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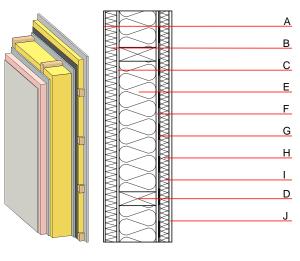
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External wall - awropi02a-09

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

Performance rating

Fire protection performance	REI from inside REI from outside	45 30
maximum ceiling height = Classified by HFA	= 3 m; maximum load E	e _{d,fi} = 19,2 kN∕m
Thermal performance	U Diffusion	0.17 W∕(m ² K) suitable
Calculated by HFA		
Acoustic performance	R _w (C;C _{tr}) L _{n,w} (C _l)	45(-3;-6) dB
Vertical battens for the dr Rw(C;Ctr)=42(-1;-5) dB Assessed by MA39	y lining screwed onto t	he ledger beams lead to an
Mass per unit area	m	57.80 kg∕m²



Calculation based on GF

Note: e=625

Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

	Thickness	Building material	Thermal per	formance			Reaction to fire
			λ	µ min – max	ρ	с	EN
Ą	4.0	plaster	1.000	10 - 35	2000	1.130	A1
В	50.0	Polystyrene EPS-F [0,040]	0.040	20 - 50	17	1.450	E
С	12.5	gypsum fibre board	0.320	21	1000	1.100	A2
D	160.0	construction timber (60/; $e=*$)	0.120	50	450	1.600	D
E	160.0	cellulose fibre [0,040; R=55]	0.040	1 - 2	55	2.000	В
F	10.0	gypsum fibre board	0.320	21	1000	1.100	A2
G		vapour barrier sd≥ 13m			1000		
Н	40.0	spruce wood cross battens (a=400) or battens offset)	0.120	50	450	1.600	D
	40.0	cellulose fibre [0,040; R=55] or air layer in type 02	0.040	1 - 2	55	2.000	В
	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

OI3_{Kon}

Calculated by HFA

21.2

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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		0.084	0.033	1,74E-6	0.018	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[LM]	[M]	[LM]	[LM]	[MJ]	[LM]
A1 - A3	47.677	267.449	315.126	298.416	36.048	334.464

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.