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Designation: sdrhzi08b-06
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

Pitched roof - sdrhzi08b-06

pitched roof, timber frame construction, ventilated, with dry lining, not suspended, 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**	0.18 W/(m²K)
	Diffusion	suitable

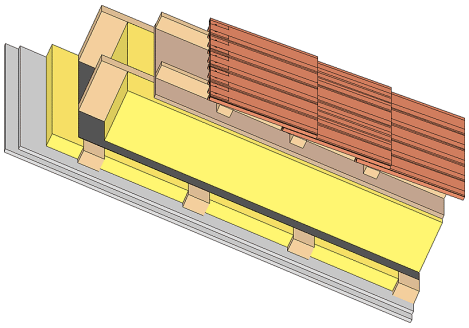
Calculated by HFA

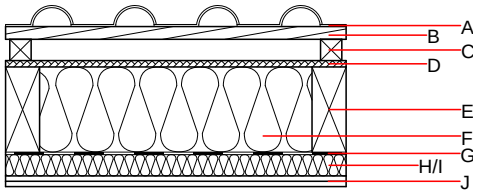
Acoustic performance	**R_w ($C;C_{tr}$)**	54(-3;-9) dB
	$L_{n,w}$ (C_I)	

with a tiled roof Rw = 51 (-3; -9) dB
Assessed by TGM

Mass per unit area	**m**	56.20 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
			λ	μ min – max	ρ	c	EN
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	15.0	fibreboard (MDF)	0.140	11	600	1.700	D
E	200.0	construction timber (80/..; e=800)	0.120	50	450	1.600	D
F	200.0	cellulose fibre [040; E]	0.040	1 - 2	55	2.000	E
G		vapour barrier sd≥ 1m			1000		
H	50.0	spruce wood cross battens (50/80;a=400)	0.120	50	450	1.600	D
I	50.0	cellulose fibre [040; E]	0.040	1 - 2	55	2.000	E
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

$OI3_{Kon}$	24.7

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		0.111	0.047	2,38E-6	0.020	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	86.077	599.275	685.352	394.474	46.624	441.098