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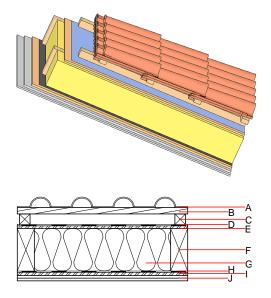
Designation: Last updated: Source: Editor: sdrhzo02b-00 8/2/23 Holzforschung Austria HFA, SP

## Pitched roof - sdrhzo02b-00

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

#### Performance rating

Fire protection performance	REI	60
maximum span = 5 m; max Classified by HFA	timum load $E_{d,fi} = 3,66 \text{ kN/}$	m²
Thermal performance	U Diffusion	0.22 W/(m <sup>2</sup> K) suitable
Calculated by HFA		
Acoustic performance	R <sub>w</sub> (C;C <sub>tr</sub> ) L <sub>n,w</sub> (C <sub>I</sub> )	51(-2;-8) dB
with a tiled roof Rw = 49 ( Assessed by TGM	-2; -8) dB	
Mass per unit area	m	50.90 kg/m <sup>2</sup>
Calculation based on gypsu	um plaster board type DF	



Note: The design of the under-roof construction and of the counterbattens 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 per	formance			Reaction to fire
		λ	µ min – max	ρ	с	EN
	concrete roof tile or tiled roof			2100		A1
30.0	spruce wood battens (30/50)	0.120	50	450	1.600	D
50.0	spruce wood counter battens (minimum height 50 mm)	0.120	50	450	1.600	D
	sarking membrane sd $\leq$ 0,3m			1000		E
12.0	OSB	0.130	200	600	1.700	D
200.0	construction timber (80/; e=800)	0.120	50	450	1.600	D
200.0	mineral wool [040; ≥16; <1000 °C]	0.040	1	16	1.030	A1
	vapour barrier sd≥ 11m			1000		
15.0	OSB	0.130	200	600	1.700	D
25.0	gypsum plaster board type DF (2x12,5 mm) or	0.250	10	800	1.050	A2
25.0	gypsum fibre board (2x12,5 mm)	0.320	21	1000	1.100	A2

### Sustainability rating (per m<sup>2</sup>)

Database ecoinvent

Calculated by HFA

OI3<sub>Kon</sub>

31.7

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#### Details of sustainability rating

#### Database ecoinvent

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO <sub>2</sub> -e.]	[kg SO <sub>2</sub> -e.]	[kg PO <sub>4</sub> -e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.130	0.059	3,12E-6	0.024	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[LM]	[LM]	[LM]	[LM]	[MJ]	[M]
A1 - A3	106.722	510.623	617.344	492.370	25.917	518.287

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