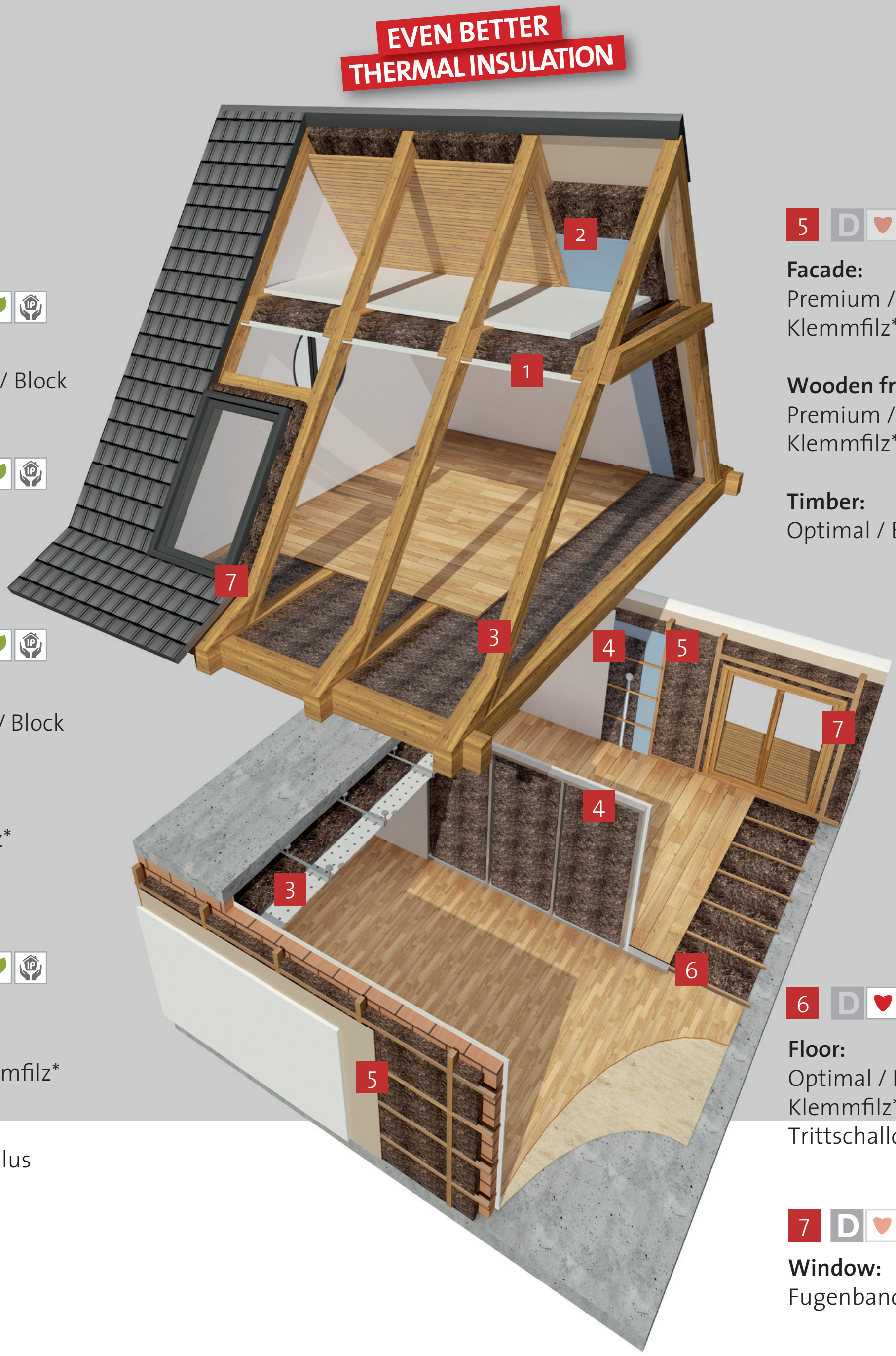
Components



1

Gabled ceiling:
Premium / Optimal / Block
Klemmfilz*

2

Roof:
Premium / Optimal
Klemmfilz*

3

Ceiling:
Premium / Optimal / Block
Klemmfilz*

Acoustic ceiling:
Optimal / Klemmfilz*
Akustik-Aktiv-Filz
Optimal plus

4

Wall:
Premium / Optimal
Optimal plus / Klemmfilz*

Installation level:
Optimal / Optimal plus
Klemmfilz*

5

Facade:
Premium / Optimal
Klemmfilz*

Wooden frame construction:
Premium / Optimal
Klemmfilz*

Timber:
Optimal / Block

6

Floor:
Optimal / Block
Klemmfilz* / Trittschallfilz
Trittschalldämmung

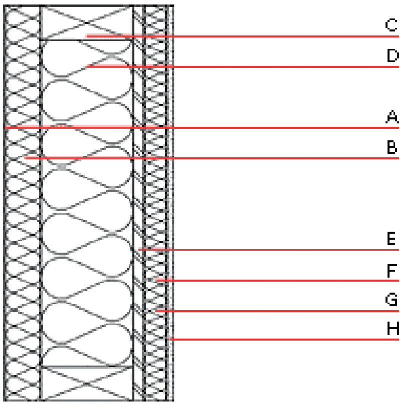
7

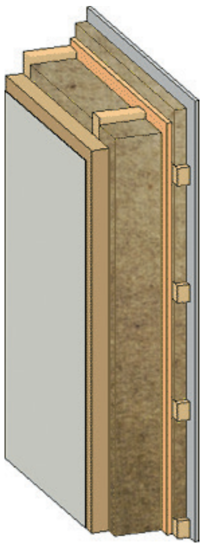
Window:
Fugenband / Loses Wollvlies

* Extraordinary insulation effect and sound absorption

ISOLENAWOLLE
Healthy insulation can naturally do more.

Exterior wall wood frame construction no rear ventilation with technical space, polished





Source: dataholz.com

Structural-physical and ecological evaluation

Fire prevention	REI	60
max. wall height = 3m; max load $E_{d,fi}$ = 19,2 kN/m		
Classification by MA39		
Heat insulation	U [W/m²K]	0,19
Diffusion characteristics	suitable	
Dimensions	$m_{W,B,A}$ [kg/m²]	20,9
Calculation by HFA		
Soundproofing	R_w $(C;C_{tr})$	52 (-3;-11)
