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Intermediate floor - gdrnxa10b-05
intermediate floor, timber frame construction, suspended, wet, without filling, other surface

Performance rating

Fire protection performance REI 60

maximum span = 5 m; maximum load $E_{d,fi}$ = 3,66 kN/m² (without floor construction, with ceiling beam 80/200)
Classified by HFA

Germany

F60

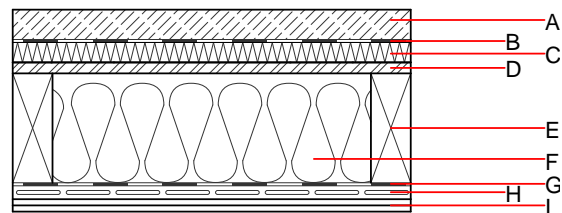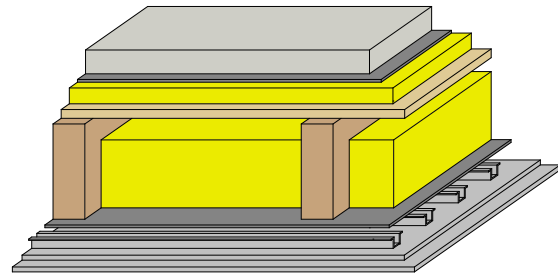Load $E_{d,fi}$ according to the German certification document

Corresponding proof: DIN 4102-4:2016-05, Tabelle 10.12, Zeile 4

Thermal performance	U	
	Diffusion	

Acoustic performance	R_w (C;C_{tr})	74(-1;-6) dB
	$L_{n,w}$ (C_I)	54(2)
Assessed by Müller-BBM		

Mass per unit area	m	191.70 kg/m²

A
B
C
D
E
F
G
H
I

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	60.0	anhydrite screed or cement screed	0.700	10	2200	1.300	A1
B	0.2	plastic separation layer	0.200	100000	1400	1.400	E
C	40.0	impact sound absorbing subflooring MW [s'=16 MN/m³]	0.035	1		1.030	A1
D	22.0	OSB	0.130	200	600	1.700	D
E	240.0	construction timber (80/..; e=625)	0.120	50	450	1.600	D
F	200.0	mineral wool [040; 11; <1000°C]	0.040	1	11	1.030	A1
G	0.2	trickling protection					E
H	27.0	resilient channel	0.156				
I	36.0	gypsum plaster board type DF (2x...mm)	0.250	10	800	1.050	A2

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$	48.4
Calculated by HFA	

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	24.490
Biogenic carbon in kg CO_2-e.	kg CO_2	36.880
Energy use of Primary Energy	MJ	764.390
Share of renewable PE	%	18.35
Calculated by TUM		

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Designation: gdrnxa10b-05
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

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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		0.191	0.083	3,07E-6	0.047	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	117.392	466.453	583.845	649.364	23.545	672.908

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		0.173	0.026	9,16E-7	0.026	
C1 - C4		0.012	0.005	9,40E-8	0.002	
A1 - C4		0.194	0.033	1,03E-6	0.027	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	138.176	435.483	574.575	592.434	28.677	621.222
C1 - C4	0.915	-423.099	-420.818	14.574	-9.389	23.905
A1 - C4	140.249	12.901	156.015	624.136	19.440	672.175

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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