# dataholz.eu

fdrhbi03a-02 8/2/23 Holzforschung Austria HFA, SP

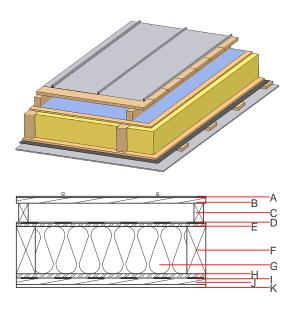
## Flat roof - fdrhbi03a-02

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

#### Performance rating

Fire protection performance	REI	30
maximum span = 5 m; ma Classified by HFA	aximum load $E_{d,fi} = 2,62$ 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>l</sub> )	47(-2;-6) dB
Assessed by TGM		
Mass per unit area	<b>m</b>	46.50 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)

Thicl	kness	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	OSB	0.130	200	600	1.700	D
	240.0	construction timber (80/; e=800)	0.120	50	450	1.600	D
	240.0	mineral wool [040; ≥16; <1000 °C]	0.040	1	16	1.030	A1
	15.0	OSB	0.130	200	600	1.700	D
		vapour barrier sd≥ 11m			1000		
	24.0	spruce wood cladding with spacing of cladding boards(24/100); a=400	0.120	50	450	1.600	D
	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 m<sup>2</sup>)

#### Database ecoinvent

Calculated by HFA

OI3<sub>Kon</sub>

38.2

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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		0.181	0.083	2,91E-6	0.036	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
		TAA11	EN A LI	[MJ]	[MJ]	[MJ]
(Phases)	[MJ]	[MJ]	[MJ]	[[413]	[IND]	[1413]

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