Floor towards attic (uninhabitable) - ddrxxa01a-06
floor towards attic (uninhabitable), timber frame construction, suspended, dry, other surface

Performance rating

Fire protection performance   REI   30

maximum span = 5 m; maximum load $E_{d,fi}$ = 3,5 kN/m²
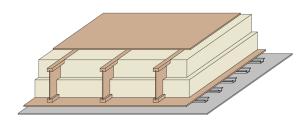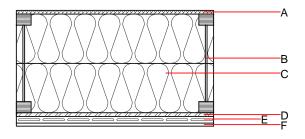Classified by HFA

Germany

F30 (from below/from above)

Load $E_{d,fi}$ according to the German certification document

Corresponding proof: DIN 4102-4:2016-05, Tabelle 10.12, Zeile 1 in conjunction with 10.7.5 (to attic no floating screed necessary)

Thermal performance	U	0.19 W/(m²K)
	Diffusion	suitable

Calculated by TUM

Acoustic performance	R_w ($C;C_{tr}$)	43(-3;-11) dB
	$L_{n,w}$ (C_l)	75(0)

Assessed by Müller-BBM

Mass per unit area	m	50.70 kg/m²

Calculation based on gypsum plaster board type DF

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
			λ	μ min − max	ρ	c	EN
A	16.0	fibreboard (MDF)	0.140	11	600	1.700	D
B	220.0	construction timber	0.120	50	450	1.600	D
C	220.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
D	15.0	OSB	0.130	200	600	1.700	D
E	27.0	metal rail					
F	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
F	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

OI3$_{Kon}$	22.6

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	45.230
Biogenic carbon in kg CO₂-e.	kg CO_2	65.310
Energy use of Primary Energy	MJ	1060.580
Share of renewable PE	%	34.71

Calculated by TUM

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dataholz.eu

Designation: ddrxxa01a-06
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, PLB

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Details of sustainability rating

Database ecoinvent

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO_2-e.]	[kg SO_2-e.]	[kg PO_4-e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.108	0.048	1,80E-6	0.019	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	95.805	639.497	735.301	389.119	45.500	434.619

Database GaBi (ÖKOBAUDAT)

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO_2-e.]	[kg SO_2-e.]	[kg PO_4-e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.124	0.026	1,55E-6	0.034	
C1 - C4		0.002	0.000	7,55E-8	0.000	
A1 - C4		0.127	0.026	1,63E-6	0.034	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	365.941	1067.588	1434.975	664.969	57.339	722.444
C1 - C4	1.834	-1063.243	-1061.410	22.225	-56.397	-34.172
A1 - C4	368.154	4.604	374.204	692.423	0.994	693.553