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Designation: awropi31b-01
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

External wall - awropi31b-01

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

Performance rating

Fire protection performance	**REI from inside**	90
	REI from outside	30

maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 32,0 kN/m
Classified by HFA

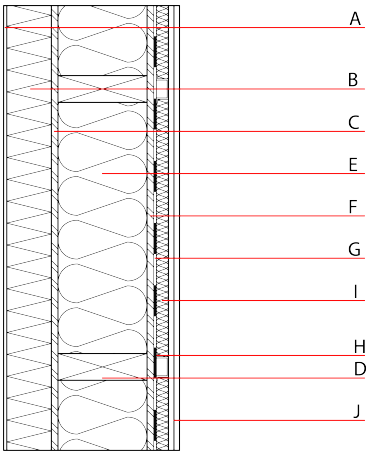
Thermal performance	**U**	0.11 W/(m²K)
	Diffusion	suitable

Proof of water vapor diffusion was provided for a structurally permanently secured airtightness of the component in accordance with ÖNORM B 8110-2 (2020) Tab.3 (C=0 m³/(s*PA^b)).
Calculated by HFA

Acoustic performance	**R_w ($C;C_{tr}$)**	57(-5;-12) dB
	$L_{n,w}$ (C_I)	

frequency range 50-3500: $C_{50\text{-}3500}$ -10 dB; $C_{tr\ 50\text{-}3500}$ -21 dB
Assessed by HFA

Mass per unit area	**m**	72.40 kg/m²



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	c	EN
A	7.0	plaster	1.000	10 - 35	2000	1.130	A1
B	100.0		0.031	20 - 50	16	1.450	E
C	15.0	OSB	0.130	200	600	1.700	D
D	200.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
E	200.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
F	15.0	OSB	0.130	200	600	1.700	D
G		vapour barrier sd≥ 50m			1000		
H	27.0	resilient channel a=625 vertical					
I	27.0	mineral wool [035; 20; ≥1000°C]	0.035	1	20	1.030	A1
J	25.0	gypsum plaster board type DF (2x12,5mm) or	0.250	10	800	1.050	A2
J	25.0	gypsum fibre board (2x12,5mm)	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$	40.3

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		0.159	0.061	2,88E-6	0.041	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	117.720	622.935	740.654	586.547	105.054	691.602