

## External wall - awmhi02a-00

external wall, solid wood construction, ventilated, with dry lining, with cladding, Gipsplatte

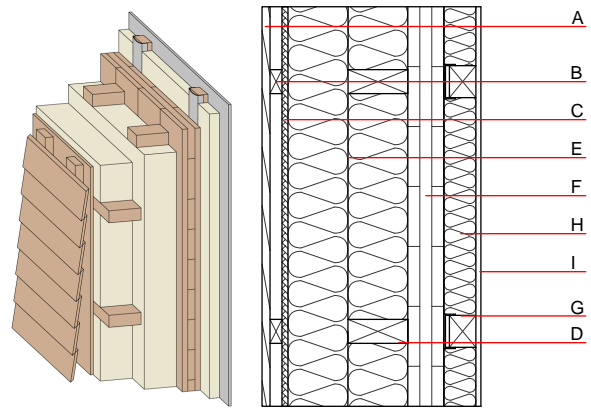
### Performance rating

**Fire protection performance** REI from inside 90  
 REI from outside 60  
 maximum ceiling height = 3 m; maximum load  $E_{d,fi} = 35 \text{ kN/lm}$   
 Classified by HFA

**Thermal performance** U 0.10  $\text{W}/(\text{m}^2\text{K})$   
 Diffusion suitable  
 Calculated by HFA

**Acoustic performance**  $R_w (C;C_{tr})$  52 dB  
 $L_{n,w} (C_i)$   
 without resilient clips  $R_w \geq 49 \text{ dB}$   
 Assessed by HFA

**Mass per unit area** m 116.20  $\text{kg}/\text{m}^2$   
 Calculation based on gypsum plaster board type DF



### 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	20.0	larch wood external wall cladding	0.120	50	450	1.600	D
B	30.0	spruce wood battens offset (30/60) - ventilation	0.120	50	450	1.600	D
C	15.0	fibreboard (MDF)	0.140	11	600	1.700	D
D	160.0	construction timber cross; (60/160; e=625)	0.120	50	450	1.600	D
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E	320.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	E
F	100.0	cross laminated timber $\geq 94,0$ ; at least 3-layers, top layer at least 30mm)	0.130	50	500	1.600	D
G	80.0	spruce wood Battens on resilient clips (50/80; e=625)	0.120	50	450	1.600	D
H	80.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	E
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

$OI3_{Kon}$  34.9

Calculated with gypsum plaster fire protection board (GKF/DF); this data includes 3-, 5-, and 7-ply cross laminated timber elements;  
 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		0.225	0.094	3,45E-6	0.056	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	148.267	1498.206	1646.473	656.251	34.200	690.451