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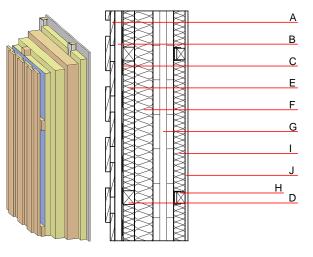
Designation: Last updated: Source: Editor: awmohi01a-03 8/2/23 Holzforschung Austria HFA, SP

External wall - awmohi01a-03

external wall, solid wood construction, not ventilated, with dry lining, with cladding, other surface

Performance rating

Fire protection performance maximum ceiling height = 3 Classified by HFA	REI from inside REI from outside 3 m; maximum load E _{d,fi} = 3	120 60 85,0 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)	51 dB
Rw+Ctr \ge 42 Assessed by TUGRAZ		
Mass per unit area	m	75.90 kg/m ²



Calculation based on gypsum plaster board type DF

Note: When using cross laminated timber:

 $\label{eq:Variation 00-03: } d \geq 94,0; at least 3-layers, top layer at least 30mm; variation 04: \\ d \geq 78,0; at least 3-layers, top layer at least 25mm$

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
٩	20.0	larch wood external wall cladding	0.155	150	600	1.600	D
3	30.0	spruce wood battens (30/60)	0.120	50	450	1.600	D
;		vapour-permeable membrane $sd \le 0,3m$					
)	80.0	spruce wood battens (40/50 or 80/60;e=625)	0.120	50	450	1.600	D
	80.0	mineral wool [040; ≥70; ≥1000°C]	0.040	1	70	1.030	A1
	80.0	mineral wool [040; ≥70; ≥1000°C]	0.040	1	70	1.030	A1
5	100.0	cross laminated timber (e.g. cross laminated timber)	0.130	50	500	1.600	D
ł	50.0	spruce wood battens (40/50; e=625) mounted on resilient clips	0.120	50	450	1.600	D
	50.0	mineral wool [040; 28; ≥1000°C]	0.040	1	28	1.030	A1
	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

55.4

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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		0.289	0.098	3,25E-6	0.112	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[LM]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]

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.