

External wall - awrhh16a-02

external wall, timber frame construction, ventilated, with dry lining, with cladding, Gipsplatte

Performance rating

Fire protection performance	REI from inside	30
	REI from outside	30

maximum ceiling height = 3 m; maximum load $E_{d,fi} = 32,0 \text{ kN/m}$
 Classified by HFA

Thermal performance	U	0.17 W/(m ² K)
	Diffusion	suitable

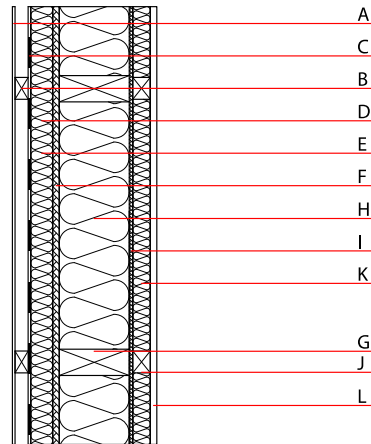
Proof of water vapor diffusion was carried out in accordance with ÖNORM B 8110-2 (2020) point 11 for components from quality-controlled prefabrication (airtightness, Table 3) and 6m air column.
 Calculated by HFA

Acoustic performance	$R_w (C;C_{tr})$	50(-2;-9) dB
	$L_{n,w} (C_i)$	

Assessed by HFA

Mass per unit area	m	58.70 kg/m ²
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Calculation based on gypsum plaster board type DF



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	6.0	external wall cladding					B
B	30.0	spruce battens vertical 30/50 plus 1,2mm EPDM sealing tape - ventilation	0.120	50	450	1.600	D
C		vapour-permeable membrane vapour-permeable membrane $s_d \leq 0,3m$					
D	50.0	Mineralwolle [040; 20; <1000°C]	0.040	1	20	1.030	A2
E	50.0	spruce wood battens horizontal (50/60)	0.120	50	450	1.600	D
F	15.0	fibreboard (MDF)	0.140	11	600	1.700	D
G	160.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
H	160.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
I	8.0	Funderplan Biofaser (sealed with airtight tape)	0.180	185	1000	1.700	D
J	40.0	spruce wood battens vertical	0.120	50	450	1.600	D
K	40.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
L	15.0	gypsum plaster board type DF or	0.250	10	800	1.050	A2
L	15.0	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

013_{kon}	51.9
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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		0.207	0.094	4,79E-6	0.027	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	212.420	724.794	937.214	763.703	95.953	859.656