

External wall - awropi31a-00

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

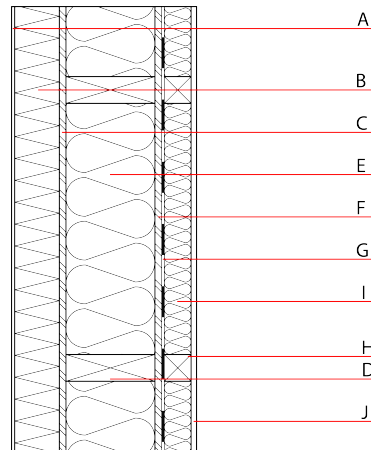
Performance rating

Fire protection performance REI from inside 60
 REI from outside 90
 maximum ceiling height = 3 m; maximum load $E_{d,fi} = 32,0 \text{ kN/m}$
 Classified by HFA

Thermal performance U 0.12 $\text{W}/(\text{m}^2\text{K})$
 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: $C_{50-3500} -8 \text{ dB}$; $C_{tr,50-3500} -19 \text{ dB}$
 Assessed by HFA

Mass per unit area m 71.30 kg/m^2



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 EN
			λ	$\mu \text{ min} - \text{max}$	ρ	c	
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	mineral wool [040; 30; $\geq 1000^\circ\text{C}$]	0.040	1	30	1.030	A1
F	15.0	OSB	0.130	200	600	1.700	D
G		vapour barrier $s_{d,eq} \geq 14\text{m}$					
H	60.0	spruce wood - cross battens (60/60) vertical (a=625)	0.120	50	450	1.600	D
I	60.0	mineral wool [035; 20; $\geq 1000^\circ\text{C}$]	0.035	1	20	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 m^2)

Database ecoinvent

$OI3_{Kon}$ 66.6

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		0.313	0.095	3,04E-6	0.115	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	119.384	521.844	641.228	713.494	28.482	741.976