External wall - awroho03a-03

external wall, timber frame construction, not ventilated, without dry lining, with cladding, other surface
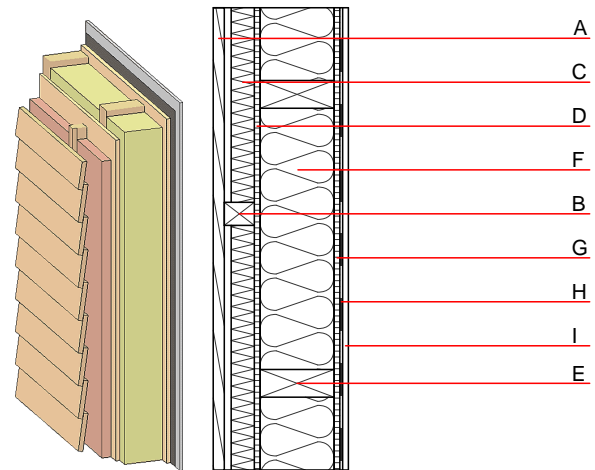
Performance rating

Fire protection performance	REI from inside	60
	REI from outside	30

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

Thermal performance	U	0.16 W/(m²K)
	Diffusion	suitable

Calculated by HFA

Acoustic performance	R_w (C;C$_{tr}$)	52(-2;-7) dB
	$L_{n,w}$ (C$_l$)	

Vertical external battens screwed onto the ledger beams lead to an Rw(C;Ctr)=48(-1;-5) dB
Assessed by MA39

Mass per unit area	m	71.60 kg/m²

Calculation based on GF

Note: e=625

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	c	EN
A	24.0	larch wood external wall cladding	0.155	150	600	1.600	D
B	65.0	spruce wood cross battens	0.120	50	450	1.600	D
C	50.0	wood wool composite boards	0.090	2 - 5	370	2.000	B
D	16.0	particleboard	0.130	50 - 100	700	1.700	D
E	240.0	construction timber (60/..; e=*)	0.120	50	450	1.600	D
F	240.0	mineral wool [040; ≥16; <1000°C]	0.040	1	16	1.030	A1
G	12.0	particleboard	0.130	50 - 100	700	1.700	D
H		vapour barrier sd≥ 10m			1000		
I	12.5	gypsum fibre board or	0.320	21	1000	1.100	A2
I	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2

Sustainability rating (per m²)

Database ecoinvent

OI3$_{Kon}$	30.7

Calculated by HFA

dataholz.eu

Designation: awroho03a-03
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

Page 2

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		0.143	0.062	2,59E-6	0.032	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	107.394	792.489	899.883	537.934	41.362	579.296

dataholz.eu – Catalogue of timber building materials, components and component connections reviewed to consider thermal, acoustic, fire performance requirements and ecological drivers for timber construction released by accredited testing institutes.
These datasheets will generally be accepted as proofs of compliance by building authorities.

Page 2