

Pitched roof - sdshzi01a-00

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

Performance rating

Fire protection performance REI 60

Classified by HFA

Thermal performance U Diffusion 0.10 W/(m²K) suitable

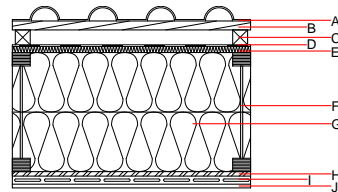
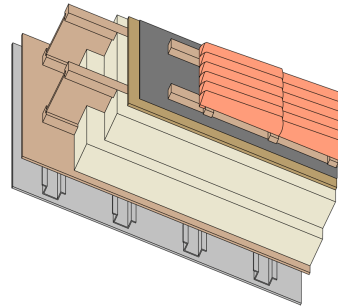
Calculated by HFA

Acoustic performance R_w (C_c;C_{tr}) L_{n,w} (C_i) 46 dB

Assessed by HFA

Mass per unit area m 86.50 kg/m²

Calculation based on gypsum plaster board type DF



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	μ min - max	ρ	c	
A		concrete roof tile				2100	A1
B	30.0	spruce wood	0.120	50	450	1.600	D
C	50.0	spruce wood	0.120	50	450	1.600	D
D		sarking membrane sd ≤ 0,3m				1000	E
E	20.0	softboard [045; 250] - rigid underlay	0.045	5	250	2.100	E
F	400.0	Light composite wood-based beams (I-beams) with solid wood flanges (60/45) and hard board intermediate web (≥ 6,7)	0.400	20 - 30	800	1.700	D
G	400.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	E
H	15.0	OSB	0.130	200	600	1.700	D
I	27.0	metal rail					
J	13.0	gypsum plaster board type DF	0.250	10	800	1.050	A2
J	13.0	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

OI_{3kon} 36.4

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		0.162	0.073	3,24E-6	0.023	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	91.193	613.298	704.491	523.206	26.196	549.402