

External wall - awrho13a-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 60
 maximum ceiling height = 3 m; maximum load $E_{d,fi} = 23,4 \text{ kN/m}$
 Classified by HFA

Thermal performance
 U 0.25 $\text{W}/(\text{m}^2\text{K})$
 Diffusion suitable

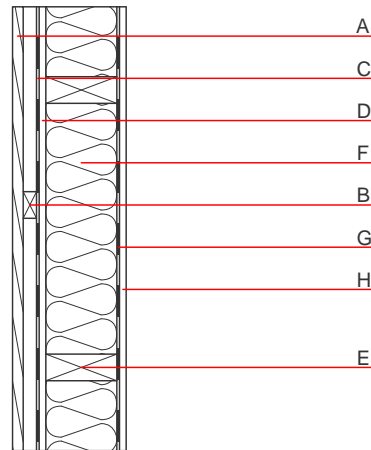
Calculated by IBO

Acoustic performance
 $R_w (C; C_{tr})$ 43 dB
 $L_{n,w} (C_i)$

The acoustic insulation assessment is based on a length-related flow resistance of $r \geq 5 \text{ kPa.s/m}^2$. If this value is lower for the insulation material used, the R_w value is reduced by 3dB.

Assessed by TGM

Mass per unit area m 44.40 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	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	15.0	Rigips Riduro	0.250	4 - 10	1000	1.050	A2
E	160.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
F	160.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	E
G		vapour barrier $sd \geq 2\text{m}$			1000		
H	15.0	Rigips Riduro	0.250	4 - 10	1000	1.050	A2

Sustainability rating (per m^2)

Database ecoinvent

013_{Kon} 14.2

Calculated by IBO

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		0.073	0.033	1,64E-6	0.015	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	84.455	460.738	545.193	256.420	12.201	268.621