

## External wall - awrrho07a-04

external wall, timber frame construction, ventilated, without dry lining, with cladding, other surface

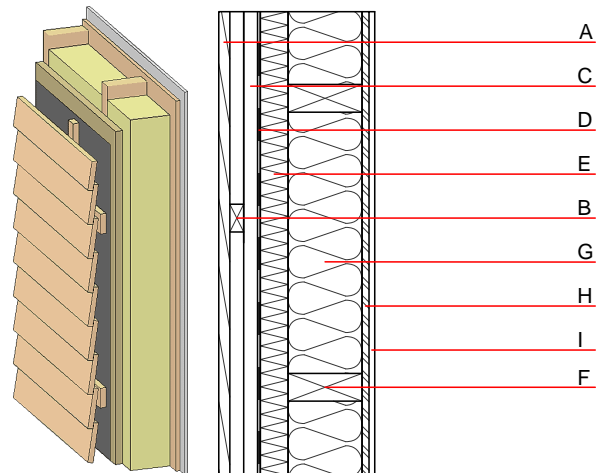
### Performance rating

**Fire protection performance**  
 REI from inside 60  
 REI from outside 30  
 maximum ceiling height = 3 m; maximum load  $E_{d,fi} = 32,0 \text{ kN/m}$   
 Classified by MA39  
 Classified by HFA

**Thermal performance**  
 U 0.18  $\text{W}/(\text{m}^2\text{K})$   
 Diffusion suitable  
 Calculated by HFA

**Acoustic performance**  
 $R_w (C; C_{tr})$  47(-2;-8) dB  
 $L_{n,w} (C_i)$   
 Assessed by MA39

**Mass per unit area** m 58.90  $\text{kg}/\text{m}^2$   
 Calculation based on gypsum plaster board type DF



Note: According to OIB-RL 2 (Austria) is for ventilated and insulated facades (from building class 2) an insulation material with minimum Euroclass D required.

### 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	0.155	150	600	1.600	D
B	30.0	spruce wood battens - ventilation	0.120	50	450	1.600	D
C	30.0	spruce wood cross battens	0.120	50	450	1.600	D
D		wind barrier			1000		
E	60.0	wood-fibre insulation board [045; 140]	0.045	2 - 5	140	2.100	E
F	160.0	construction timber (60/...; e=625)	0.120	50	450	1.600	D
G	160.0	mineral wool [035; 50; <1000°C]	0.035	1	50	1.030	A1
H	15.0	OSB (sealed with airtight tape)	0.130	200	600	1.700	D
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

$OI3_{kon}$  43.4

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		0.193	0.088	3,50E-6	0.032	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	129.097	656.751	785.848	636.473	29.328	665.801