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Designation: awropi13a-07
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

External wall - awropi13a-07

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	60

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

Thermal performance	**U**	0.17 W/(m²K)
	Diffusion	suitable

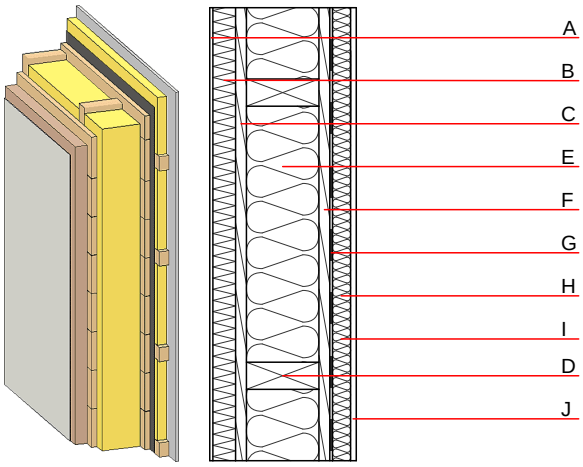
Calculated by HFA

Acoustic performance	**R_w ($C;C_{tr}$)**	53(-3;-8) dB
	$L_{n,w}$ (C_I)	

Vertical battens for the dry lining screwed onto the ledger beams lead to an Rw(C;Ctr)=50(-1;-5) dB
Assessed by MA39

Mass per unit area	**m**	77.10 kg/m²

Calculation based on gypsum plaster board type DF



Note: e=625

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	10.0	plaster	1.000	10 - 35	2000	1.130	A1
B	50.0	wood wool composite boards	0.090	2 - 5	370	2.000	B
C	24.0	planking spruce wood	0.120	50	450	1.600	D
D	160.0	construction timber (60/..; e=*)	0.120	50	450	1.600	D
E	160.0	mineral wool [035; 50; <1000°C]	0.035	1	50	1.030	A1
F	24.0	planking spruce wood	0.120	50	450	1.600	D
G		vapour barrier sd≥ 7m			1000		
H	40.0	spruce wood cross battens (a=400) or battens offset)	0.120	50	450	1.600	D
I	40.0	mineral wool [035; 50; <1000°C]	0.035	1	50	1.030	A1
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

$OI3_{Kon}$	45.6

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		0.204	0.090	3,85E-6	0.034	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	121.896	659.844	781.740	664.744	6.585	671.329