

## Intermediate floor - gdrnxa05a-09

intermediate floor, timber frame construction, suspended, wet, without filling, other surface

### Performance rating

**Fire protection performance** REI 30

maximum span = 5 m; maximum load  $E_{d,fi} = 2,62 \text{ kN/m}^2$  (without floor construction and 12mm OSB; with ceiling beam 60/200)

Classified by IBS

Classified by HFA

**Thermal performance** U Diffusion 0.26 W/(m<sup>2</sup>K)  
suitable

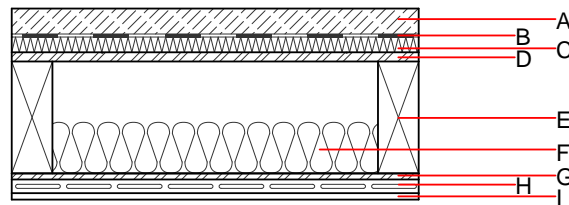
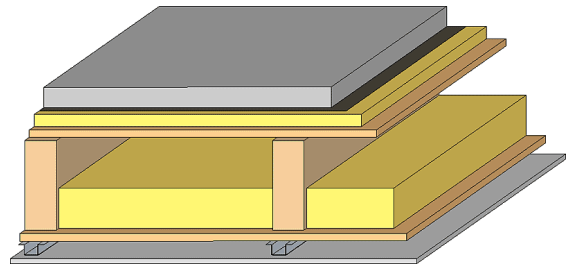
**Acoustic performance**  $R_w (C; C_{tr})$  55(-3;-9) dB  
 $L_{n,w} (C_i)$  68(0)

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

Assessed by TGM

**Mass per unit area** m 159.50 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	anhydrite screed	0.700	10	2200	1.300	A1
B		plastic separation layer	0.200	100000	1400	1.400	E
C	30.0	Polystyrene EPS-W [0,041]	0.041	20 - 50	15	1.450	E
D	18.0	OSB	0.130	200	600	1.700	D
E	220.0	construction timber (80/...; e=625)	0.120	50	450	1.600	D
F	100.0	mineral wool [040; $\geq 16$ ; $< 1000^\circ\text{C}$ ]	0.040	1	16	1.030	A1
G	12.0	OSB	0.130	200	600	1.700	D
H	27.0	resilient channel					
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 m<sup>2</sup>)

#### Database ecoinvent

013<sub>kon</sub> 33.7

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		0.136	0.064	2,27E-6	0.029	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	118.492	523.630	642.122	496.409	41.704	538.113