

## Intermediate floor - gdrxa03b-10

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

### Performance rating

**Fire protection performance** REI 60

Classified by HFA

#### Germany

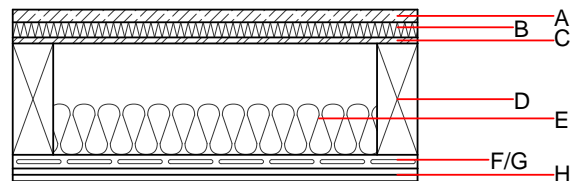
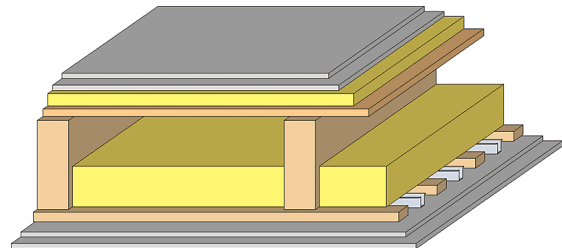
Load  $E_{d,fi}$  according to the German certification document

**Thermal performance** U Diffusion suitable

**Acoustic performance**  $R_w$  (C;C<sub>tr</sub>) 63(-3;10) dB  
 $L_{n,w}$  (C<sub>i</sub>) 56(0)

**Mass per unit area** m 78.10 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	25.0	dry screed	0.210	8	900	1.050	A1
B	30.0		0.040	1	180	1.030	A1
C	22.0	OSB	0.130	200	600	1.700	D
D	220.0	construction timber (80/...; e=625) (80/...; e=*)	0.120	50	450	1.600	D
E	100.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
F	24.0	spruce wood cladding with spacing of cladding boards(24/100); a=400	0.120	50	450	1.600	D
G	27.0	resilient channel (placed between open formwork)	0.156				
H	25.0	gypsum plaster board type DF (2x12,5 mm) or	0.250	10	800	1.050	A2
H	25.0	gypsum fibre board (2x12,5 mm)	0.320	21	1000	1.100	A2

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

#### Database ecoinvent

O13<sub>kon</sub> 32.5

Calculated by HFA

#### Database GaBi (ÖKOBAUDAT)

Built-in renewable materials kg 32.390  
 Biogenic carbon in kg CO<sub>2</sub>-e. kg CO<sub>2</sub> 48.080  
 Energy use of Primary Energy MJ 878.810  
 Share of renewable PE % 27.33

## 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		0.141	0.053	2,50E-6	0.040	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	104.647	516.995	621.641	484.435	26.477	510.912

### 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		0.125	0.022	7,85E-7	0.026	
C1 - C4		0.006	0.002	8,39E-8	0.001	
A1 - C4		0.134	0.025	8,83E-7	0.027	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	237.430	708.240	947.100	604.070	30.710	634.910
C1 - C4	2.030	-697.180	-695.150	23.890	-23.150	0.740
A1 - C4	240.210	11.580	253.220	638.600	7.660	646.390