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Designation: Last updated: Source: Editor: awropo04a-00 8/2/23 Holzforschung Austria HFA, SP

External wall - awropo04a-00

external wall, timber frame construction, not ventilated, without dry lining, with rendering, other surface

Performance rating А Fire protection **REI** from inside 30 **REI** from outside 30 performance В maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 19,2 kN/m С Classified by HFA Е U Thermal performance 0.20 W/(m^2 K) Diffusion F suitable Calculated by HFA G R_w (C;C_{tr}) Acoustic performance 43(-2;-6) dB L_{n,w} (C_l) Assessed by MA39 D Mass per unit area m 38.90 kg/m² 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	
			λ	µ min – max	ρ	с	EN	
4	4.0	plaster	1.000	10 - 35	2000	1.130	A1	
3	50.0	Polystyrene EPS-F [0,040]	0.040	20 - 50	17	1.450	E	
2	16.0	particleboard P5	0.130	50 - 100	700	1.700	D	
D	160.0	construction timber (60/; $e=*$)	0.120	50	450	1.600	D	
1	160.0	mineral wool [040; ≥16; <1000 °C]	0.040	1	16	1.030	A1	
-		vapour barrier sd≥ 20m			1000			
5	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2	
5	12.5	gypsum fibre board	0.320	21	1000	1.100	A2	

Sustainability rating (per m²)

Database ecoinvent

OI3_{Kon}

Calculated by HFA

26.6

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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		0.098	0.041	1,75E-6	0.023	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[M]	[LM]	[LM]	[M]	[LM]
A1 - A3	37.782	289.150	326.932	378.905	60.650	439.556

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.