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Designation: Last updated: Source: Editor: sdmhzo02-03 8/2/23 Holzforschung Austria HFA, PLB

Pitched roof - sdmhzo02-03

pitched roof, solid wood construction, ventilated, without dry lining, without lining, wooden surface

Performance rating

Fire protection performance	REI	30	
maximum span = 5 m; n Classified by HFA	naximum load $E_{d,fi} = 5$	kN∕m² (without roof structure)	: :
Germany			1
REI30			
Load E _{d,fi} according to th	ne German certification	document	
Corresponding proof: ma	anufacturer-specific		
Thermal performance	U Diffusion	0.18 W∕(m ² K) suitable	
Calculated by TUM			_
Acoustic performance	R _w (C;C _{tr}) L _{n,w} (C _l)	38(-1;-7) dB	M
Assessed by Müller-BBM			ľ
Mass per unit area	m	144.80 kg/m ²	Ē



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. Underlay laminated on insulation board

Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

	Thickness	Building material	Thermal pe	Reaction to fire			
			λ	µ min – max	ρ	с	EN
А		concrete roof tile / tiled roof			2100		A1
В	30.0	spruce wood battens (30/50)	0.120	50	450	1.600	D
С	30.0	spruce wood counter battens (Germany 30mm); Austria: minimum 50mm	0.120	50	450	1.600	D
D		sarking membrane sd \leq 0,3m			1000		E
Е	180.0	mineral wool [040; 130] on-roof insulation	0.040	1	130	1.030	
F	0.2	sealing sheet (air tight)					
G	120.0	cross laminated timber	0.130	50	500	1.600	D

Sustainability rating (per m²)

Database ecoinvent		Database GaBi (ÖKOBAUDAT)				
OI3 _{Kon}	115.6	Built-in renewable materials	kg	62.800		
Calculated by HFA		Biogenic carbon in kg CO ₂ -e.	kg CO ₂	90.490		
		Energy use of Primary Energy	LW	1288.380		
		Share of renewable PE	%	23.54		
		Calculated by TUM				

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.

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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		0.517	0.199	5,88E-6	0.166	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[M]	[LM]	[MJ]	[M]
A1 - A3	108.694	911.596	1020.290	1372.326	27.020	1399.346

Database GaBi (ÖKOBAUDAT)

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		0.280	0.042	3,98E-6	0.028	
C1 - C4		0.009	0.008	1,60E-7	0.001	
A1 - C4		0.291	0.051	4,14E-6	0.028	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[M]	[M]	[LM]	[MJ]	[LM]
A1 - A3	300.294	1069.225	1366.867	943.454	47.714	990.498
C1 - C4	2.295	-1065.138	-1062.844	31.463	0.000	31.463
A1 - C4	303.293	4.086	304.728	985.090	47.714	1032.133