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Designation: awropi31a-01
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

External wall - awropi31a-01

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

Performance rating

Fire protection performance	**REI from inside**	60
	REI from outside	90

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

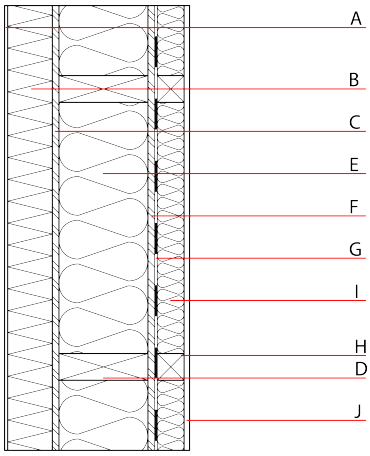
Thermal performance	**U**	0.12 W/(m²K)
	Diffusion	suitable

Calculated by HFA

Acoustic performance	**R_w ($C;C_{tr}$)**	46(-2;-8) dB
	$L_{n,w}$ (C_I)	

frequency range 50-3500: C50-3500 -8 dB; Ctr 50-3500 -19 dB
Assessed by HFA

Mass per unit area	**m**	75.40 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		0.040	1	100	1.030	A1
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≥ 14m					
H	60.0	spruce wood - cross battens (60/60) vertical (a=625)	0.120	50	450	1.600	D
I	60.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	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 m²)

Database ecoinvent

$OI3_{Kon}$	53.4

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		0.248	0.086	3,21E-6	0.076	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	134.163	714.581	848.744	679.775	46.688	726.463