# dataholz.eu

fdrhbi02b-03 8/2/23 Holzforschung Austria HFA, SP

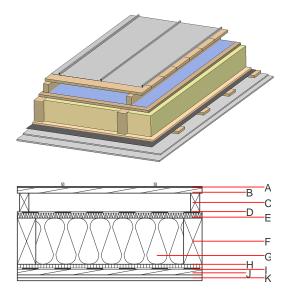
## Flat roof - fdrhbi02b-03

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	0.18 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>I</sub> )	48(-2;-6) dB
Assessed by TGM		
Mass per unit area	m	59.10 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	formance			Reaction to fire
			λ	µ min – max	ρ	с	EN
٩		Plastic roofing membrane or					E
ł		sheet metal roofing			7800		A1
3	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
	22.0	softboard [045; 250] - rigid underlay	0.045	5	250	2.100	E
	200.0	construction timber ( $80/*$ ; e= $800$ )	0.120	50	450	1.600	D
5	200.0	mineral wool [035; 50; <1000°C]	0.035	1	50	1.030	A1
1	16.0	particleboard	0.130	50 - 100	700	1.700	D
		vapour barrier sd≥ 1 m			1000		
	24.0	spruce wood cladding with spacing of cladding boards(24/100); a=400	0.120	50	450	1.600	D
(	25.0	gypsum plaster board type DF (2x12,5 mm) or	0.250	10	800	1.050	A2
<	25.0	gypsum fibre board (2x12,5 mm)	0.320	21	1000	1.100	A2

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

#### Database ecoinvent

Calculated by HFA

OI3<sub>Kon</sub>

64.2

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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		0.266	0.124	4,56E-6	0.045	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	[MJ]	PENRT [MJ]

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