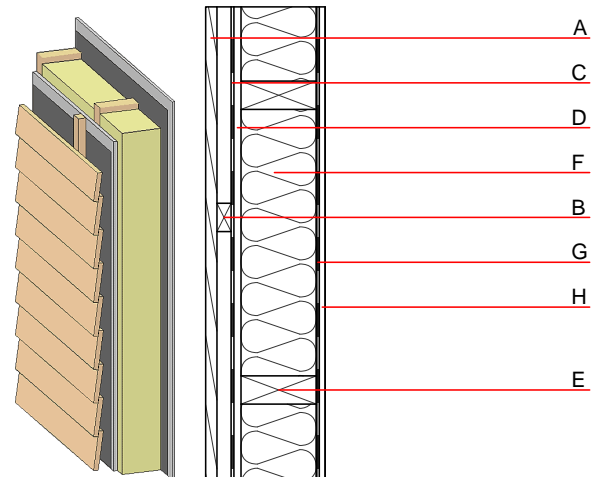


External wall - awrho04a-03

external wall, timber frame construction, ventilated, without dry lining, with cladding, other surface

Performance rating

Fire protection performance	REI from inside	30
	REI from outside	30
maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 19,2 kN/m Classified by HFA		
Thermal performance	U	0.19 W/(m ² K)
	Diffusion	suitable
Calculated by HFA		
Acoustic performance	R_w (C;C _{tr})	47(-2;-8) dB
	$L_{n,w}$ (C _i)	
Battens for the ventilation space screwed onto the structural timber result in an $R_w(C;C_{tr})=43(-1;-7)$ dB Assessed by MA39		
Mass per unit area	m	40.40 kg/m ²
Calculation based on GF		



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 EN
			λ	μ min – max	ρ	c	
A	24.0	larch wood external wall cladding	0.155	150	600	1.600	D
B	30.0	spruce wood battens offset (30/50; 30/80) - ventilation	0.120	50	450	1.600	D
C		wind barrier			1000		
D	12.5	gypsum fibre board	0.320	21	1000	1.100	A2
E	240.0	construction timber (60/...; e=*)	0.120	50	450	1.600	D
F	240.0	mineral wool [040; ≥ 16 ; $< 1000^\circ\text{C}$]	0.040	1	16	1.030	A1
G		vapour barrier sd $\geq 2\text{m}$			1000		
H	12.5	gypsum fibre board or	0.320	21	1000	1.100	A2
H	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2

Sustainability rating (per m²)

Database ecoinvent

013_{Kon} 25.1

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		0.112	0.052	2,25E-6	0.021	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	100.292	425.552	525.844	391.290	10.862	402.152