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Designation: awropi25a-05
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, PLB

External wall - awropi25a-05

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

Performance rating

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

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

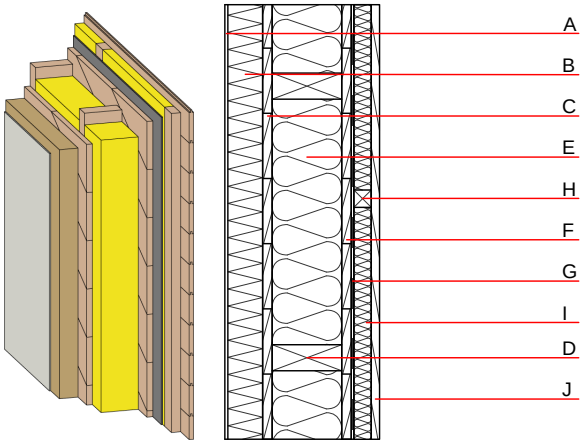
Thermal performance	**U**	0.13 W/(m²K)
	Diffusion	suitable

Calculated by HFA

Acoustic performance	**R_w ($C;C_{tr}$)**	51(-3;-10) dB
	$L_{n,w}$ (C_I)	

Assessed by TGM

Mass per unit area	**m**	78.30 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	80.0	WF-PT [042; 180]	0.042	3 - 7	180	2.100	E
C	22.0	planking spruce wood diagonal	0.120	50	450	1.600	D
D	200.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
E	200.0	Wood fibre insulation [039; 50]	0.039	1 - 2	50	2.100	E
F	22.0	planking spruce wood diagonal	0.120	50	450	1.600	D
G		vapour barrier sd≥ 6m			1000		
H	40.0	spruce wood cross battens (a=400) or battens offset)	0.120	50	450	1.600	D
I	40.0	Wood fibre insulation [039; 50]	0.039	1 - 2	50	2.100	E
J	19.0	planking tongue and groove	0.120	50	450	1.600	D

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$	27.2

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		0.154	0.069	2,85E-6	0.033	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	166.696	1127.207	1293.903	532.763	44.017	576.780