

Designation: awrohi02a-11 Last updated: 8/2/23

Source: Holzforschung Austria

Editor: HFA, SP

## External wall - awrohi02a-11

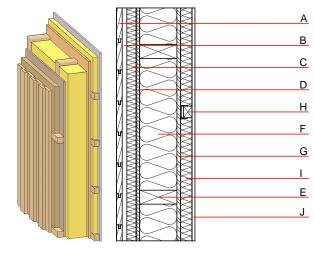
external wall, timber frame construction, not ventilated, with dry lining, with cladding, other surface

## Performance rating

Thermal performance	U Diffusion	0.18 W/(m <sup>2</sup> K) suitable		
Calculated by HFA				
Acoustic performance	R <sub>w</sub> (C;C <sub>tr</sub> ) L <sub>n,w</sub> (C <sub>l</sub> )	50(-3;-9) dB		

Vertical battens for the dry lining screwed onto the ledger beams lead to an Rw(C;Ctr)=47(-1;-5) dB Assessed by MA39

Calculation based on GF



Note: e=400

### 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
			λ	μ min – max	ρ	С	EN
Α	24.0	larch wood external wall cladding	0.155	150	600	1.600	D
В	50.0	spruce wood cross battens	0.120	50	450	1.600	D
С	40.0	softboard [045; 250] - rigid underlay	0.045	5	250	2.100	Е
D	15.0	fibreboard (MDF)	0.140	11	600	1.700	D
E	160.0	construction timber (60/; e=*)	0.120	50	450	1.600	D
F	160.0	mineral wool [040; ≥16; <1000°C]	0.040	1	16	1.030	A1
G	15.0	OSB (sealed with airtight tape)	0.130	200	600	1.700	D
Н	40.0	spruce wood cross battens (a=400) or battens offset)	0.120	50	450	1.600	D
I	40.0	mineral wool [040; ≥16; <1000°C] or air layer in type 02	0.040	1	16	1.030	A1
J	12.5	gypsum fibre board or	0.320	21	1000	1.100	A2
J	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2

# Sustainability rating (per m²)

Calculated by HFA

Database ecoinvent
OI3<sub>Kon</sub> 30.0



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### Details of sustainability rating

#### Database ecoinvent

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO <sub>2</sub> -e.]	[kg SO <sub>2</sub> -e.]	[kg PO <sub>4</sub> -e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.157	0.070	2,68E-6	0.031	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	154.315	944.111	1098.426	530.447	42.896	573.343