Intermediate floor - gdrtxn04a-05
intermediate floor, timber frame construction, directly, dry, with filling, Gipsplatte

Performance rating

Fire protection performance REI 30

with planking 19 mm; maximum span = 5 m; maximum load $E_{d,fi}$ = 4,5 kN/m²
(without floor construction, with ceiling beam 80/220)
Classified by HFA

Germany

F30

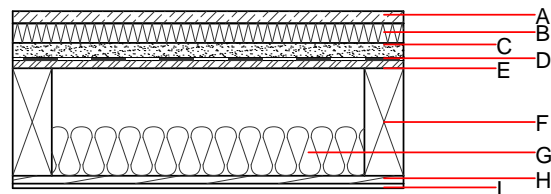Load $E_{d,fi}$ according to the German certification document

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

Thermal performance	U	
	Diffusion	suitable

Acoustic performance	R_w (C;C_{tr})	58(-6;-13) dB
	$L_{n,w}$ (C_I)	64(3)
Assessed by Müller-BBM		

Mass per unit area	m	121.00 kg/m²

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	25.0	dry screed	0.210	8	900	1.050	A1
B	40.0	impact sound absorbing subflooring [040; s'<40 MN/m³]	0.040	1	180	1.030	A1
C	30.0	fill (m' ca. 45 kg/m²)	0.700	1	1800	1.000	A1
D	0.2	trickling protection					E
E	16.0	OSB	0.130	200	600	1.700	D
F	240.0	construction timber (80/..; e=625)	0.120	50	450	1.600	D
G	100.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
H	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

OI3$_{Kon}$	25.5
Calculated by HFA	

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	37.300
Biogenic carbon in kg CO₂-e.	kg CO_2	55.170
Energy use of Primary Energy	MJ	897.040
Share of renewable PE	%	29.54
Calculated by TUM		

dataholz.eu

Designation: gdrtxn04a-05
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

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Details of sustainability rating

Database ecoinvent

Lifecycle (Phases)	GWP [kg CO$_2$-e.]	AP [kg SO$_2$-e.]	EP [kg PO$_4$-e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.128	0.047	2,06E-6	0.040	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	118.262	623.400	741.662	403.770	23.104	426.874

Database GaBi (ÖKOBAUDAT)

Lifecycle (Phases)	GWP [kg CO$_2$-e.]	AP [kg SO$_2$-e.]	EP [kg PO$_4$-e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.128	0.022	9,60E-7	0.026	
C1 - C4		0.011	0.003	7,53E-8	0.001	
A1 - C4		0.140	0.026	1,04E-6	0.027	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	261.233	788.542	1051.804	592.062	57.136	649.346
C1 - C4	3.452	-782.462	-779.010	35.417	-22.324	13.093
A1 - C4	265.001	6.339	273.369	632.040	34.853	667.042

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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