

Intermediate floor - gdmtn01-00

intermediate floor, solid wood construction, without lining, dry, 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

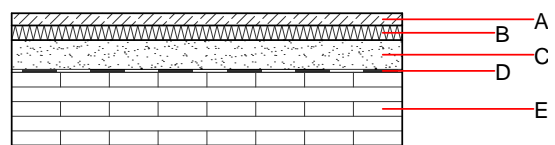
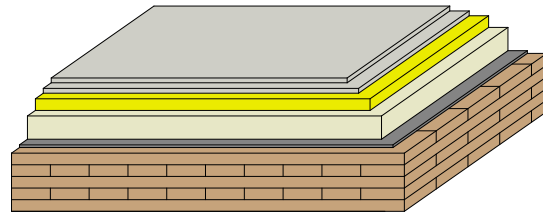
Corresponding proof: manufacturer-specific

Thermal performance U Diffusion suitable

Acoustic performance R_w (C;C_{tr}) 62(-5;-13) dB
 $L_{n,w}$ (C_i) 50(-1)

Assessed by Müller-BBM

Mass per unit area m 202.50 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 EN
			λ	μ min – max	ρ	c	
A	25.0	dry screed	0.210	8	900	1.050	A1
B	30.0	impact sound absorbing subflooring MW-T [$s' = 40MN/m^2$]	0.040	1	160	0.840	A2
C	60.0	elastic bonded fill (m ³ approx. 90 kg/m ³) elastic bonded, m ³ = 90 kg/m ³	0.700	1	1500	1.000	A1
D	0.2	trickling protection					E
E	140.0	cross laminated timber	0.130	50	500	1.600	D

Sustainability rating (per m²)

Database ecoinvent

O13_{kon} 41.4

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials kg 68.520
Biogenic carbon in kg CO₂-e. kg CO₂ 98.630
Energy use of Primary Energy MJ 967.990
Share of renewable PE % 31.21

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		0.217	0.079	3,37E-6	0.069	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	43.510	957.600	1001.110	649.662	27.875	677.538

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		0.127	0.023	3,67E-6	0.020	
C1 - C4		0.016	0.004	1,68E-7	0.001	
A1 - C4		0.143	0.026	3,83E-6	0.022	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	297.826	1161.286	1456.312	618.702	42.774	660.692
C1 - C4	4.314	-1160.600	-1156.286	46.970	0.000	46.970
A1 - C4	302.141	0.686	300.027	665.844	42.774	707.835