

## External wall - awmhi03a-02

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

### Performance rating

<b>Fire protection performance</b>	REI from inside	90
	REI from outside	60

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

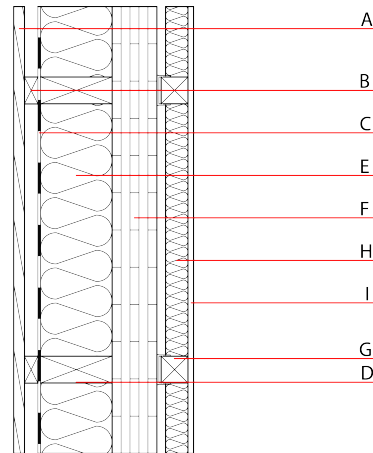
<b>Thermal performance</b>	U	0.17 $\text{W}/(\text{m}^2\text{K})$
	Diffusion	suitable

Calculated by HFA

<b>Acoustic performance</b>	$R_w (C; C_{tr})$	49(-3;-9) dB
	$L_{n,w} (C_i)$	

frequency range 50-3500:  $C_{50-3500} -4 \text{ dB}$ ;  $C_{tr} 50-3500 -12 \text{ dB}$   
 Assessed by HFA

<b>Mass per unit area</b>	m	93.10 $\text{kg}/\text{m}^2$
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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 $s_d \leq 0,3\text{m}$					
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=626	0.120	50	450	1.600	
H	50.0	mineral wool [040; 11; <1000°C]	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 $\text{m}^2$ )

#### Database ecoinvent

$OI_{3kon}$  29.9

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		0.184	0.079	3,08E-6	0.052	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	113.243	1181.340	1294.582	567.432	23.584	591.016