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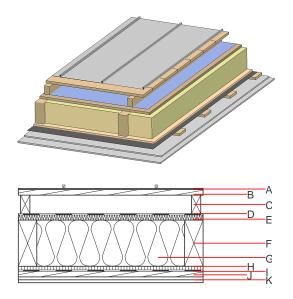
fdrhbi02b-02 8/2/23 Holzforschung Austria HFA, SP

Flat roof - fdrhbi02b-02

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	iximum load E _{d,fi} = 3,66 kN∕	/m²
Thermal performance	U Diffusion	0.17 W∕(m ² K) suitable
Calculated by HFA		
Acoustic performance	R _w (C;C _{tr}) L _{n,w} (C	48(-2;-6) dB
Assessed by TGM		
Mass per unit area	m	55.50 kg/m ²
Calculation based on gyps	sum 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
	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
22.0	softboard [045; 250] - rigid underlay	0.045	5	250	2.100	E
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
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 m²)

Database ecoinvent

OI3_{Kon}

Calculated by HFA

44.1

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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		0.191	0.089	3,25E-6	0.038	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	[MJ]	PENRT [MJ]

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