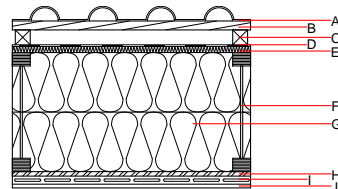
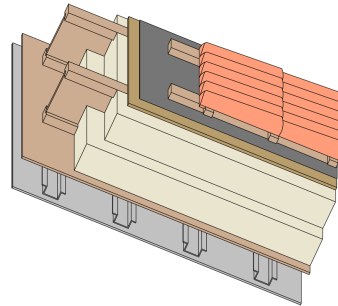


## Pitched roof - sdshzi01a-01

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

### Performance rating

<b>Fire protection performance</b>	REI	60
Classified by HFA		
<b>Thermal performance</b>	U Diffusion	0.10 W/(m <sup>2</sup> K) suitable
Calculated by HFA		
<b>Acoustic performance</b>	R <sub>w</sub> (C <sub>r</sub> ;C <sub>tr</sub> ) L <sub>n,w</sub> (C <sub>i</sub> )	46 dB
Assessed by HFA		
<b>Mass per unit area</b>	m	84.60 kg/m <sup>2</sup>
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	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	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 m<sup>2</sup>)

#### Database ecoinvent

0I3<sub>Kon</sub> 39.9

Calculated by HFA

## Details of sustainability rating

### Database ecoinvent

Lifecycle (Phases)	GWP [kg CO <sub>2</sub> -e.]	AP [kg SO <sub>2</sub> -e.]	EP [kg PO <sub>4</sub> -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.158	0.075	3,64E-6	0.026	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	104.784	714.786	819.569	636.610	56.508	693.118