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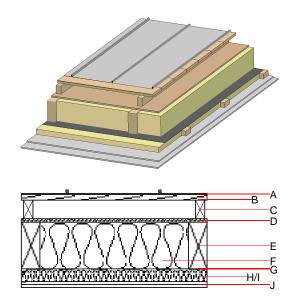
Designation: Last updated: Source: Editor: fdrhbi08b-01 8/2/23 Holzforschung Austria HFA, SP

# Flat roof - fdrhbi08b-01

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

### Performance rating

Fire protection performance	REI	60
maximum span = 5 m; ma Classified by HFA	ximum load E <sub>d,fi</sub> = 3,66 kN∕	m²
Thermal performance	U Diffusion	0.21 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>l</sub> )	48(-3;-8) dB
Assessed by TGM		
Mass per unit area	m	47.00 kg/m <sup>2</sup>
Calculation based on GF		



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. I=without insulation

### 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
	Plastic roofing membrane or					E
	sheet metal roofing			7800		A1
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	fibreboard (MDF)	0.140	11	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≥ 1 m			1000		
50.0	spruce wood cross battens (50/80;a=400)	0.120	50	450	1.600	D
	without insulation					
25.0	gypsum fibre board (2x12,5 mm) or	0.320	21	1000	1.100	A2
25.0	gypsum plaster board type DF (2x12,5 mm)	0.250	10	800	1.050	A2

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

#### Database ecoinvent

Calculated by HFA

# OI3<sub>Kon</sub>

36.0

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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		0.163	0.077	2,62E-6	0.030	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[LM]	[MJ]	[LM]	[LM]	[MJ]
(FIIdSES)						

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