

Intermediate floor - gdrnxa07a-02

intermediate floor, timber frame construction, suspended, wet, with filling, other surface

Performance rating

Fire protection performance REI 30

maximum span = 5 m; maximum load $E_{d,fi} = 3,66 \text{ kN/m}^2$ (without floor construction; with ceiling beam 80/200)

Classified by IBS

Classified by HFA

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

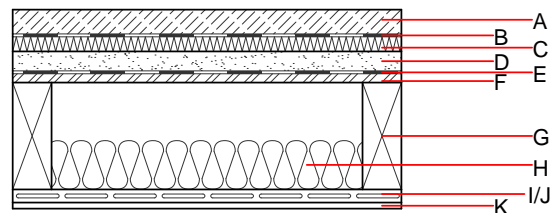
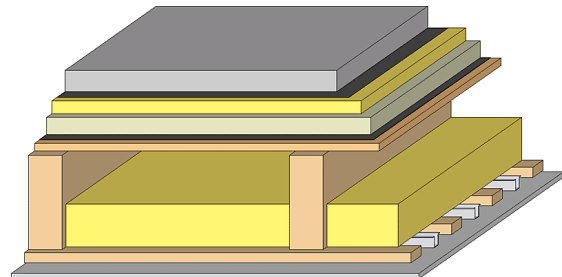
Calculated by HFA

Acoustic performance $R_w (C; C_{tr})$ 71 (-1; -6) dB
 $L_{n,w} (C_i)$ 40(2)

Assessed by TGM

Mass per unit area m 215.70 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	$\mu \text{ min} - \text{max}$	ρ	c	
A	50.0	cement screed or anhydrite 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 [$s' = 10 \text{ MN}/\text{m}^3$]	0.035	1	68	1.030	A1
D	40.0	fill loose	0.700	1	1800	1.000	A1
E		trickling protection					E
F	18.0	OSB	0.130	200	600	1.700	D
G	240.0	construction timber (80/-; $e=625$)	0.120	50	450	1.600	D
H	100.0	mineral wool [040; ≥ 16 ; $< 1000^\circ\text{C}$]	0.040	1	16	1.030	A1
I	24.0	spruce wood cladding with spacing of cladding boards(24/100); $a=400$	0.120	50	450	1.600	D
J	27.0	resilient channel placed between cladding with spacing	0.156				
K	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
K	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m^2)

Database ecoinvent

013_{Kon} 39.2

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		0.160	0.077	2,70E-6	0.029	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	111.774	476.516	588.291	552.295	20.654	572.949