

Designation: awropi01a-10 Last updated: 8/2/23

Holzforschung Austria Source:

Editor: HFA, SP

# External wall - awropi01a-10

external wall, timber frame construction, not ventilated, with dry lining, with rendering, other surface

### Performance rating

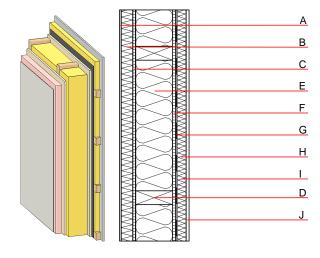
**REI** from inside 60 Fire protection performance RFI from outside 30 maximum ceiling height = 3 m; maximum load  $E_{d,fi}$  = 19,2 kN/m Classified by HFA

Thermal performance	U Diffusion	0.18 W/(m <sup>2</sup> K) suitable
Calculated by HFA		
Acoustic performance	$R_w$ (C;C <sub>tr</sub> ) L <sub>n,w</sub> (C <sub>l</sub> )	44(-2;-6) dB
Vertical battens for the dr Rw(C:Ctr)=41(-1:-5) dB	y lining screwed onto	the ledger beams lead to an

Assessed by MA39

Mass per unit area  $50.40 \text{ kg/m}^2$ 

Calculation based on GF



Note: e=625

### Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

	Thickness	Building material	Thermal per	Thermal performance			
			λ	μ min – max	ρ	С	EN
Α	4.0	plaster	1.000	10 - 35	2000	1.130	A1
В	50.0	Polystyrene EPS-F [0,040]	0.040	20 - 50	17	1.450	E
С	16.0	particleboard	0.130	50 - 100	700	1.700	D
D	160.0	construction timber (60/; e=*)	0.120	50	450	1.600	D
E	160.0	sheep wool [0,041; R=26]	0.041	1	30	1.720	E
F	16.0	particleboard	0.130	50 - 100	700	1.700	D
G		vapour barrier sd≥ 17m			1000		
Н	40.0	spruce wood cross battens (a=400) or battens offset)	0.120	50	450	1.600	D
I	40.0	sheep wool [0,041; R=26] or air layer in type 02	0.041	1	30	1.720	E
J	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
J	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

## Sustainability rating (per m<sup>2</sup>)

Database ecoinvent

OI3<sub>Kon</sub> 26.7

Calculated by HFA



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## Details of sustainability rating

### Database ecoinvent

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO <sub>2</sub> -e.]	[kg SO <sub>2</sub> -e.]	[kg PO <sub>4</sub> -e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.096	0.039	2,02E-6	0.028	
	,					
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	45.259	562.897	608.156	446.197	80.180	526.377