	$L_{n,w}$ (C_I)	–
For vertical battens in the installation plane, screwed to the structural wood, the result is R_w $(C; C_{tr})$ = 50 (-3; -11) dB Assessment by MA39		
Ecology	$OI3_{kon}$	12,1
Calculation by IBO		

Building material specifications for construction, layer structure (from exterior to interior, dimensions in mm)

	Thickness	Building material	Heat insulation				Flammability
			λ	μ min-max	p	c	EN
A	7,0	Plaster system	1,000	10 - 35	2000	1,130	A1
B	60,0	Wood fiber insulation board	0,055	5 - 7	200	2,100	E
C	160,0	Construction timber (60/*; e = 625)	0,120	50	450	1,600	D
D	**160,0**	**ISOLENAWOLLE Optimal** *corrected value	**0,0385***	**1**	**18**	**1,760**	**E**
E	18,0	OSB (bonded air-tight)	0,130	200	650	1,700	D
F	40,0	Spruce wood cross battens (a = 400) or mixed battens	0,120	50	450	1,600	D
G	**40,0**	**ISOLENAWOLLE Optimal** *corrected value	**0,0385***	**1**	**18**	**1,760**	**E**
H	12,5	Fire-resistant plasterboard or	0,250	10	800	1,050	A2
H	12,5	Plasterboard	0,320	21	1000	1,100	A2

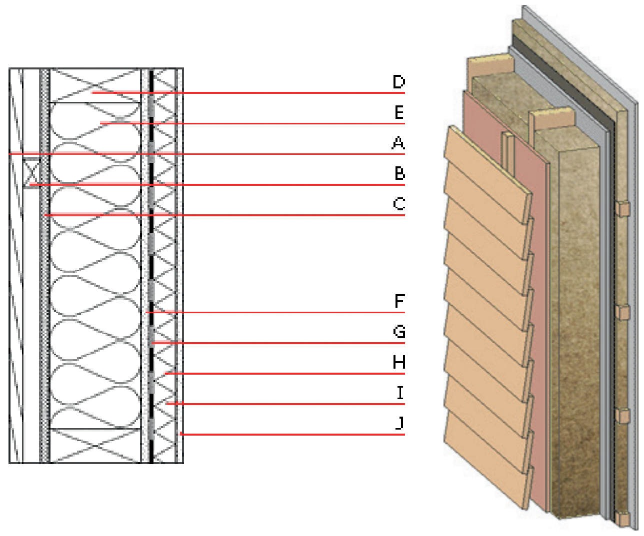
Ecological assessment in detail

GWP	AP	PEI ne	PEI e	EP	POCP
[kg CO_2 eqv.]	[kg CO_2 eqv.]	[MJ]	[MJ]	[kg PO_4 eqv.]	[kg C_2H_4 eqv.]
-28,2	0,236	650,90	861,60	0,033	0,011

