

External wall - awrho13a-01

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 kN/m
 Classified by HFA

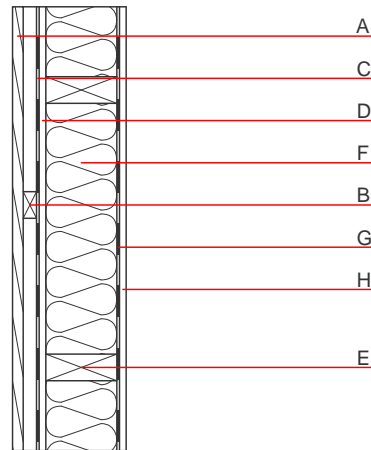
Thermal performance	U	0.21 W/(m ² K)
	Diffusion	suitable

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 $r \geq 5$ kPa.s/m². 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	54.40 kg/m ²
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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	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	ISOVER Multi-Kombi Holzrahmenfilz	0.033	1	11	1.030	A1
G		vapour barrier sd ≥ 2 m			1000		
H	15.0	Rigips Riduro	0.250	4 - 10	1000	1.050	A2

Sustainability rating (per m²)

Database ecoinvent

013 _{kon}	21.2
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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		0.091	0.043	2,07E-6	0.018	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	82.351	379.641	461.992	338.328	12.201	350.529