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Intermediate floor - gdrtxn04a-01

intermediate floor, timber frame construction, directly, dry, with filling, other surface

Performance rating

Fire protection	REI	30
performance		
with planking 19 mm (without floor constru Classified by HFA	n; maximum spar uction, with ceilir	n = 5 m; maximum load $E_{d,fi}$ = 4,5 kN/m ² ng beam 80/220)
Germany		
F30		

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

Corresponding proof: DIN 4102-4:2016-05, Tabelle 10.12, Zeile 1

Thermal performance	U Diffusion	suitable
Acoustic performance	R _w (C;C _{tr}) L _{n,w} (C _l)	57(-6;-13) dB 65(3)
Assessed by Müller-BBM		
Mass per unit area	m	120.30 kg/m ²



gdrtxn04a-01

Holzforschung Austria

8/2/23

HFA, SP



Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

	Thickness	Building material	Thermal per	Reaction to fire			
			λ	µ min – max	ρ	с	EN
А	25.0	dry screed	0.210	8	900	1.050	A1
В	40.0		0.040	1	180	1.030	A1
С	30.0	fill (m' ca. 45 kg/m²)	0.700	1	1800	1.000	A1
D	0.2	trickling protection					E
Е	16.0	OSB	0.130	200	600	1.700	D
F	220.0	construction timber (80/; e=625)	0.120	50	450	1.600	D
G	100.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	E
Н	16.0	spruce wood tongeue and groove planking	0.120	50	450	1.600	D
I	9.5	gypsum plaster board type A	0.250	4 - 10	680	1.050	A2

Sustainability rating (per m²)

Database ecoinvent		Database GaBi (ÖKOBAUDAT)				
OI3 _{Kon}	24.4	Built-in renewable materials	kg	36.910		
Calculated by HEA		Biogenic carbon in kg CO ₂ -e.	kg CO ₂	53.570		
carcalacca 2, init		Energy use of Primary Energy	MJ	656.400		
		Share of renewable PE	%	25.16		
		Calculated by TUM				

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Designation: Last updated: Source: Editor: gdrtxn04a-01 8/2/23 Holzforschung Austria HFA, SP

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		0.126	0.045	1,93E-6	0.038	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[M]	[MJ]	[M]	[M]	[MJ]	[M]
A1 - A3	110.924	574.390	685.314	370.540	16.350	386.890

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		0.106	0.017	8,75E-7	0.020	
C1 - C4		0.012	0.006	8,18E-8	0.001	
A1 - C4		0.119	0.024	9,63E-7	0.021	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[M]	[LM]	[MJ]	[MJ]
A1 - A3	161.926	618.418	782.290	455.916	41.699	497.751
C1 - C4	2.927	-540.317	-537.391	30.759	-6.888	23.871
A1 - C4	165.168	78.360	245.474	491.236	34.853	526.226