

External wall - awropo22b-07

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 MA39
 Classified by HFA

Thermal performance	U	0.22 W/(m ² K)
	Diffusion	suitable

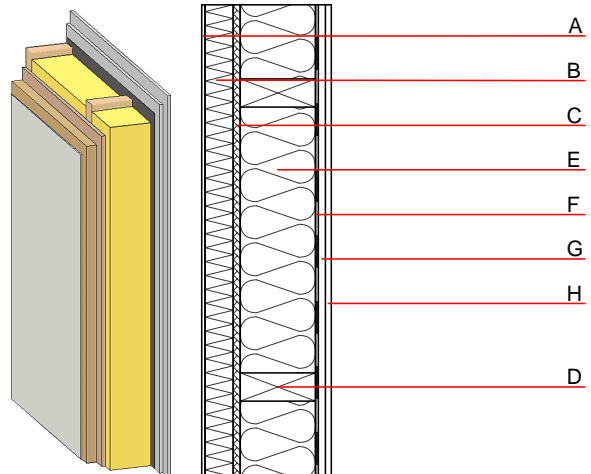
Calculated by HFA

Acoustic performance	$R_w (C; C_{tr})$	51 (-2;-8) dB
	$L_{n,w} (C_i)$	

Assessed by MA39

Mass per unit area	m	73.00 kg/m ²
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Calculation based on GF



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	$\mu \text{ min} - \text{max}$	ρ	c	
A	7.0	plaster	1.000	10 - 35	2000	1.130	A1
B	60.0	wood-fibre insulation board [055; 200]	0.055	5 - 7	200	2.100	E
C	15.0	fibreboard (MDF)	0.140	11	600	1.700	D
D	160.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
E	160.0	sheep wool [0,041; R=26]	0.041	1	30	1.720	E
F		vapour barrier sd \geq 3m			1000		
G	15.0	gypsum fibre board	0.320	21	1000	1.100	A2
H	12.5	gypsum fibre board or	0.320	21	1000	1.100	A2
H	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2

Sustainability rating (per m²)

Database ecoinvent

013 _{Kon}	34.4
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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		0.137	0.057	3,06E-6	0.019	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	118.860	538.834	657.694	529.784	40.642	570.427