

## Intermediate floor - gdrnxa07a-07

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 0.27 W/(m<sup>2</sup>K) suitable

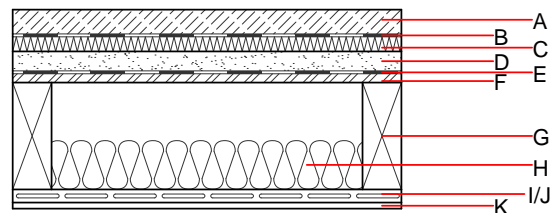
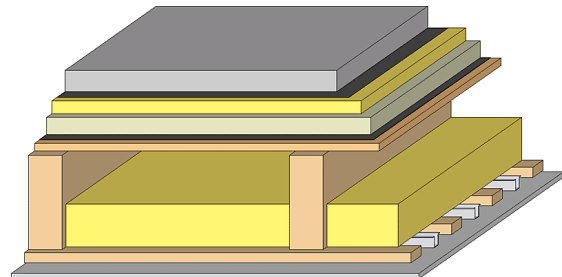
Calculated by HFA

**Acoustic performance**  $R_w$  (C;C<sub>tr</sub>) 70(-2;-7) dB  
 $L_{n,w}$  (C<sub>i</sub>) 43(2)

Assessed by TGM

**Mass per unit area** m 212.70 kg/m<sup>2</sup>

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
			$\lambda$	$\mu$ min – max	$\rho$	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 EPS-T [ $s' = 11 \text{ MN/m}^3$ ]	0.044	20 - 50		1.450	E
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	220.0	construction timber (80/-; e=625)	0.120	50	450	1.600	D
H	100.0	mineral wool [040; $\geq 70$ ; $< 1000^\circ\text{C}$ ]	0.035	1	70	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<sup>2</sup>)

#### Database ecoinvent

013<sub>Kon</sub> 56.9

Calculated by HFA

## Details of sustainability rating

### Database ecoinvent

Lifecycle (Phases)	GWP [kg CO <sub>2</sub> -e.]	AP [kg SO <sub>2</sub> -e.]	EP [kg PO <sub>4</sub> -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.226	0.107	3,86E-6	0.036	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	117.575	455.553	573.128	755.300	20.654	775.953