

External wall - awrhho14a-01

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 $E_{d,fi} = 51 \text{ kN/m}$
 Classified by HFA

Thermal performance
 U 0.20 $\text{W}/(\text{m}^2\text{K})$
 Diffusion suitable

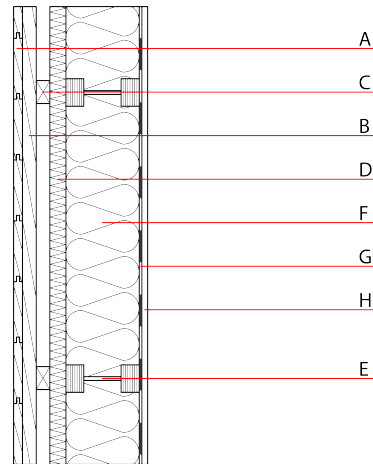
Calculated by HFA

Acoustic performance
 $R_w (C;C_{tr})$ 45(-2;-8) dB
 $L_{n,w} (C_i)$

Assessed by HFA

Mass per unit area m 48.20 kg/m^2

Calculation based on gypsum plaster board type DF



Note: According to OIB-RL 2 (Austria) is for ventilated and insulated facades (from building class 2) an insulation material with minimum Euroclass D required.

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 (closed)	0.155	150	600	1.600	D
B	30.0	spruce wood cross battens ($\geq 30/50$)	0.120	50	450	1.600	D
C	30.0	spruce wood battens - ventilation ($\geq 30/50$)	0.120	50	450	1.600	D
D	35.0	STEICOuniversal dry [050; 210]	0.050	3	210	2.100	E
E	160.0	STEICOjoist mit Furnierschichtholzgurten (60/39) und Hartfasersteg (60/160; e=625)					
F	160.0	STEICOflex [037; 60]	0.037	1 - 2	60	2.100	E
G		STEICOmembra 5 sd 5m					E
H	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
H	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m^2)

Database ecoinvent

$OI3_{kon}$ 20.5

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	0.045	1,90E-6	0.019	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	113.667	574.206	687.872	342.707	34.250	376.957