

## Intermediate floor - gdrta03b-13

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

### Performance rating

Fire protection performance REI 60

Classified by HFA

#### Germany

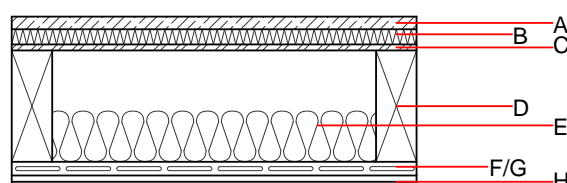
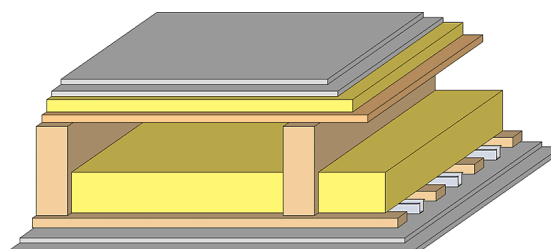
Load  $E_{d,fi}$  according to the German certification document

Thermal performance U Diffusion suitable

Acoustic performance  $R_w$  ( $C$ ;  $C_{tr}$ ) 64(-3; -10) dB  
 $L_{n,w}$  ( $C_i$ ) 55(0)

Mass per unit area m 79.30 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	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	240.0	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>)

#### Databaseecoinvent

OI3<sub>Kon</sub> 32.5

Calculated by HFA

#### Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	33.650
Biogenic carbon in kg CO <sub>2</sub> -e.	kg CO <sub>2</sub>	49.920
Energy use of Primary Energy	MJ	887.840
Share of renewable PE	%	27.59

## 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		0.142	0.054	2,52E-6	0.040	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	108.396	537.959	646.355	488.798	26.477	515.275

### 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		0.126	0.022	8,22E-7	0.027	
C1 - C4		0.006	0.002	8,70E-8	0.001	
A1 - C4		0.135	0.025	9,24E-7	0.028	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	242.160	730.030	973.720	608.120	30.720	638.990
C1 - C4	2.040	-718.960	-716.920	24.130	-23.170	0.970
A1 - C4	244.960	11.590	258.080	642.880	7.660	650.690