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Designation: gdrnxa10b-00
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

Intermediate floor - gdrnxa10b-00

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, with ceiling beam 80/200)
Classified by HFA

Germany

F60

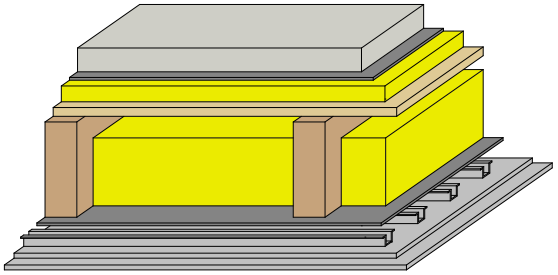
Load $E_{d,fi}$ according to the German certification document

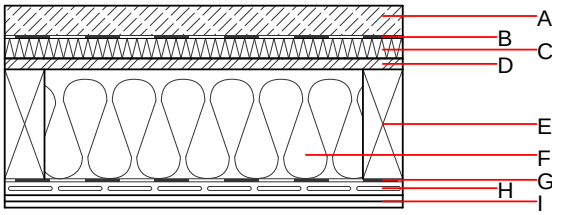
Corresponding proof: DIN 4102-4:2016-05, Tabelle 10.12, Zeile 4

Thermal performance	**U**	
	Diffusion	
Acoustic performance	**R_w (C_i;C_{tr})**	73(-1;-6) dB
	$L_{n,w}$ (C_I)	51(2)

Assessed by Müller-BBM

Mass per unit area	**m**	179.10 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	60.0	anhydrite screed or cement screed	0.700	10	2200	1.300	A1
B	0.2	plastic separation layer	0.200	100000	1400	1.400	E
C	40.0	impact sound absorbing subflooring MW [s' =7 MN/m²]	0.033	1	30	0.030	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	mineral wool [040; 11; <1000°C]	0.040	1	11	1.030	A1
G	0.2	trickling protection					E
H	27.0	resilient channel	0.156				
I	25.0	gypsum plaster board type DF (2x...mm)	0.250	10	800	1.050	A2

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$	44.8

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	**kg**	24.490
Biogenic carbon in kg CO_2-e.	**kg CO_2**	36.880
Energy use of Primary Energy	**MJ**	676.850
Share of renewable PE	**%**	19.07

Calculated by TUM

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		0.173	0.084	3,12E-6	0.030	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	116.963	466.453	583.416	631.020	23.545	654.564

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		0.151	0.022	7,77E-7	0.025	
C1 - C4		0.011	0.004	7,19E-8	0.001	
A1 - C4		0.168	0.028	8,64E-7	0.025	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	127.486	434.946	563.349	525.455	30.970	556.536
C1 - C4	0.842	-423.099	-420.890	11.093	-9.389	20.424
A1 - C4	129.091	12.365	144.321	547.759	21.685	598.043