

### Intermediate floor - gdmnx03b-01

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

#### Performance rating

**Fire protection performance** REI 90  
 maximum span = 5 m; maximum load  $E_{d,fi} = 6,5 \text{ kN/m}^2$  (without floor construction)  
 Classified by HFA

**Thermal performance** U Diffusion 0.25  $\text{W}/(\text{m}^2\text{K})$   
 suitable

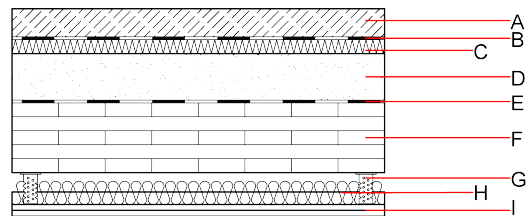
Calculated by HFA

**Acoustic performance**  $R_w (C; C_{tr})$  81(-6; 15) dB  
 $L_{n,w} (C_i)$  41(5)

$[C_{150-2500}] = [11]$  dB  
 Assessed by HFA

**Mass per unit area** m 347.20  $\text{kg}/\text{m}^2$

Calculation based on gypsum plaster board type DF



Note: D: fill m' approx. 93  $\text{kg}/\text{m}^2$

#### 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
			$\lambda$	$\mu$ min - max	$\rho$	c	
A	60.0	cement screed m' approx. 150 $\text{kg}/\text{m}^2$	1.330	50 - 100	2500	1.080	
B		plastic separation layer	0.200	100000	1400	1.400	E
C	30.0	impact sound absorbing subflooring MW-T [ $s' = 10 \text{ MN}/\text{m}^3$ ]	0.033	1	70	1.030	A1
D	60.0	non-bonded chippings	0.700	1	1550	1.000	A1
E		trickling protection					E
F	160.0	cross laminated timber 5-ply (first layer minimum 40 mm)	0.130	50	500	1.600	D
G	70.0	acoustic direct hanger with CD-profile (a=400)					
H	50.0	mineral wool [040; $\geq 16$ ; $< 1000^\circ\text{C}$ ]	0.040	1	16	1.030	A1
I	25.0	gypsum plaster board type DF 2x12,5mm or	0.250	10	800	1.050	A2
I	25.0	gypsum fibre board 2x12,5mm	0.320	21	1000	1.100	A2

#### Sustainability rating (per $\text{m}^2$ )

##### Database ecoinvent

013<sub>kon</sub> 66.0

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		0.290	0.131	5,08E-6	0.075	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	69.784	1094.400	1164.184	1011.827	52.971	1064.798