

Flat roof - fdmko01-02

flat roof, solid wood construction, not ventilated, without dry lining, without lining, wooden surface

Performance rating

Fire protection performance REI 30

Classified by HFA

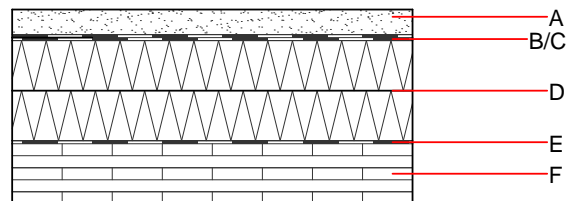
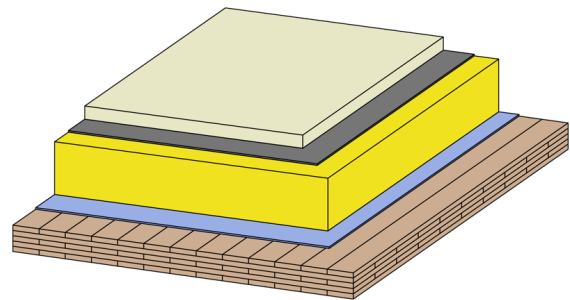
Germany

Load $E_{d,fi}$ according to the German certification document

Thermal performance U Diffusion 0.21 W/(m²K) suitable

Acoustic performance R_w (C;C_{tr}) 43(-2;-7) dB
 $L_{n,w}$ (C_i)

Mass per unit area m 88.50 kg/m²



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 EN
			λ	μ min – max	ρ	c	
A		no additional structure gravel					
B		no additional structure					
C		sealing sheet $s_d \geq 100m$					
D	200.0	mineral wool [040; 130; $\geq 1000^\circ C$] (2*100)	0.040	1	130	1.030	A1
E		sealing sheet e.g. bitumen					
F	125.0	cross laminated timber $\geq 125,0$; at least 5-layers, top layer at least 27,5 mm)	0.130	50	500	1.600	D

Sustainability rating (per m²)

Database ecoinvent

O13_{kon} 101.3
 Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	61.180
Biogenic carbon in kg CO ₂ -e.	kg CO ₂	88.060
Energy use of Primary Energy	MJ	1194.970
Share of renewable PE	%	24.32

Details of sustainability rating

Database ecoinvent

Lifecycle (Phases)	GWP [kg CO ₂ -e.]	AP [kg SO ₂ -e.]	EP [kg PO ₄ -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]
A1 - A3		0.457	0.143	6,47E-6	0.175

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	56.829	855.000	911.829	1093.756	198.054	1291.810

Database GaBi (ÖKOBAUDAT)

Lifecycle (Phases)	GWP [kg CO ₂ -e.]	AP [kg SO ₂ -e.]	EP [kg PO ₄ -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]
A1 - A3		0.296	0.044	4,15E-6	0.028
C1 - C4		0.004	0.008	1,57E-7	0.001
A1 - C4		0.300	0.052	4,31E-6	0.029

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	289.721	1040.824	1328.045	883.615	140.852	1023.769
C1 - C4	0.946	-1036.250	-1035.304	19.526	0.000	19.526
A1 - C4	290.676	4.574	292.750	904.294	140.852	1044.448