

Pitched roof - sdrhzo02b-01

pitched roof, timber frame construction, ventilated, without dry lining, directly, other surface

Performance rating

Fire protection performance REI 60

maximum span = 5 m; maximum load $E_{d,fi}$ = 3,66 kN/m²
Classified by HFA

Thermal performance U 0.20 W/(m²K)
Diffusion suitable

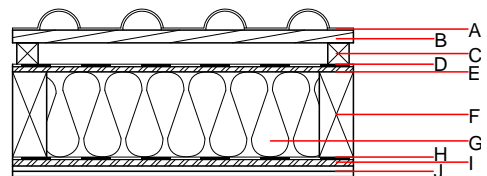
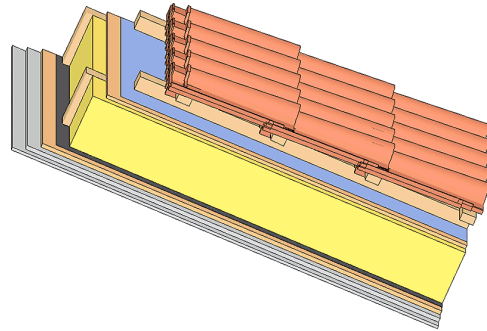
Calculated by HFA

Acoustic performance R_w (C;C_{tr}) 51 (-1;-7) dB
 $L_{n,w}$ (C_i)

with a tiled roof R_w = 49 (-1;-7) dB
Assessed by TGM

Mass per unit area m 52.20 kg/m²

Calculation based on gypsum plaster board type DF



Note: The design of the under-roof construction and of the counter-battens have to be specified according to the roof pitch and the national requirements.

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		concrete roof tile or tiled roof			2100		A1
B	30.0	spruce wood battens (30/50)	0.120	50	450	1.600	D
C	50.0	spruce wood counter battens (minimum height 50 mm)	0.120	50	450	1.600	D
D		sarking membrane $s_d \leq 0,3m$			1000		E
E	12.0	OSB	0.130	200	600	1.700	D
F	220.0	construction timber (80/...; e=800)	0.120	50	450	1.600	D
G	220.0	mineral wool [040; ≥ 16 ; <1000°C]	0.040	1	16	1.030	A1
H		vapour barrier $s_d \geq 11m$			1000		
I	15.0	OSB	0.130	200	600	1.700	D
J	25.0	gypsum plaster board type DF (2x12,5 mm) or	0.250	10	800	1.050	A2
J	25.0	gypsum fibre board (2x12,5 mm)	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

013_{Kon} 32.9

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		0.135	0.062	3,21E-6	0.025	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	109.870	527.001	636.871	509.578	25.917	535.495