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Designation: Last updated: Source: Editor: sdrhzi09a-07 8/2/23 Holzforschung Austria HFA, SP

Pitched roof - sdrhzi09a-07

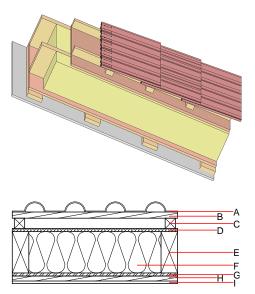
pitched roof, timber frame construction, ventilated, with dry lining, not suspended, other surface

Performance rating

Fire protection performance	REI	30
maximum span = 5 m; ma roofing, counter battens a Classified by HFA Classified by HFA		$E_{d,fi}$ = 2,62 kN/m² (rafter 60/200 without
Germany		
F30		
Load $E_{d,fi}$ according to the	e German cert	fication document
Corresponding proof: DIN	4102-4:201	6-05, Tabelle 10.19, Zeile 1
Thermal performance	U Diffusion	0.20 W/(m ² K) suitable

Calculated by TUM	Diriusion	Sultuple
Acoustic performance	R _w (C;C _{tr}) L _{n,w} (C _l)	53(-1;-7) dB
Assessed by Müller-BBM		
Mass per unit area	m	106.20 kg/m ²

Calculation based on gypsum 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 pe	rformance			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 (Austria: minimum height 50 mm), Germany 30 mm	0.120	50	450	1.600	D
)	16.0	fibreboard (MDF)	0.140	11	600	1.700	D
	200.0	construction timber (80/; e=625)	0.120	50	450	1.600	D
	200.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
	15.0	OSB (sealed with airtight tape)	0.130	200	600	1.700	D
I	24.0	spruce wood cladding with spacing of cladding boards(24/100); a=400	0.120	50	450	1.600	D
	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent		Database GaBi (ÖKOBAUDAT)			
OI3 _{Kon}	23.4	Built-in renewable materials	kg	49.990	
Calculated by HFA		Biogenic carbon in kg CO ₂ -e.	kg CO ₂	72.310	
ouroundou by thirt		Energy use of Primary Energy	MJ	1295.300	
		Share of renewable PE	%	30.00	
		Calculated by TUM			

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Details of sustainability rating

Database ecoinvent

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO ₂ -e.]	[kg SO ₂ -e.]	[kg PO ₄ -e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.109	0.049	2,48E-6	0.022	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]

dataholz.eu – Catalogue of timber building materials, components and component connections reviewed to consider thermal, acoustic, fire performance requirements and ecological drivers for timber construction released by accredited testing institutes. These datasheets will generally be accepted as proofs of compliance by building authorities.