Intermediate floor - gdmnxn03-00

intermediate floor, solid wood construction, without lining, wet, with filling, wooden surface

Performance rating

Fire protection performance	**REI**	60

maximum span = 5 m; maximum load $E_{d,fi}$ = 5 kN/m²
Classified by HFA

Germany

REI60

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

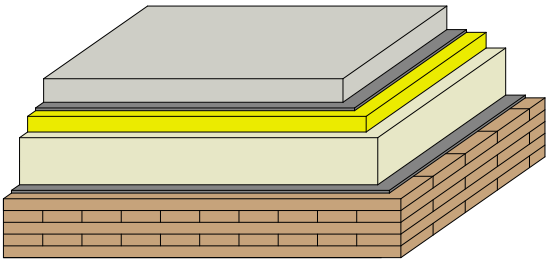
Corresponding proof: manufacturer-specific

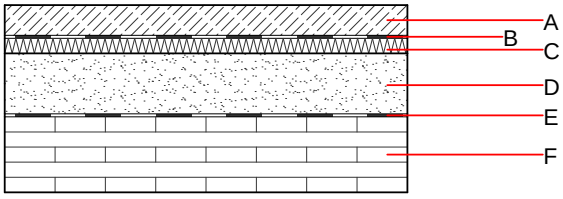
Thermal performance	**U**	
	Diffusion	suitable

Acoustic performance	**R_w ($C_;C_{tr}$)**	74(-2;-8) dB
	$L_{n,w}$ (C_I)	45(-1)

Assessed by Müller-BBM

Mass per unit area	**m**	409.00 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	60.0	cement screed	1.330	50 - 100	2000	1.080	A1
B	0.2	plastic separation layer	0.200	100000	1400	1.400	E
C	40.0	impact sound absorbing subflooring MW-T [s'=10 MN/m³]	0.035	1	68	1.030	A1
D	120.0	elastic bonded fill elastic bonded, m' = 180 kg/m²	0.700	1	1500	1.000	A1
E	0.2	trickling protection					E
F	140.0	cross laminated timber	0.130	50	500	1.600	D

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$	53.2

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	**kg**	68.520
Biogenic carbon in kg CO_2-e.	**kg CO_2**	98.630
Energy use of Primary Energy	**MJ**	1049.610
Share of renewable PE	**%**	29.70

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		0.244	0.111	4,04E-6	0.063	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	58.065	957.600	1015.665	812.618	31.697	844.315

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		0.158	0.027	3,72E-6	0.022	
C1 - C4		0.033	0.006	1,69E-7	0.003	
A1 - C4		0.194	0.034	3,89E-6	0.024	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	305.272	1161.515	1463.987	671.184	52.364	722.765
C1 - C4	6.443	-1160.600	-1152.789	66.483	0.000	85.203
A1 - C4	311.717	0.915	311.780	737.898	52.364	817.967