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Floor towards attic (uninhabitable) - ddmxxi01a-02

floor towards attic (uninhabitable), solid wood construction, not suspended, dry, other surface

Performance rating

Fire protection performance   **REI**   30

maximum span = 5 m; maximum load $E_{d,fi}$ = 0,6 kN/m²
Classified by HFA

Germany

REI30

Load $E_{d,fi}$ according to the German certification document
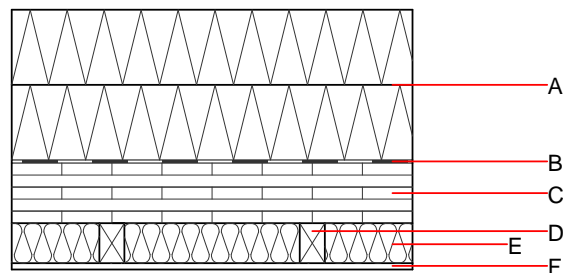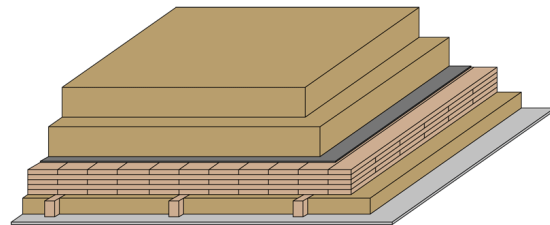
Corresponding proof: manufacturer-specific

Thermal performance	**U**	0.09 W/(m²K)
	Diffusion	suitable
Calculated by TUM		

Acoustic performance	R_w (C;C$_{tr}$)	44(-2;-7) dB
	$L_{n,w}$ (C$_I$)	
Assessed by Müller-BBM		

Mass per unit area	**m**	115.60 kg/m²

Note: A: pressure-resistant

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	300.0	mineral wool [040; 130]	0.040	1	130	1.030	
B		foil (air tight)					
C	125.0	cross laminated timber ≥ 125mm; 5-ply at least, surface layer at least 27,5	0.130	50	500	1.600	D
D	80.0	spruce wood battens (50/80; e=400)	0.120	50	450	1.600	D
E	80.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
F	16.0	3-ply solid wood panel	0.110	50	400	2.500	D

Sustainability rating (per m²)

Database ecoinvent

OI3$_{Kon}$	130.0
Calculated by HFA	

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	80.620
Biogenic carbon in kg CO$_2$-e.	kg CO$_2$	115.960
Energy use of Primary Energy	MJ	1500.420
Share of renewable PE	%	28.90
Calculated by TUM		

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Designation: ddmxxi01a-02
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		0.633	0.194	5,74E-6	0.251	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	153.708	1106.311	1260.020	1394.621	43.205	1437.826

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		0.428	0.065	5,23E-6	0.040	
C1 - C4		0.006	0.012	2,00E-7	0.002	
A1 - C4		0.435	0.077	5,44E-6	0.042	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	431.910	1474.447	1902.577	1033.819	88.021	1121.174
C1 - C4	1.681	-1467.643	-1465.962	31.263	-14.168	17.095
A1 - C4	433.603	6.803	436.626	1066.813	73.853	1140.001

dataholz.eu – Catalogue of timber building materials, components and component connections reviewed to consider thermal, acoustic, fire performance requirements and ecological drivers for timber construction released by accredited testing institutes.
These datasheets will generally be accepted as proofs of compliance by building authorities.

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