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Intermediate floor - gdrnxa05a-13

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

Performance rating

Fire protection performance	REI	30

maximum span = 5 m; maximum load $E_{d,fi}$ = 2,62 kN/m² (without floor construction and 12mm OSB; with ceiling beam 60/200)
Classified by HFA
Classified by HFA

Germany

F30

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

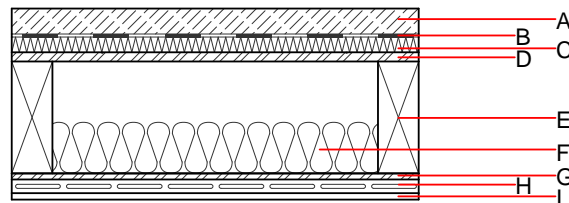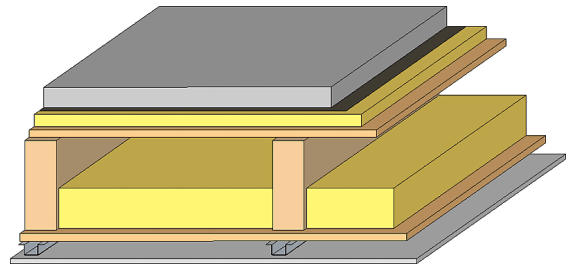Corresponding proof: DIN 4102-4:2016-05, Tabelle 10.12, Zeile 1

Thermal performance	U	
	Diffusion	suitable

Acoustic performance	R_w (C;C_{tr})	59(-1;-7) dB
	$L_{n,w}$ (C_I)	60(0)

Assessed by Müller-BBM

Mass per unit area	m	159.30 kg/m²

Calculation based on gypsum plaster board type DF

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	50.0	anhydrite screed	0.700	10	2200	1.300	A1
B		plastic separation layer	0.200	100000	1400	1.400	E
C	30.0	impact sound absorbing subflooring MW-T	0.035	1	68	1.030	A1
D	18.0	OSB	0.130	200	600	1.700	D
E	240.0	construction timber (80/..; e=625)	0.120	50	450	1.600	D
F	100.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
G	12.0	OSB	0.130	200	600	1.700	D
H	27.0	resilient channel					
I	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
I	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

OI3$_{Kon}$	38.2

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	37.940
Biogenic carbon in kg CO_2-e.	kg CO_2	56.780
Energy use of Primary Energy	MJ	903.340
Share of renewable PE	%	27.58

Calculated by TUM

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These datasheets will generally be accepted as proofs of compliance by building authorities.

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Designation: gdrnxa05a-13
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, PLB

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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		0.159	0.076	2,74E-6	0.030	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	131.664	616.099	747.764	572.535	32.259	604.794

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		0.149	0.024	7,98E-7	0.034	
C1 - C4		0.009	0.002	6,03E-8	0.001	
A1 - C4		0.162	0.027	8,66E-7	0.034	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	247.226	798.791	1047.247	633.617	42.536	676.301
C1 - C4	1.543	-792.867	-790.185	15.168	-28.223	2.544
A1 - C4	249.150	6.184	258.185	654.186	14.364	692.439

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