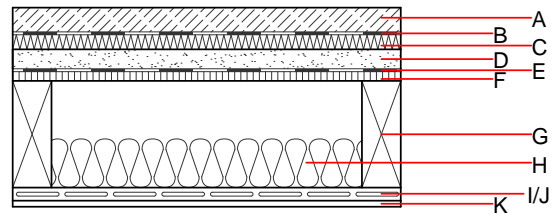
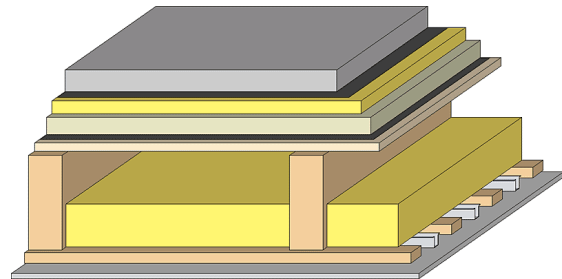


Intermediate floor - gdrnxa08a-09

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

Performance rating

Fire protection performance	REI	30
maximum span = 5 m; maximum load $E_{d,fi} = 3,66 \text{ kN/m}^2$ Classified by HFA		
Thermal performance	U Diffusion	0.27 $\text{W}/(\text{m}^2\text{K})$ suitable
energy storage capacity per unit area above: $104,4 \text{ kg/m}^2$ Calculated by HFA		
Acoustic performance	$R_w (C; C_{tr})$ $L_{n,w} (C_i)$	65(-3;-8) dB 50(2)
EPS-F with a dynamic stiffness of $s' \leq 40 \text{ MN/m}^3$.		
Mass per unit area	m	$214,40 \text{ kg/m}^2$
Calculation based on gypsum plaster board type DF		



Note: e=625;

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	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	Polystyrene EPS-W [$s' \geq 26 \text{ MN/m}^3$]	0.041	20 - 50	15	1.450	E
D	40.0	fill	0.700	1	1800	1.000	A1
E		trickling protection					E
F	19.0	particleboard	0.130	50 - 100	700	1.700	D
G	220.0	construction timber (80/..; e=*)	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} 34.1

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		0.129	0.062	2,05E-6	0.030	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	74.813	473.735	548.548	505.014	53.059	558.074