

Intermediate floor - gdrta03b-12

intermediate floor, timber frame construction, suspended, dry, without filling, other surface

Performance rating

Fire protection performance REI 60

Classified by HFA

Germany

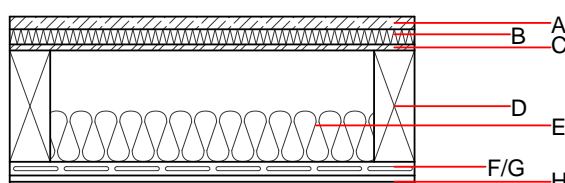
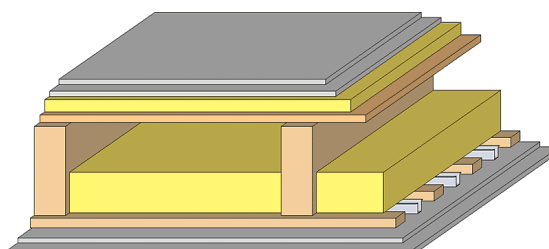
Load $E_{d,fi}$ according to the German certification document

Thermal performance U Diffusion suitable

Acoustic performance R_w ($C; C_{tr}$) 64(-3; -10) dB
 $L_{n,w}$ (C_i) 55(0)

Mass per unit area m 79.70 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 EN
			λ	μ min – max	ρ	c	
A	25.0	dry screed	0.210	8	900	1.050	A1
B	30.0		0.040	1	180	1.030	A1
C	22.0	OSB	0.130	200	600	1.700	D
D	240.0	construction timber (80/...; e=625) (80/...; e=*)	0.120	50	450	1.600	D
E	100.0	Cellulose fibre [040; 50]	0.040	1	50	2.000	E
F	24.0	spruce wood cladding with spacing of cladding boards(24/100); a=400	0.120	50	450	1.600	D
G	27.0	resilient channel (placed between open formwork)	0.156				
H	25.0	gypsum plaster board type DF (2x12,5 mm) or	0.250	10	800	1.050	A2
H	25.0	gypsum fibre board (2x12,5 mm)	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Databaseecoinvent

OI3_{Kon} 31.4

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	34.520
Biogenic carbon in kg CO ₂ -e.	kg CO ₂	50.160
Energy use of Primary Energy	MJ	656.240
Share of renewable PE	%	22.84

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		0.141	0.053	2,41E-6	0.039	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	104.809	509.912	614.721	459.932	19.722	479.654

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		0.105	0.017	7,74E-7	0.021	
C1 - C4		0.007	0.005	9,65E-8	0.001	
A1 - C4		0.116	0.023	8,85E-7	0.022	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	147.590	581.690	730.830	476.010	15.300	491.460
C1 - C4	1.520	-498.590	-497.070	19.720	-7.740	11.970
A1 - C4	149.870	83.620	235.040	506.360	7.660	514.170