

Intermediate floor - gdsnxx04-00

intermediate floor, exposed beams, without lining, wet, with filling, wooden surface

Performance rating

Fire protection performance REI 30

maximum span = 5 m; maximum load $E_{d,fi}$ = 5,5 kN/m² (without floor construction; with exposed beams 180/240)

Classified by IBS
 Classified by HFA

Germany

F30

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

Corresponding proof: DIN 4102-4:2016-05, Tabelle 10.16, Zeile 1

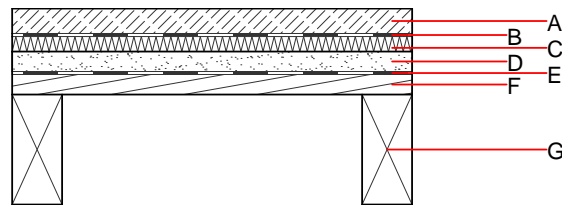
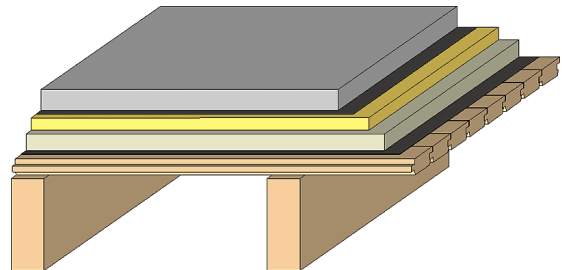
Thermal performance U Diffusion 0.65 W/(m²K) suitable

Calculated by HFA

Acoustic performance R_w (C₁;C_{1T}) 66(-1;-7) dB
 $L_{n,w}$ (C₁) 58(-4)

Assessed by TGM
 Assessed by Müller-BBM

Mass per unit area m 201.00 kg/m²



Note: [0,035]; e=625

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	50.0	cement screed	1.330	50 - 100	2000	1.080	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	40.0	fill	0.700	1	1800	1.000	A1
E		trickling protection					E
F	40.0	planking spruce wood tongue and groove fire resistant planking	0.120	50	450	1.600	D
G		construction timber floor joists (in acc. with structural design)	0.120	50	450	1.600	D

Sustainability rating (per m²)

Database ecoinvent

O13_{kon} 23.6

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials kg 33.260
 Biogenic carbon in kg CO₂-e. kg CO₂ 48.590
 Energy use of Primary Energy MJ 461.460
 Share of renewable PE % 31.95

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		0.109	0.055	1.68E-6	0.024	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	104.587	484.789	589.376	359.773	7.645	367.418

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		0.096	0.015	8.91E-7	0.011	
C1 - C4		0.016	0.004	8.37E-8	0.002	
A1 - C4		0.115	0.020	9.75E-7	0.012	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	145.103	575.356	720.386	288.470	41.926	330.533
C1 - C4	2.310	-574.526	-571.076	25.340	-0.146	40.794
A1 - C4	147.415	0.830	149.796	314.041	41.780	379.698