

**Floor towards attic (uninhabitable) - ddmxxn01-01**

floor towards attic (uninhabitable), solid wood construction, without lining, wooden surface

**Performance rating**

**Fire protection performance** REI 60

maximum span = 5 m; maximum load  $E_{d,fi} = 0,6 \text{ kN/m}^2$   
 Classified by HFA

**Germany**

REI60

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

Corresponding proof: manufacturer-specific

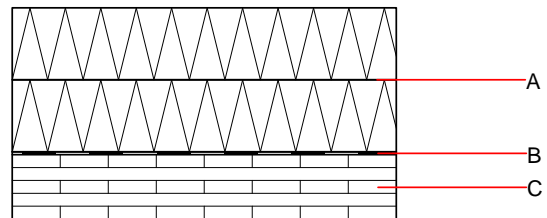
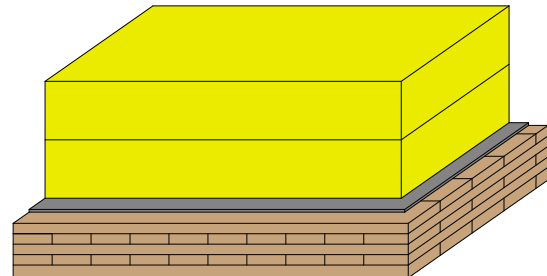
**Thermal performance** U Diffusion 0.11  $\text{W}/(\text{m}^2\text{K})$  suitable

Calculated by TUM

**Acoustic performance**  $R_w (C; C_{tr})$  44(-2;-7) dB  
 $L_{n,w} (C_i)$

Assessed by Müller-BBM

**Mass per unit area** m 110.50  $\text{kg}/\text{m}^2$



**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 EN
			$\lambda$	$\mu$ min – max	$\rho$	c	
A	300.0	wood-fibre insulation board [0,045; R=160]	0.045	5 - 7	160	2.100	E
B		membrane (airtight)					
C	140.0	cross laminated timber	0.130	50	500	1.600	D

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

**Database ecoinvent**

$OI3_{kon}$  68.2

Calculated by HFA

**Database GaBi (ÖKOBAUDAT)**

**Built-in renewable materials** kg 134.580  
**Biogenic carbon in  $\text{kg CO}_2\text{-e}$ .**  $\text{kg CO}_2$  193.220  
**Energy use of Primary Energy** MJ 1517.110  
**Share of renewable PE** % 40.72

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		0.329	0.144	6,07E-6	0.076	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	135.310	1843.222	1978.531	1184.339	112.169	1296.508

**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		0.175	0.036	3,60E-6	0.037	
C1 - C4		0.002	0.000	1,63E-7	0.000	
A1 - C4		0.177	0.037	3,76E-6	0.037	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	615.226	1868.996	2481.542	864.060	70.891	934.201
C1 - C4	2.527	-1868.996	-1866.468	35.292	-53.061	-17.768
A1 - C4	617.754	-0.000	615.074	899.352	17.830	916.432