

Intermediate floor - gdmnxa02a-02

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

Performance rating

Fire protection performance REI 60

maximum span = 5 m; maximum load $E_{d,fi} = 5 \text{ kN/m}^2$
 Classified by HFA

Thermal performance U 0.25 W/(m²K)
 Diffusion suitable

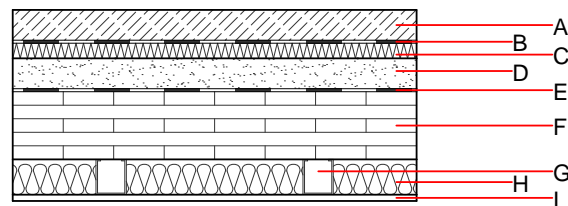
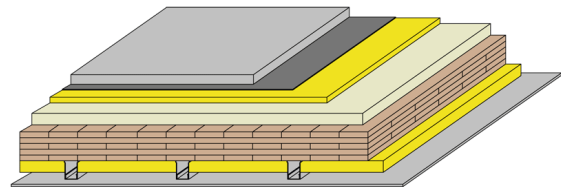
Calculated by HFA

Acoustic performance $R_w (C; C_{tr})$ 62(-2;-6) dB
 $L_{n,w} (C_i)$ 46(2)

Assessed by TU-GRAZ

Mass per unit area m 307.00 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	$\mu \text{ min} - \text{max}$	ρ	c	
A	60.0	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 [$s' = 10 \text{ MN/m}^3$]	0.033	1	70	1.030	A1
D	60.0	non-bonded chippings	0.700	1	1700	1.000	A1
E		trickling protection					E
F	140.0	cross laminated timber $\geq 140/0$; at least 5-layers, top layer at least 26 mm)	0.130	50	500	1.600	D
G	70.0	acoustic hanger (suspension); e=410					
H	60.0	mineral wool [040; 20]	0.040	1	20	1.030	A2
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 m²)

Database ecoinvent

OL3_{Kon} 58.7

calculated with gypsum plaster fire protection board (GKF/DF); this data includes 3-, 5-, and 7-ply cross laminated timber elements;
 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		0.261	0.120	4,46E-6	0.066	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	62.096	957.600	1019.696	890.116	31.697	921.813