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External wall - awmhhi03a-01
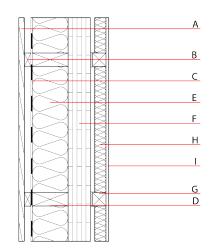
external wall, solid wood construction, ventilated, with dry lining, with cladding, other surface

Performance rating

Fire protection performance	REI from inside	90	
	REI from outside	60	

maximum ceiling height = 3 m; maximum load Ed,fi = 35,0 kN/lfm
Classified by HFA

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

Calculated by HFA

Acoustic performance	R_w (C;C$_{tr}$)	49(-3;-9) dB
	$L_{n,w}$ (C$_I$)	

frequency range 50-3500: C50-3500 -4 dB; Ctr 50-3500 -12 dB
Assessed by HFA

Mass per unit area	m	92.40 kg/m^2

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, e.g. clapboard facade	0.155	150	600	1.600	D
B	30.0	spruce wood battens vertical (30/60); ventilation	0.120	50	450	1.600	D
C		vapour-permeable membrane sd ≤ 0,3m					
D	160.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
E	160.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
F	100.0	cross laminated timber 5-ply	0.130	50	500	1.600	D
G	70.0	battens (60/60) vertical on resilient clips, e=626	0.120	50	450	1.600	
H	50.0	mineral wool [040; 11; <1000℃]	0.040	1	11	1.030	A1
I	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
I	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m^2)

Database ecoinvent

OI3$_{Kon}$	31.2

Calculated by HFA

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Designation: awmhhi03a-01
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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		0.182	0.080	3,23E-6	0.054	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	118.266	1218.850	1337.116	609.347	34.788	644.135

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.

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