

Pitched roof - sdrhzi10a-02

pitched roof, timber frame construction, ventilated, with dry lining, directly, other surface

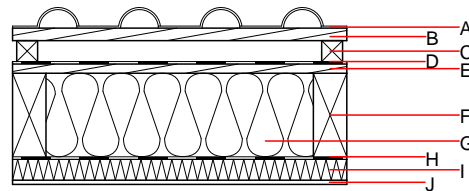
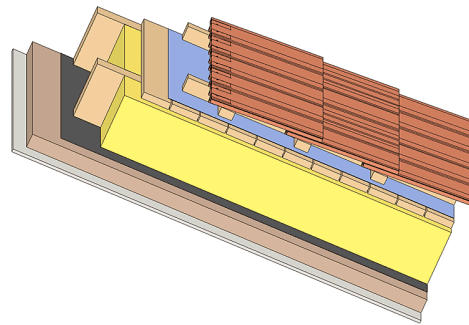
Performance rating

Fire protection performance	REI	60
maximum span = 5 m; maximum load $E_{d,fi} = 1,32 \text{ kN/m}^2$ Classified by HFA		

Thermal performance	U	0.16 $\text{W}/(\text{m}^2\text{K})$
Diffusion		suitable
Calculated by HFA		

Acoustic performance	$R_w (C; C_{tr})$ $L_{n,w} (C_i)$	51 (-3; -9) dB
Assessed by TGM		

Mass per unit area	m	110.70 kg/m^2
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Note: mineral wool

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	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 battens (min. 50 mm)	0.120	50	450	1.600	D
D	sarking membrane $sd \leq 0,3\text{m}$			1000		E
E 24.0	planking spruce wood closed cladding without spacing of cladding boards	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 Klemmplatte KP [038; R=30]	0.038	1	30	1.030	A1
H	vapour barrier $sd \geq 6\text{m}$			1000		
I 50.0	Heraklith BM	0.090	2 - 5	370	2.000	B
J 10.0	plaster	0.700	10	1300	1.000	A1

Sustainability rating (per m^2)

Database ecoinvent

$OI3_{kon}$ 37.1

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		0.176	0.059	2,65E-6	0.063	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	102.785	583.912	686.697	481.376	10.862	492.239