

Intermediate floor - gdmnx03a-03

intermediate floor, solid wood construction, suspended, wet, with filling, other surface

Performance rating

Fire protection performance REI 90
 maximum span = 5 m; maximum load $E_{d,fi} = 6,5 \text{ kN/m}^2$ (without floor construction)
 Classified by HFA

Thermal performance U Diffusion 0.26 $\text{W}/(\text{m}^2\text{K})$
 suitable

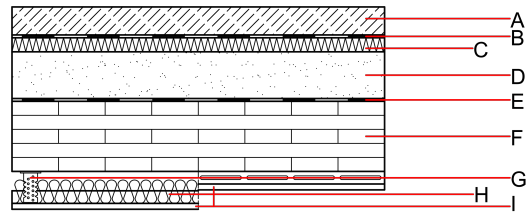
Calculated by HFA

Acoustic performance $R_w (C; C_{tr})$ 76(-6; 14) dB
 $L_{n,w} (C_i)$ 45(3)

$[C_{150-2500}] = [10]$ dB
 Assessed by HFA

Mass per unit area m 337.20 kg/m^2

Calculation based on gypsum plaster board type DF



Note: D: fill m' approx. 93 kg/m^2

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' ca. 150 kg/m^2	1.330	50 - 100	2500	1.080	
B		plastic separation layer	0.200	100000	1400	1.400	E
C	30.0	impact sound absorbing subflooring MW-T [$s' = 10 \text{ MN}/\text{m}^3$]	0.033	1	70	1.030	A1
D	60.0	non-bonded chippings	0.700	1	1550	1.000	A1
E		trickling protection					E
F	160.0	cross laminated timber 5-ply (first layer minimum 40 mm)	0.130	50	500	1.600	D
G	70.0	acoustic direct hanger with CD-profile (a=400)					
H	50.0	mineral wool [040; ≥ 16 ; $< 1000^\circ\text{C}$]	0.040	1	16	1.030	A1
I	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
I	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m^2)

Database ecoinvent

013_{kon} 63.6

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		0.284	0.128	4,79E-6	0.074

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	67.500	1094.400	1161.900	971.545	52.971	1024.516