External wall - awropi31a-07

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
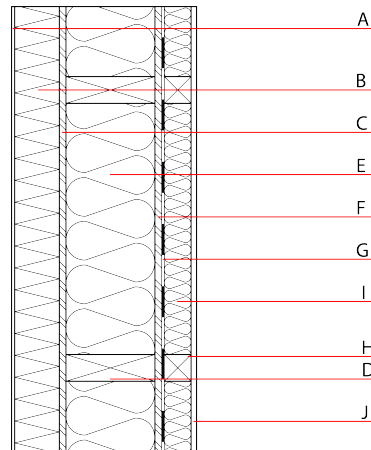Classified by HFA

Thermal performance	U	0.11 W/(m²K)
	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; Ctr 50-3500 -26 dB
Assessed by HFA

Mass per unit area	m	72.20 kg/m²

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
			λ	μ min – max	ρ	c	EN
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	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
F	15.0	OSB	0.130	200	600	1.700	D
G		vapour barrier sd≥ 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

OI3$_{Kon}$	59.5

Calculated by HFA

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Page 2

Details of sustainability rating

Database ecoinvent

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO_2-e.]	[kg SO_2-e.]	[kg PO_4-e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.268	0.095	3,43E-6	0.078	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	124.850	622.935	747.784	730.739	42.486	773.225

dataholz.eu – Catalogue of timber building materials, components and component connections reviewed to consider thermal, acoustic, fire performance requirements and ecological drivers for timber construction released by accredited testing institutes.
These datasheets will generally be accepted as proofs of compliance by building authorities.

Page 2