

Intermediate floor - gdrtn02a-09

intermediate floor, timber frame construction, not suspended, dry, 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 W/(m²K)
suitable

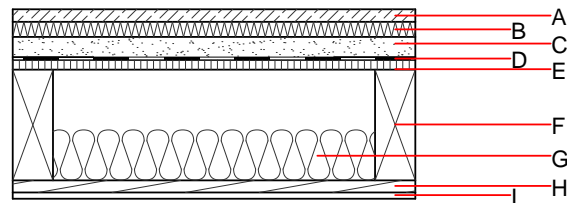
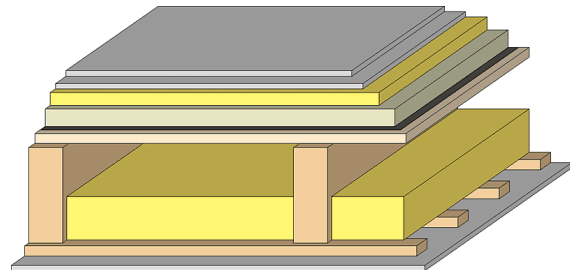
Calculated by HFA

Acoustic performance $R_w (C; C_{tr})$ 59(-6;-13) dB
 $L_{n,w} (C_i)$ 65(4)

EPS-F with a dynamic stiffness of $s' \leq 40 \text{ MN/m}^3$.
Assessed by TGM

Mass per unit area m 134.30 kg/m²

Calculation based on GF



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	25.0	dry screed	0.210	8	900	1.050	A1
B	30.0	Polystyrene EPS-W [0,041]	0.041	20 - 50	15	1.450	E
C	40.0	fill	0.700	1	1800	1.000	A1
D		trickling protection					E
E	19.0	particleboard	0.130	50 - 100	700	1.700	D
F	220.0	construction timber (80/...; e=*)	0.120	50	450	1.600	D
G	100.0	mineral wool [040; ≥ 16 ; $< 1000^\circ\text{C}$]	0.040	1	16	1.030	A1
H	24.0	spruce wood cladding with spacing of cladding boards(24/100); a=400	0.120	50	450	1.600	D
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} 30.0

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		0.122	0.054	2,48E-6	0.024	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	69.369	473.735	543.104	482.366	33.037	515.403