Area-related dimensions

m	Calculated with
[kg/m²]	
56,60	Fire-resistant plasterboard

Exterior wall wood frame construction rear ventilation, formed with technical space



Source: dataholz.com

Structural-physical and ecological evaluation

Fire prevention	REI	60
max. wall height = 3m; max. load $E_{d,fi}$ = 19,2 kN/m		
Classification by MA39		
Heat insulation	U [W/m²K]	0,24
Diffusion characteristics	suitable	
Dimensions	$m_{W,B,A}$ [kg/m²]	21,2
Calculation by HFA		
Soundproofing	R_w (C;C_{tr})	50 (-3;-10)
	$L_{n,w}$ (C_I)	–
If the battens in the back-ventilation plane are screwed to the structural wood, and the battens in the insulation plane are vertical and also screwed to the structural wood, then the result is: R_w (C; C_{tr}) = 43 (-1; -5) dB Assessment by MA39		
Ecology	$OI3_{kon}$	-12,8
Calculation by IBO		

Building material specifications for construction, layer structure (from exterior to interior, dimensions in mm)

	Thickness	Building material	Heat insulation				Flammability
			λ	μ min-max	p	c	EN
A	24,0	Larch wood exterior wall cladding	0,150	50	600	1,600	D
B	30,0	Mixed spruce wood battens (30/50; 30/80) - rear ventilation	0,120	50	450	1,600	D
C	15,0	MDF	0,120	11	600	1,700	D
D	160,0	Construction timber (60/*; e = 625)	0,120	50	450	1,600	D
E	**160,0**	**ISOLENAWOLLE Optimal** *corrected value	**0,0385**	**1**	**18**	**1,760**	**E**
F	15,0	Plasterboard	0,320	21	1000	1,100	A2
G		Vapor barrier sd ≥ 1m			1000		
H	40,0	Spruce wood cross battens (a = 400) or mixed battens	0,120	50	450	1,600	D
I	**40,0**	**ISOLENAWOLLE Optimal** *corrected value	**0,0385**	**1**	**18**	**1,760**	**E**
J	12,5	Fire-resistant plasterboard	0,250	10	800	1,050	A2
J	12,5	Plasterboard	0,320	21	1000	1,100	A2

Ecological assessment in detail

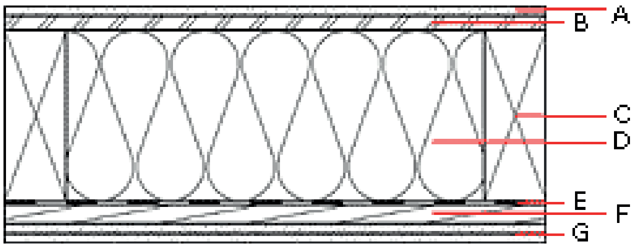
GWP	AP	PEI ne	PEI e	EP	POCP
[kg CO_2 eqv.]	[kg CO_2 eqv.]	[MJ]	[MJ]	[kg PO_4 eqv.]	[kg C_2H_4 eqv.]
-52,5	0,120	486,5	997,0	0,018	0,007

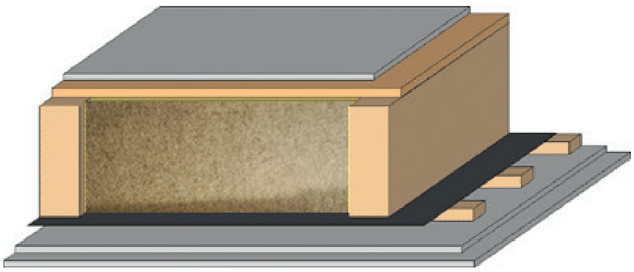
Area-related dimensions

m	Calculated with
[kg/m²]	
47,20	Plasterboard

ISOLENAWOLLE
Healthy insulation can naturally do more.

