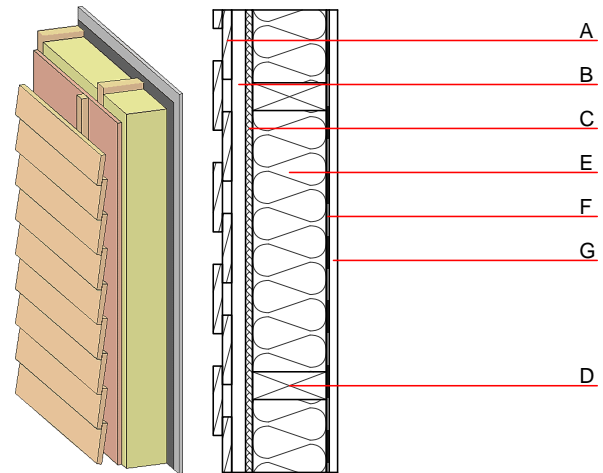


External wall - awrhho05b-04

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

Performance rating

Fire protection performance	REI from inside	60
	REI from outside	30
maximum ceiling height = 3 m; maximum load $E_{d,fi} = 25,0 \text{ kN/m}$ Classified by HFA		
Thermal performance	U	0.24 W/(m ² K)
	Diffusion	suitable
Calculated by HFA		
Acoustic performance	$R_w (C; C_{tr})$	46(-2;-8) dB
	$L_{n,w} (C_i)$	
Battens for the ventilation space screwed onto the structural timber result in an $R_w(C; C_{tr})=42(-1;-7)$ dB Assessed by MA39		
Mass per unit area	m	34.00 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	$\mu \text{ min} - \text{max}$	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	15.0	fibreboard (MDF)	0.140	11	600	1.700	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		vapour barrier sd \geq 1m			1000		
G	18.0	gypsum fibre board or	0.320	21	1000	1.100	A2
G	18.0	gypsum plaster board type DF	0.250	10	800	1.050	A2

Sustainability rating (per m²)

Database ecoinvent

013_{Kon} 37.9

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		0.166	0.075	2,90E-6	0.026	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	110.262	509.797	620.060	546.221	22.510	568.730