

## External wall - awmhh03b-02

external wall, solid wood construction, ventilated, with dry lining, with cladding, other surface

### Performance rating

<b>Fire protection performance</b>	<b>REI from inside</b>	120
	<b>REI from outside</b>	60

maximum ceiling height = 3 m; maximum load  $E_{d,fi}$  = 35,0 kN/lfm  
 Classified by HFA

<b>Thermal performance</b>	<b>U</b>	0.17 W/(m <sup>2</sup> K)
	<b>Diffusion</b>	suitable

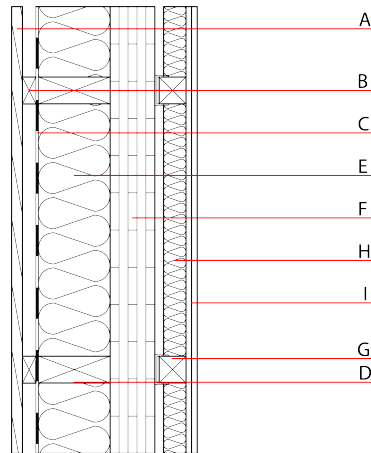
Calculated by HFA

<b>Acoustic performance</b>	<b>R<sub>w</sub> (C;C<sub>tr</sub>)</b>	54(-4;-11) dB
	<b>L<sub>n,w</sub> (C<sub>i</sub>)</b>	

frequency range 50-3500: C<sub>50-3500</sub> -6 dB; C<sub>tr,50-3500</sub> -15 dB

Assessed by HFA

<b>Mass per unit area</b>	<b>m</b>	100.90 kg/m <sup>2</sup>
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### 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
			$\lambda$	$\mu$ min – max	$\rho$	c	
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	Cellulose fibre [040; 50]	0.040	1	50	2.000	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=625	0.120	50	450	1.600	
H	50.0	mineral wool [040; 11; <1000°C]	0.040	1	11	1.030	A1
I	25.0	gypsum plaster board type DF (2x12,5) or	0.250	10	800	1.050	A2
I	25.0	gypsum fibre board (2x12,5)	0.320	21	1000	1.100	A2

### Sustainability rating (per m<sup>2</sup>)

#### Database ecoinvent

013<sub>kon</sub> 32.2

Calculated by HFA

## Details of sustainability rating

### Database ecoinvent

Lifecycle (Phases)	GWP [kg CO <sub>2</sub> -e.]	AP [kg SO <sub>2</sub> -e.]	EP [kg PO <sub>4</sub> -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.189	0.082	3,35E-6	0.053	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	115.273	1181.340	1296.612	605.753	23.584	629.337