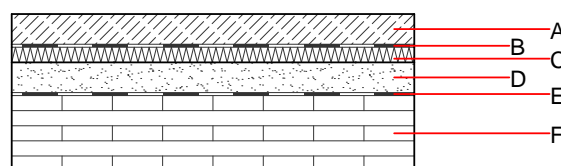
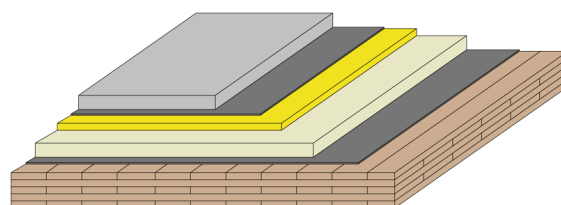


## Intermediate floor - gdmnxn02-03

intermediate floor, solid wood construction, without lining, wet, with filling, wooden surface

### Performance rating

<b>Fire protection performance</b>	REI	60
maximum span = 5 m; maximum load $E_{d,fi} = 5 \text{ kN/m}^2$ (without floor construction) Classified by HFA		
<b>Thermal performance</b>	U Diffusion	0.43 W/(m <sup>2</sup> K) suitable
Calculated by HFA		
<b>Acoustic performance</b>	$R_w (C; C_{tr})$ $L_{n,w} (C_i)$	62 dB 52
Assessed by TU-GRAZ		
<b>Mass per unit area</b>	m	295.80 kg/m <sup>2</sup>



### 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
			$\lambda$	$\mu \text{ min - max}$	$\rho$	c	
A	60.0	cement screed	1.330	50 - 100	2000	1.080	A1
B		plastic separation layer	0.200	100000	1400	1.400	E
C	30.0	impact sound absorbing subflooring MW-T [ $s' = 10 \text{ MN/m}^3$ ]	0.033	1	70	1.030	A1
D	60.0	non-bonded chippings	0.700	1	1700	1.000	A1
E		trickling protection					E
F	140.0	cross laminated timber, minimum 5-ply, $d \geq 140.0$ ; first layer minimum 30mm	0.130	50	500	1.600	D

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

#### Database ecoinvent

013 <sub>Kon</sub>	48.1
calculated with gypsum plaster fire protection board (GKF/DF); this data includes 3-, 5-, and 7-ply cross laminated timber elements; Calculated by HFA	

## 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		0.225	0.102	3,73E-6	0.061	
Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	55.768	957.600	1013.368	755.258	31.697	786.956