Ceiling against roof space wood frame construction not suspended





Source: dataholz.com

Structural-physical and ecological evaluation

Fire prevention	REI	60
max. span width = 5m; max. load $E_{d,fi}$ = 3,66 kN/m²		
Classification by IBS		
Heat insulation	U [W/m²K]	0,22
Diffusion characteristics	suitable	
Dimensions	$m_{W,B,A}$ [kg/m²]	27,4
Calculation by HFA		
Soundproofing	R_w (C;C_{tr})	47 (-4;-9)
	$L_{n,w}$ (C_I)	–
Assessment by TGM		
Ecology	$OI3_{kon}$	-10,9
Calculation by IBO		

Building material specifications for construction, layer structure (from exterior to interior, dimensions in mm)

	Thickness	Building material	Heat insulation				Flammability
			λ	µ min-max	p	c	EN
A	12,5	Fire-resistant plasterboard or	0,250	10	800	1,050	A2
A	12,5	Plasterboard	0,320	21	1000	1,100	A2
B	18,0	OSB	0,130	200	650	1,700	D
C	220,0	Spruce wood ceiling joists (80/*;e=625)	0,120	50	450	1,600	D
D	**220,0**	**ISOLENAWOLLE Optimal** *corrected value	**0,0385**	**1**	**18**	**1,720**	**E**
E		Vapor barrier sd ≥ 15m			1000		
F	24,0	Spruce wood open formwork (24/100; a = 400)	0,120	50	450	1,600	D
G	25,0	Fire-resistant plasterboard (2x12,5mm) or	0,250	10	800	1,050	A2
G	25,0	Plasterboard (2x12,5mm)	0,320	21	1000	1,100	A2

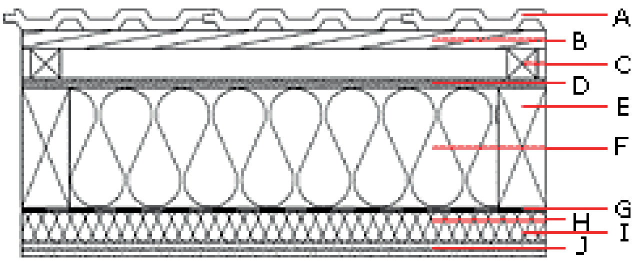
Ecological assessment in detail

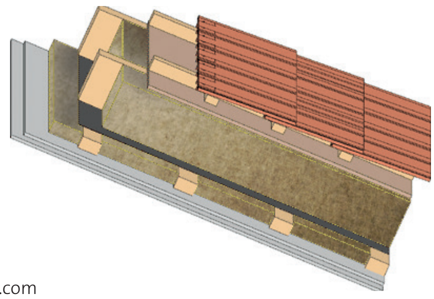
GWP	AP	PEI ne	PEI e	EP	POCP
[kg CO_2 eqv.]	[kg CO_2 eqv.]	[MJ]	[MJ]	[kg PO_4 eqv.]	[kg C_2H_4 eqv.]
-31,4	0,135	379,1	713,3	0,026	0,006

Area-related dimensions

m	Calculated with
[kg/m²]	
62,00	Plasterboard

Pitched roof wood frame construction rear ventilation with technical space, (not suspended)





Source: dataholz.com

Structural-physical and ecological evaluation

Fire prevention	REI	60
max. span width = 5m; max. load $E_{d,fi}$ = 3,66 kN/m²		
Classification by IBS		
Heat insulation	U [W/m²K]	0,20
Diffusion characteristics	suitable	
Dimensions	$m_{W,B,A}$ [kg/m²]	25,4
Calculation by HFA		
Soundproofing	R_w (C;C_{tr})	53 (-4;-10)
	$L_{n,w}$ (C_I)	–
with tile roofing Rw=51 (-4; -10) dB		
Evaluation by TGM		
Ecology	$OI3_{kon}$	-9,8
Calculation by IBO		

Building material specifications for construction, layer structure (from exterior to interior, dimensions in mm)

	Thickness	Building material	Heat insulation				Flammability
			λ	µ min-max	p	c	EN
A		Concrete roofing tile or brick roofing tile			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 50mm)	0,120	50	450	1,600	D
D	15,0	MDF	0,120	11	600	1,700	D
E	200,0	Construction timber (80*; e = 800)	0,120	50	450	1,600	D
F	**200,0**	**ISOLENAWOLLE Optimal** *corrected value	**0,0385***	**1**	**18**	**1,760**	**E**
G		Vapor barrier sd ≥ 1m			1000		
H	50,0	Spruce wood cross battens (50/80; a = 400)	0,120	50	450	1,600	D
I	**50,0**	**ISOLENAWOLLE Optimal** *corrected value	**0,0385***	**1**	**18**	**1,760**	**E**
J	25,0	Fire-resistant plasterboard (2x12,5mm) or	0,250	10	800	1,050	A2
J	25,0	Plasterboard (2x12,5mm)	0,320	21	1000	1,100	A2

