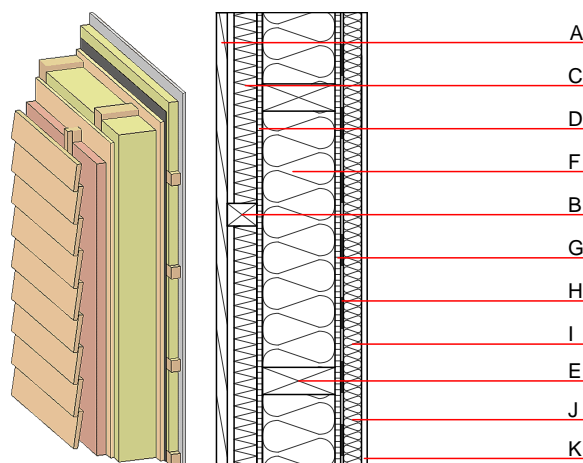


External wall - awrohi03a-10

external wall, timber frame construction, not ventilated, with 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 $E_{d,fi}$ = 32,0 kN/m Classified by HFA		
Thermal performance	U	0.20 W/(m ² K)
	Diffusion	suitable
Calculated by HFA		
Acoustic performance	R_w (C;C _{tr})	50(-3;-9) dB
	$L_{n,w}$ (C _i)	
Vertical external battens and vertical battens for the dry lining screwed onto the ledger beams lead to an R_w (C;C _{tr})=43(-1;-5) dB Assessed by MA39		
Mass per unit area	m	69.70 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	65.0	spruce wood cross battens of battens offset	0.120	50	450	1.600	D
C	50.0	wood wool composite boards	0.090	2 - 5	370	2.000	B
D	16.0	particleboard	0.130	50 - 100	700	1.700	D
E	160.0	construction timber (60/...; e=*)	0.120	50	450	1.600	D
F	160.0	sheep wool [0,041; R=26]	0.041	1	30	1.720	E
G	12.0	particleboard	0.130	50 - 100	700	1.700	D
H		vapour barrier sd≥ 10m			1000		
I	40.0	spruce wood cross battens (a=400) or battens offset	0.120	50	450	1.600	D
J	40.0	sheep wool [0,041; R=26]	0.041	1	30	1.720	E
K	12.5	gypsum fibre board or	0.320	21	1000	1.100	A2
K	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2

Sustainability rating (per m²)

Database ecoinvent

OI3_{Kon} 21.7

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		0.102	0.043	2,25E-6	0.029	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	98.488	888.393	986.882	455.929	42.434	498.363