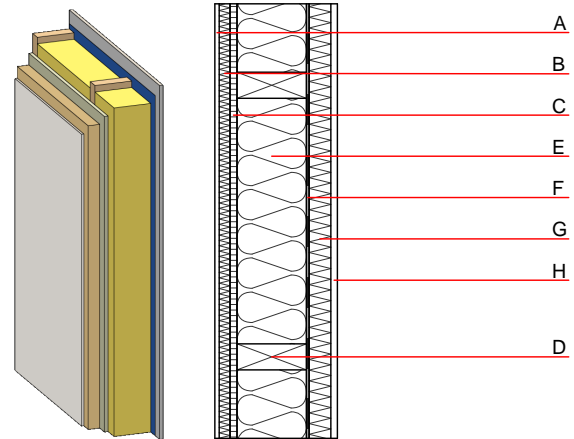


External wall - awropi21a-03

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

Performance rating

Fire protection performance	REI from inside	60
maximum ceiling height = 3 m; maximum load $E_{d,fi} = 19,2 \text{ kN/m}$ Classified by HFA		
Thermal performance	U Diffusion	0.16 $\text{W}/(\text{m}^2\text{K})$ suitable
Calculated by HFA		
Acoustic performance	$R_w (C;C_{tr})$ $L_{n,w} (C_i)$	53(-3;-11) dB
Assessed by TGM		
Mass per unit area	m	88.40 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	10.0	plaster	1.000	10 - 35	2000	1.130	A1
B	25.0	Heraklith BM	0.090	2 - 5	370	2.000	B
C	16.0	particleboard P5	0.130	50 - 100	700	1.700	D
D	240.0	construction timber (60/...; e=625)	0.120	50	450	1.600	D
E	240.0	Heralan KP	0.040	1	28	1.030	A1
F		vapour barrier $sd \geq 9\text{m}$			1000		
G	50.0	Heraklith BM	0.090	2 - 5	370	2.000	B
H	15.0	gypsum plaster board type DF	0.250	10	800	1.050	A2

Sustainability rating (per m^2)

Database ecoinvent

OI_{kon} 40.7

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		0.176	0.060	2,64E-6	0.052	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	67.269	507.400	574.669	542.041	29.823	571.865