# dataholz.eu

fdrhbi04b-05 8/2/23 Holzforschung Austria HFA, SP

# Flat roof - fdrhbi04b-05

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

#### Performance rating

Fire protection performance	REI	60
maximum span = 5 m; max Classified by HFA	ximum load E <sub>d,fi</sub> = 3,66 kN∕	′m²
Thermal performance	U Diffusion	0.19 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;-7) dB
Assessed by TGM		
Mass per unit area	m	58.40 kg/m <sup>2</sup>

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 per	rformance	Reaction to fire		
			λ	µ min – max	ρ	с	EN
А		Plastic roofing membrane or					E
А		sheet metal roofing			7800		A1
В	24.0	spruce wood closed cladding without spacing of cladding boards	0.120	50	450	1.600	D
С	80.0	spruce wood counter battens (ventilation)	0.120	50	450	1.600	D
D		sarking membrane sd $\leq$ 0,3m			1000		E
Е	22.0	softboard [045; 250] - rigid underlay	0.045	5	250	2.100	E
F	200.0	construction timber (80/; e=800)	0.120	50	450	1.600	D
G	200.0	cellulose fibre [040; E]	0.040	1 - 2	55	2.000	E
Н	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
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 m<sup>2</sup>)

#### Database ecoinvent

### OI3<sub>Kon</sub>

32.6

Calculated by HFA

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Designation: Last updated: Source: Editor: fdrhbi04b-05 8/2/23 Holzforschung Austria HFA, SP

## 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		0.162	0.074	2,67E-6	0.031	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[M]	[LM]	[LM]	[MJ]	[M]
A1 - A3	129.595	796.223	925.818	518.247	25.765	544.012

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