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Intermediate floor - gdrnxa05b-13
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 and 12mm OSB; with ceiling beam 80/200)
Classified by HFA
Classified by HFA

Germany

F60

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

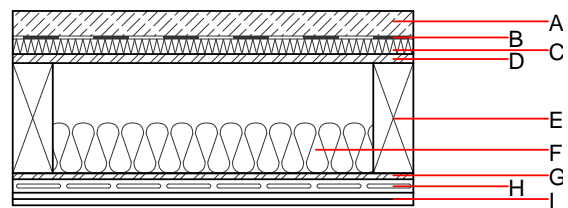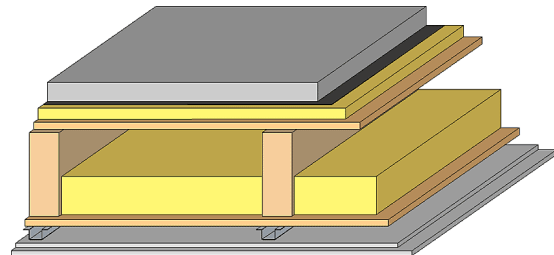Corresponding proof: DIN 4102-4:2016-05, Tabelle 10.12, Zeile 4

Thermal performance	U	
	Diffusion	suitable

Acoustic performance	R_w (C;C_{tr})	58(-1;-7) dB
	$L_{n,w}$ (C_I)	60(0)

Assessed by Müller-BBM

Mass per unit area	m	171.90 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 or cement 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	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	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	25.0	gypsum plaster board type DF (2x12,5 mm) or	0.250	10	800	1.050	A2
I	25.0	gypsum fibre board (2x12,5 mm)	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$	41.5

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	40.340
Biogenic carbon in kg CO_2-e.	kg CO_2	60.490
Energy use of Primary Energy	MJ	986.650
Share of renewable PE	%	26.69

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: gdrnxa05b-13
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, PLB

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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		0.169	0.081	3,11E-6	0.031	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	141.561	655.170	796.731	630.461	35.150	665.611

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		0.159	0.026	8,24E-7	0.037	
C1 - C4		0.010	0.003	8,07E-8	0.001	
A1 - C4		0.174	0.030	9,20E-7	0.038	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	260.888	845.450	1107.568	694.774	45.163	740.085
C1 - C4	1.675	-834.352	-831.539	17.926	-29.909	3.617
A1 - C4	263.322	11.617	277.791	723.331	15.358	762.577

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