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Designation: Last updated: Source: Editor: awropo21a-04 8/2/23 Holzforschung Austria HFA, SP

External wall - awropo21a-04

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

Performance rating A Fire protection **REI** from inside 60 **REI** from outside 60 performance В maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 32,0 kN/m С Classified by HFA Е U Thermal performance 0.18 W/(m^2 K) Diffusion F suitable Calculated by HFA G Acoustic performance R_w (C;C_{tr}) 52(-3;-9) dB Н L_{n,w} (C_l) Assessed by MA39 D Mass per unit area m 78.20 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
ł	7.0	plaster	1.000	10 - 35	2000	1.130	A1
3	60.0	wood-fibre insulation board WF-PT [045; 180]	0.045	5 - 7	180	2.100	E
2	24.0	planking spruce wood	0.120	50	450	1.600	D
)	160.0	construction timber (60/; e=*)	0.120	50	450	1.600	D
-	160.0	mineral wool [035; 50; <1000°C]	0.035	1	50	1.030	A1
	24.0	planking spruce wood	0.120	50	450	1.600	D
5		vapour barrier sd≥ 6m			1000		
ł	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
4	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

OI3_{Kon} Calculated by HFA 45.8

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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		0.205	0.092	3,88E-6	0.033	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[LM]	[MJ]	[MJ]
	122.915	695.979	818.894	676.249	21.724	697.973

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.