

## Floor towards attic (uninhabitable) - ddrtxn07a-00

floor towards attic (uninhabitable), timber frame construction, not suspended, dry, Gipsplatte

### Performance rating

**Fire protection performance** REI 30

maximum span = 5 m; maximum load  $E_{d,fi}$  = 3,66 kN/m<sup>2</sup>  
 Classified by HFA

#### Germany

F30

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

Corresponding proof: DIN 4102-4:2016-05, Tabelle 10.12, Zeile 1 in conjunction with 10.7.5 (to attic no floating screed necessary)

**Thermal performance** U Diffusion 0.19 W/(m<sup>2</sup>K) suitable

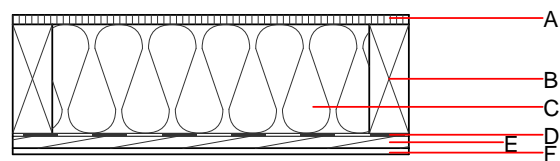
Calculated by TUM

**Acoustic performance**  $R_w$  (C;C<sub>tr</sub>) 42(-2;-6) dB  
 $L_{n,w}$  (C<sub>i</sub>)

Assessed by Müller-BBM

**Mass per unit area** m 40.80 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	19.0	particleboard	0.130	50 - 100	700	1.700	D
B	220.0	construction timber (80/...; e=625)	0.120	50	450	1.600	D
C	220.0	mineral wool [040; 11; <1000°C]	0.040	1	11	1.030	A1
D		vapour barrier $s_d \geq 8m$			1000		
E	24.0	spruce wood cladding with spacing of cladding boards(24/100); a=400	0.120	50	450	1.600	D
F	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
F	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

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

#### Database ecoinvent

OI3<sub>Kon</sub> 17.6

Calculated by HFA

#### Database GaBi (ÖKOBAUDAT)

Built-in renewable materials kg 28.830  
 Biogenic carbon in kg CO<sub>2</sub>-e. kg CO<sub>2</sub> 42.030  
 Energy use of Primary Energy MJ 377.520  
 Share of renewable PE % 26.60

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		0.081	0.036	1,43E-6	0.020	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	60.968	473.735	534.703	316.947	33.674	350.621

### 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		0.088	0.014	1,22E-6	0.012	
C1 - C4		0.002	0.002	8,58E-8	0.000	
A1 - C4		0.092	0.017	1,32E-6	0.013	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	99.674	453.983	555.179	261.290	29.218	290.643
C1 - C4	0.369	-447.705	-447.336	9.461	-11.166	-1.705
A1 - C4	100.430	6.538	108.489	277.087	18.104	295.326