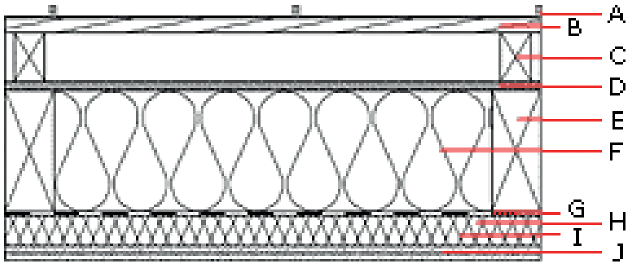
Ecological assessment in detail

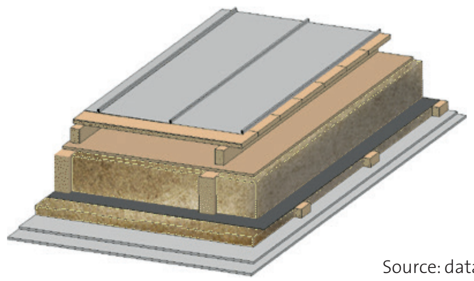
GWP	AP	PEI ne	PEI e	EP	POCP
[kg CO_2 eqv.]	[kg CO_2 eqv.]	[MJ]	[MJ]	[kg PO_4 eqv.]	[kg C_2H_4 eqv.]
-30,0	0,115	484,20	788,8	0,018	0,007

Area-related dimensions

m	Calculated with
47,6 kg/m²	Fire-resistant plasterboard

Flat roof wood frame construction rear ventilation with technical space, (not suspended)





Source: dataholz.com

Structural-physical and ecological evaluation

Fire prevention	REI	60
max. span width = 5m; max. load $E_{d,fi}$ = 3,66 kN/m² Classification by IBS		
Heat insulation	U [W/m²K]	0,20
Diffusion characteristics	suitable	
Dimensions	$m_{W,B,A}$ [kg/m²]	27,1
Calculation by HFA		
Soundproofing	R_w (C;C_{tr})	50 (-4;-9)
	$L_{n,w}$ (C_I)	–
Assessment by TGM		
Ecology	$OI3_{kon}$	-4,1
Calculation by IBO		

Building material specifications for construction, layer structure (from exterior to interior, dimensions in mm)

	Thickness	Building material	Heat insulation				Flammability
			λ	μ min-max	p	c	EN
A		Plastic roofing or			7800		E
		sheet metal roofing d≥0,4			7800		A1
B	24,0	Spruce wood full formwork	0,120	50	450	1,600	D
C	80,0	Spruce wood counter battens (rear ventilation)	0,120	50	450	1,600	D
D	15,0	MDF	0,120	11	600	1,700	D
D		Roofing underlay sd≤0,3m			1000		E
E	200,0	Construction timber (80/*; e = 800)	0,120	50	450	1,600	D
F	**200,0**	**ISOLENAWOLLE Optimal** *corrected value	**0,0385***	**1**	**18**	**1,760**	**E**
G		Vapor barrier sd ≥ 1m			1000		
H	50,0	Spruce wood cross battens (50/80; a = 400)	0,120	50	450	1,600	D
I	**50,0**	**ISOLENAWOLLE Optimal** *corrected value	**0,0385***	**1**	**18**	**1,760**	**E**
J	25,0	Plasterboard (2x12,5mm) or	0,320	21	1000	1,100	A2
J		Fire-resistant plasterboard (2x12,5mm)	0,250	10	800	1,050	A2

Ecological assessment in detail

GWP	AP	PEI ne	PEI e	EP	POCP
[kg CO_2 eqv.]	[kg CO_2 eqv.]	[MJ]	[MJ]	[kg PO_4 eqv.]	[kg C_2H_4 eqv.]
-54,4	0,178	527,4	1051,9	0,022	0,010

Area-related dimensions

m	Calculated with
47,6 kg/m²	Plasterboard