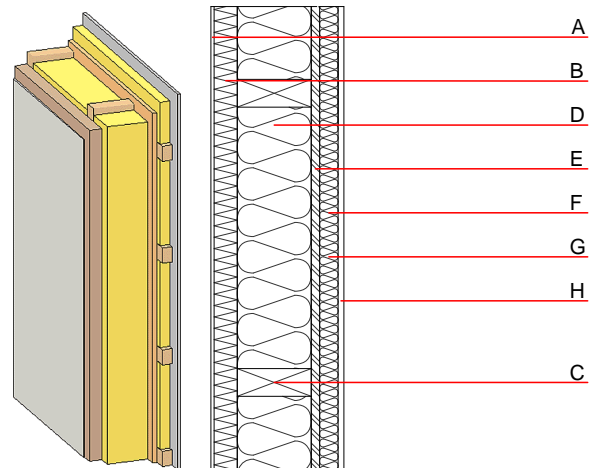


External wall - awropi05a-03

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	60
maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 32,0 kN/m Classified by HFA		
Thermal performance	U	0.16 W/(m ² K)
	Diffusion	suitable
Calculated by HFA		
Acoustic performance	R_w (C;C _{tr})	53(-3;-10) dB
	$L_{n,w}$ (C _i)	
vertical battens for the dry lining screwed onto the structural timber lead to an $R_w(C;C_{tr})=51(-3;-10)$ dB Assessed by MA39		
Mass per unit area	m	61.10 kg/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
			λ	μ min – max	ρ	c	
A	10.0	plaster	1.000	10 - 35	2000	1.130	A1
B	50.0	wood wool composite boards	0.090	2 - 5	370	2.000	B
C	200.0	construction timber (60/..; e=*)	0.120	50	450	1.600	D
D	200.0	mineral wool [040; ≥ 16 ; <1000°C]	0.040	1	16	1.030	A1
E	18.0	OSB	0.130	200	600	1.700	D
F	40.0	spruce wood cross battens (a=400) or battens offset	0.120	50	450	1.600	D
G	40.0	mineral wool [040; ≥ 16 ; <1000°C] or air layer in type 02	0.040	1	16	1.030	A1
H	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
H	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

013_{Kon} 29.8

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		0.130	0.055	2,61E-6	0.021	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	91.319	474.034	565.354	452.273	13.314	465.587