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Designation: Last updated: Source: Editor: fdrhbi06a-07 8/2/23 Holzforschung Austria HFA, SP

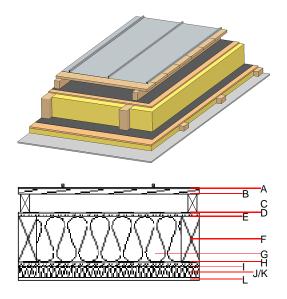
Flat roof - fdrhbi06a-07

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

Performance rating

Fire protection performance	REI	30
maximum span = 5 m; max Classified by HFA	kimum load E _{d,fi} = 2,62 kN∕	m²
Thermal performance	U Diffusion	0.20 W∕(m ² K) suitable
Calculated by HFA		
Acoustic performance	R _w (C;C _{tr}) L _{n,w} (C _I)	46(-3;-7) dB
Assessed by TGM		
Mass per unit area	m	46.40 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 performance				Reaction to fire	
		λ	µ min – max	ρ	с	EN	
	sheet metal roofing or			7800		A1	
	Plastic roofing membrane					E	
24.0	spruce wood closed cladding without spacing of cladding boards	0.120	50	450	1.600	D	
80.0	spruce wood counter battens (ventilation)	0.120	50	450	1.600	D	
	sarking membrane sd \leq 0,3m			1000		E	
15.0	OSB	0.130	200	600	1.700	D	
200.0	construction timber (80/; e=800)	0.120	50	450	1.600	D	
200.0	sheep wool [0,041; R=26]	0.041	1	30	1.720	E	
	vapour barrier sd≥ 8m			1000			
15.0	OSB	0.130	200	600	1.700	D	
50.0	spruce wood cross battens (50/80;a=400)	0.120	50	450	1.600	D	
50.0	sheep wool [0,041; R=26]	0.041	1	30	1.720	E	
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

Calculated by HFA

OI3_{Kon}

31.2

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		0.148	0.067	2,76E-6	0.034	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
Lifecycle						
(Phases)	[LM]	[M]	[LM]	[LM]	[MJ]	[MJ]

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