

External wall - awmopo01a-00

external wall, solid wood construction, not ventilated, without dry lining, with rendering, wooden surface

Performance rating

Fire protection performance	REI from inside	60
	REI from outside	90
maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 35,0 kN/m		
Classified by HFA		

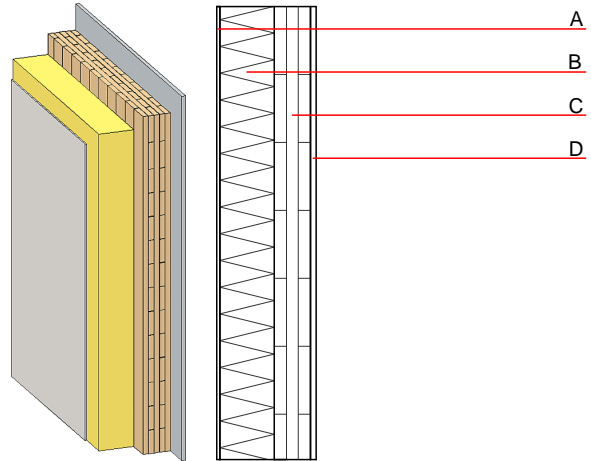
Thermal performance	U	0.26 W/(m ² K)
	Diffusion	suitable

Calculated by HFA
 Calculated by HFA

Acoustic performance	R_w (C;C _{tr})	38(-1;-4) dB
	$L_{n,w}$ (C _i)	

Assessed by TU-GRAZ

Mass per unit area	m	81.60 kg/m ²
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Note: Cross laminated timber:

Variation 00-03: $d \geq 78,0$; at least 3-layers, top layer at least 25 mm; variation 04-07: at least 3-layers, top layer at least 30 mm

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 EN
			λ	μ min – max	ρ	c	
A	7.0	plaster	1.000	10 - 35	2000	1.130	A1
B	120.0	mineral wool MW-PT [040; 155]	0.040	1	155	1.030	A1
C	80.0	solid glued wood (e.g. cross laminated timber)	0.130	50	500	1.600	D
D	12.5	gypsum plaster board type DF / gypsum fibre board	0.250	10	800	1.050	A2

Sustainability rating (per m²)

Database ecoinvent

$O13_{kon}$ 67.7

Calculated by HFA

Details of sustainability rating

Database ecoinvent

Lifecycle (Phases)	GWP [kg CO ₂ -e.]	AP [kg SO ₂ -e.]	EP [kg PO ₄ -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.320	0.101	3,39E-6	0.121	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	39.449	533.520	572.969	753.574	13.934	767.509