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fdrhbi04b-00 8/2/23 Holzforschung Austria HFA, SP

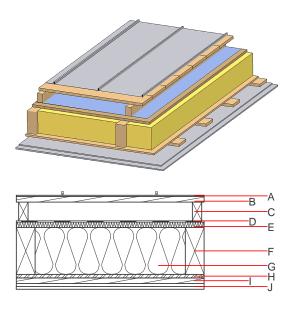
Flat roof - fdrhbi04b-00

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	kimum load E _{d,fi} = 3,66 kN∕	′m²
Thermal performance	U Diffusion	0.19 W∕(m ² K) suitable
Calculated by HFA		
Acoustic performance	R _w (C;C _{tr}) L _{n,w} (C _I)	47(-2;-6) dB
Assessed by TGM		
Mass per unit area	m	51.40 kg/m ²

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 performance				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	
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	
15.0	OSB (sealed with airtight tape)	0.130	200	600	1.700	D	
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}

39.5

Calculated by HFA

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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		0.178	0.083	3.10E-6	0.034	
Lifecucle	PERE	PERM	PERT	PENRE	PENRM	PENRT
Lifecycle						
(Phases)	[LM]	[MJ]	[LM]	[LM]	[MJ]	[MJ]

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