

## Intermediate floor - gdmnxn01a-00

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

### Performance rating

**Fire protection performance** REI 60

maximum span = 5 m; maximum load  $E_{d,fi} = 3,66 \text{ kN/m}^2$  (without floor construction)  
 Classified by HFA

#### Germany

F60

Load  $E_{d,fi}$  according to the German certification document

Corresponding proof: manufacturer-specific

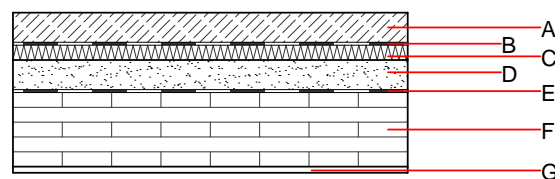
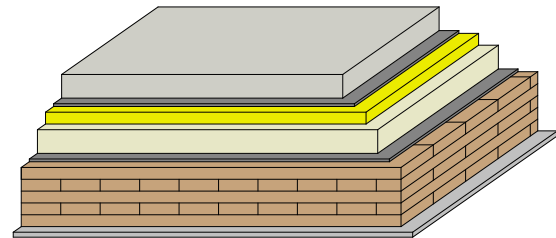
**Thermal performance** U Diffusion suitable

**Acoustic performance**  $R_w (C; C_{tr})$  75(-2;-8) dB  
 $L_{n,w} (C_i)$  45(-1)

Assessed by Müller-BBM

**Mass per unit area** m 315.30 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	60.0	cement screed	1.330	50 - 100	2000	1.080	A1
B	0.2	plastic separation layer	0.200	100000	1400	1.400	E
C	30.0	impact sound absorbing subflooring MW-T [ $s' = 10 \text{ MN/m}^3$ ]	0.035	1	68	1.030	A1
D	60.0	elastic bonded fill ( $m'$ approx. 90 kg/m <sup>2</sup> ) elastic bonded, $m' = 90 \text{ kg/m}^2$	0.700	1	1500	1.000	A1
E	0.2	trickling protection					E
F	150.0	cross laminated timber	0.130	50	500	1.600	D
G	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2
G	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

### Sustainability rating (per m<sup>2</sup>)

#### Database ecoinvent

O13<sub>kon</sub> 52.5

Calculated by HFA

#### Database GaBi (ÖKOBAUDAT)

Built-in renewable materials kg 73.410  
 Biogenic carbon in kg CO<sub>2</sub>-e. kg CO<sub>2</sub> 105.680  
 Energy use of Primary Energy MJ 1032.850  
 Share of renewable PE % 31.25

Calculated by TUM

## 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		0.241	0.110	4,20E-6	0.065	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	60.740	1026.000	1086.740	833.604	33.416	867.020

### Database GaBi (ÖKOBAUDAT)

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		0.153	0.027	3,93E-6	0.022	
C1 - C4		0.022	0.004	2,01E-7	0.002	
A1 - C4		0.180	0.032	4,14E-6	0.024	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	318.742	1249.360	1565.102	660.927	52.172	712.260
C1 - C4	3.656	-1243.500	-1238.476	43.739	0.000	62.459
A1 - C4	322.780	6.119	327.847	710.069	52.224	789.941