

Pitched roof - sdrhzo03a-01

pitched roof, timber frame construction, ventilated, without dry lining, directly, wooden surface

Performance rating

Fire protection performance REI 30

maximum span = 5 m; maximum load $E_{d,fi} = 4,5 \text{ kN/m}^2$
Classified by HFA

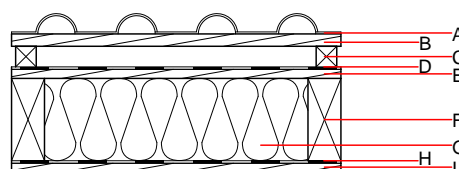
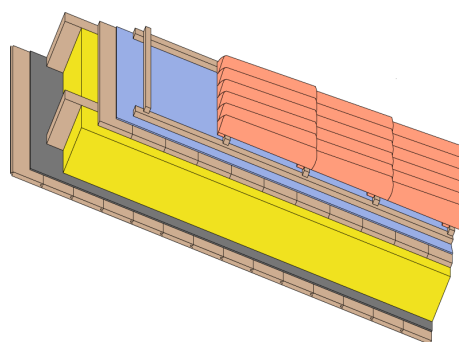
Thermal performance U 0.17 W/(m²K)
Diffusion suitable

Calculated by HFA

Acoustic performance $R_w (C; C_{tr})$ 48(-3;-10) dB
 $L_{n,w} (C_i)$

Assessed by TGM

Mass per unit area m 83.30 kg/m²



Note: The design of the under-roof construction and of the counter-battens 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 EN
			λ	$\mu \text{ min} - \text{max}$	ρ	c	
A		concrete roof tile or tiled roof			2100		A1
B	30.0	spruce wood battens (30/50)	0.120	50	450	1.600	D
C	50.0	spruce wood counter battens (minimum height 50 mm)	0.120	50	450	1.600	D
D		sarking membrane $s_d \leq 0,3\text{m}$			1000		E
E	22.0	planking spruce wood full formwork	0.120	50	450	1.600	D
F	240.0	construction timber (80/...; e=800)	0.120	50	450	1.600	D
G	240.0	mineral wool [038; ≥ 33 ; $\geq 1000^\circ\text{C}$]	0.038	1	33	1.030	A1
H		vapour barrier $s_d \geq 11\text{m}$			1000		
I	19.0	planking profile C	0.120	50	450	1.600	

Sustainability rating (per m²)

Database ecoinvent

013_{Kon} 31.0

Calculated by HFA

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		0.163	0.056	2,10E-6	0.064	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	111.257	615.403	726.660	400.882	10.862	411.744