

Intermediate floor - gdhbnxa02b-02

intermediate floor, Holzbetonverbund, suspended, wet, with filling, Gipsplatte

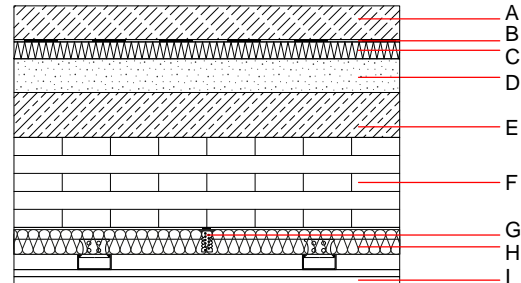
Performance rating

Fire protection performance REI 90
 maximum span = 4,7 m; maximum load $E_{d,fi} = 5,5 \text{ kN/m}^2$ (without floor construction)
 Classified by HFA

Thermal performance U Diffusion 0.28 $\text{W}/(\text{m}^2\text{K})$ suitable
 Calculated by HFA

Acoustic performance $R_w (C;C_{tr})$ 91(-4;-10) dB
 $L_{n,w} (C_i)$ 24(2)
 $[C_{150-2500}] = [26]$ dB
 Assessed by HFA

Mass per unit area m 565.80 kg/m^2
 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	60.0	cement screed m' approx. 150 kg/m^2	1.330	50 - 100	2500	1.080	A1
B		plastic separation layer	0.200	100000	1400	1.400	E
C	30.0	impact sound absorbing subflooring MW-T [$s' \leq 10 \text{ MN}/\text{m}^3$]	0.033	1	105	1.030	A2
D	90.0	Loose chippings in cardboard honeycomb, m' ca. 114 kg/m^2	0.700	1	1260	1.000	A1
E	80.0		2.000	80 - 130	2400	1.000	A1
F	160.0	cross laminated timber 5-ply	0.130	50	500	1.600	D
G	75.0						
H	50.0	mineral wool [040; ≥ 16 ; $< 1000^\circ\text{C}$]	0.040	1	16	1.030	A1
I	30.0	gypsum plaster board type DF 2-layer or	0.250	10	800	1.050	A2
I	30.0	gypsum fibre board 2-layer	0.320	21	1000	1.100	A2

Sustainability rating (per m^2)

Database ecoinvent

$O13_{Kon}$ 82.4
 Calculated by HFA

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		0.336	0.161	5,96E-6	0.081	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	109.162	1094.400	1203.562	1219.207	31.311	1250.518