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Designation: Last updated: Source: Editor: awropo13a-00 8/2/23 Holzforschung Austria HFA, SP

External wall - awropo13a-00

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

Performance rating А Fire protection **REI** from inside 60 **REI** from outside 30 performance В maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 32,0 kN/m С Classified by HFA Е Thermal performance υ 0.20 W/(m^2 K) Diffusion F suitable Calculated by HFA G Acoustic performance R_w (C;C_{tr}) 44(-2;-6) dB Н L_{n,w} (C_l) Assessed by MA39 D Mass per unit area m 46.60 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	
١	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	15.0	fibreboard (MDF)	0.140	11	600	1.700	D	
)	160.0	construction timber ($60/160$; e=*)	0.120	50	450	1.600	D	
	160.0	mineral wool [040; ≥16; <1000°C]	0.040	1	16	1.030	A1	
	15.0	OSB	0.130	200	600	1.700	D	
5		vapour barrier sd≥ 9m			1000			
ł	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2	
ł	12.5	gypsum fibre board	0.320	21	1000	1.100	A2	

Sustainability rating (per m²)

Database ecoinvent

OI3_{Kon}

Calculated by HFA

28.8

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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		0.118	0.048	1,97E-6	0.023	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[M]	[M]	[MJ]	[MJ]	[M]	[MJ]
A1 - A3	74,771	419.433	494.204	409.500	64.940	474.440

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.