

External wall - awshhi01a-02

external wall, timber frame construction, ventilated, with dry lining, with cladding, other surface

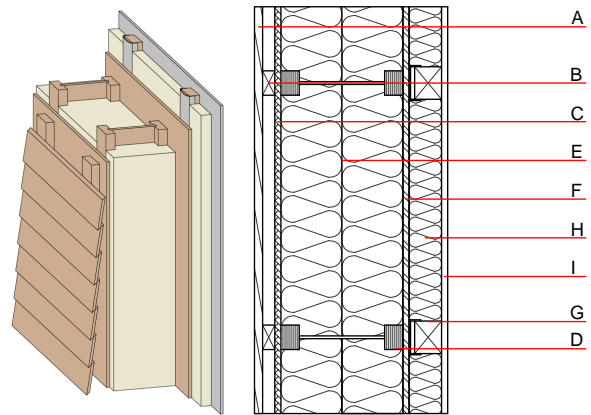
Performance rating

Fire protection performance REI from inside 60
 maximum ceiling height = 3 m; maximum load $E_{d,fi} = 22,5 \text{ kN/lm}$
 Classified by HFA

Thermal performance U 0.10 $\text{W}/(\text{m}^2\text{K})$
 Diffusion suitable
 The stated thermal characteristics in the product data sheet are specified for the hard board intermediate web; the flanges are calculated with solid wood.
 Calculated by HFA

Acoustic performance $R_w (C;C_{tr})$ 53 dB
 $L_{n,w} (C_i)$
 without resilient clips $R_w \geq 50 \text{ dB}$
 Assessed by HFA

Mass per unit area m 60.10 kg/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
			λ	μ min – max	ρ	c	
A	20.0	larch wood external wall cladding	0.155	150	600	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	300.0	Light composite wood-based beams (I-beams) with solid wood flanges (60/45) and hard board intermediate web ($\geq 6,7$) $e=625$	0.400	20 - 30	800	1.700	D
E	300.0	mineral wool [034; 18; <1000°C]	0.034	1	18	1.030	A1
F	15.0	OSB	0.130	200	600	1.700	D
G	80.0	spruce wood battens on resilient clips (50/80; $e=625$)	0.120	50	450	1.600	D
H	80.0	mineral wool [034; 18; <1000°C]	0.034	1	18	1.030	A1
I	15.0	gypsum plaster board type DF or	0.250	10	800	1.050	A2
I	15.0	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m^2)

Database ecoinvent

$OI3_{Kon}$ 37.6
 Calculated with gypsum plaster fire protection board (GKF/DF)
 Calculated by HFA

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		0.170	0.077	3,01E-6	0.027	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	114.314	646.556	760.870	571.019	29.898	600.917