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gdrnxa10b-02 8/2/23 Holzforschung Austria HFA, SP

Intermediate floor - gdrnxa10b-02

intermediate floor, timber frame construction, suspended, wet, without filling, other surface

Performance rating

Fire protection performance	REI	60						
naximum span = 5 m; maximum load $E_{d,fi}$ = 3,66 kN/m² (without floor onstruction, with ceiling beam 80/200) ilassified by HFA								
Germany								
F60								
Load $E_{d,fi}$ according to the	oad 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})	73(-1;-6) dB						

 $L_{n,w}$ (C_I)

m

Mass per unit area

Assessed by Müller-BBM

186.20 kg/m²

51(2)





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	60.0	anhydrite screed or cement screed	0.700	10	2200	1.300	A1
В	0.2	plastic separation layer	0.200	100000	1400	1.400	E
С	40.0	impact sound absorbing subflooring MW [s' =7 $\rm MN/m^2]$	0.033	1	30	0.030	A1
D	22.0	OSB	0.130	200	600	1.700	D
Е	240.0	construction timber (80/; e=625)	0.120	50	450	1.600	D
F	200.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
G	0.2	trickling protection					E
Н	27.0	resilient channel	0.156				
I	25.0	gypsum plaster board type DF (2xmm)	0.250	10	800	1.050	A2

Sustainability rating (per m²)

Database	ecoinvent	

48.2 34.440 OI3_{Kon} **Built-in renewable materials** kg Biogenic carbon in kg CO₂-e. kg CO₂ 51.130 Calculated by HFA Energy use of Primary Energy 1147.230 MJ Share of renewable PE % 29.31 Calculated by TUM

Database GaBi (ÖKOBAUDAT)

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Designation: Last updated: Source: Editor: gdrnxa10b-02 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		0.188	0.091	3,46E-6	0.033	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[M]	[M]	[M]	[LM]	[MJ]	[MJ]
A1 - A3	131.066	609.464	740.531	702.433	37.054	739.487

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		0.181	0.031	7,87E-7	0.035	
C1 - C4		0.011	0.003	7,32E-8	0.001	
A1 - C4		0.198	0.036	8,75E-7	0.036	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[LM]	[MJ]	[LM]
A1 - A3	333.518	891.583	1226.019	776.451	58.530	835.092
C1 - C4	1.944	-880.272	-876.962	23.864	-41.386	1.198
A1 - C4	336.222	11.829	350.916	811.004	17.248	856.851