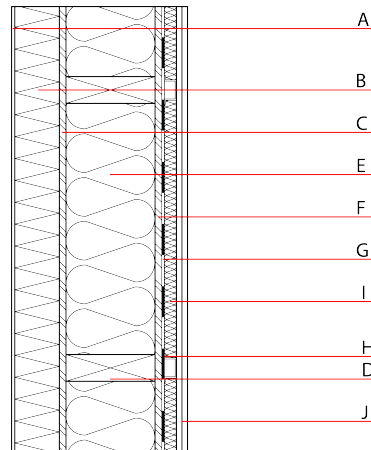
Thermal performance	U	0.12 W/(m ² K)
	Diffusion	suitable

Proof of water vapor diffusion was provided for a structurally permanently secured airtightness of the component in accordance with ÖNORM B 8110-2 (2020) Tab.3 (C=0 m³/(s*PA^{0.5})).
 Calculated by HFA

Acoustic performance	R _w (C;C _{tr})	57(-5;12) dB
	L _{n,w} (C _i)	

frequency range 50-3500: C₅₀₋₃₅₀₀ -10 dB; C_{tr 50-3500} -21 dB
 Assessed by HFA

Mass per unit area	m	73.30 kg/m ²
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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		0.031	20 - 50	16	1.450	E
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 50m			1000		
H	27.0	resilient channel a=625 vertical					
I	27.0	mineral wool [035; 20; \geq 1000°C]	0.035	1	20	1.030	A1
J	25.0	gypsum plaster board type DF (2x12,5mm) or	0.250	10	800	1.050	A2
J	25.0	gypsum fibre board (2x12,5mm)	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

O13 _{Kon}	38.7
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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		0.161	0.060	2,69E-6	0.039	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	111.441	576.046	687.487	534.154	91.050	625.203