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Designation: gdrnxa04b-09
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Source: Holzforschung Austria
Editor: HFA, SP

# Intermediate floor - gdrnxa04b-09

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

## Performance rating

| | | |
|---|---|---|
| **Fire protection performance** | **REI** | 60 |

maximum span = 5 m; maximum load $E_{d,fi}$ = 3,66 kN/m²
Classified by HFA

| | | |
|---|---|---|
| **Thermal performance** | **U** | 0.27 W/(m²K) |
| | **Diffusion** | suitable |

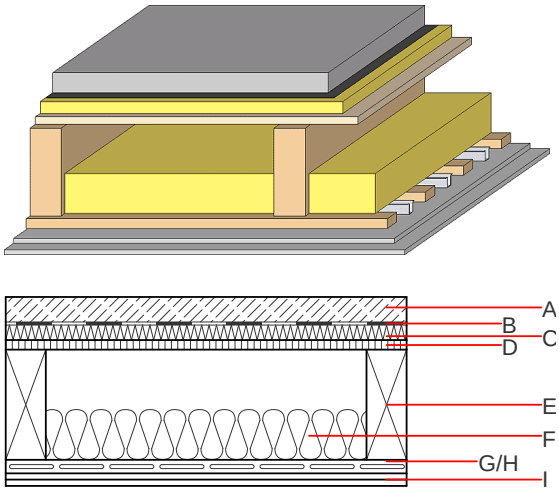
Calculated by HFA

| | | |
|---|---|---|
| **Acoustic performance** | **$R_w$ ($C;C_{tr}$)** | 63(-3;-8) dB |
| | **$L_{n,w}$ ($C_I$)** | 59(-1) |

EPS-F with a dynamic stiffness of s' ≤ 40MN/m³.
Assessed by TGM

| | | |
|---|---|---|
| **Mass per unit area** | **m** | 152.40 kg/m² |

Calculation based on GF




**Note: e=625;**

## 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 |
|---|---|---|---|---|---|---|---|
| | | | λ | μ min – max | ρ | c | EN |
| A | 50.0 | anhydrite screed or cement screed | 0.700 | 10 | 2200 | 1.300 | A1 |
| B | | plastic separation layer | 0.200 | 100000 | 1400 | 1.400 | E |
| C | 30.0 | Polystyrene EPS-W [0,041] | 0.041 | 20 - 50 | 15 | 1.450 | E |
| D | 19.0 | particleboard | 0.130 | 50 - 100 | 700 | 1.700 | D |
| E | 220.0 | construction timber (80/..; e=*) | 0.120 | 50 | 450 | 1.600 | D |
| F | 100.0 | mineral wool [040; ≥16; <1000°C] | 0.040 | 1 | 16 | 1.030 | A1 |
| G | 24.0 | spruce wood cladding with spacing of cladding boards(24/100); a=400 | 0.120 | 50 | 450 | 1.600 | D |
| H | 27.0 | resilient channel (placed between open formwork) | 0.156 | | | | |
| I | 25.0 | gypsum plaster board type DF (2x12,5 mm) or | 0.250 | 10 | 800 | 1.050 | A2 |
| I | 25.0 | gypsum fibre board (2x12,5 mm) | 0.320 | 21 | 1000 | 1.100 | A2 |

## Sustainability rating (per m²)

**Database ecoinvent**

| | |
|---|---|
| **$OI3_{Kon}$** | 35.3 |

Calculated by HFA

## Details of sustainability rating

**Database ecoinvent**

| Lifecycle (Phases) | GWP [kg $CO_2$-e.] | AP [kg $SO_2$-e.] | EP [kg $PO_4$-e.] | ODP [kg R11-e.] | POCP [kg Ethen-e.] | |
|---|---|---|---|---|---|---|
| A1 - A3 | | 0.130 | 0.063 | 2,28E-6 | 0.030 | |

| Lifecycle (Phases) | PERE [MJ] | PERM [MJ] | PERT [MJ] | PENRE [MJ] | PENRM [MJ] | PENRT [MJ] |
|---|---|---|---|---|---|---|
| A1 - A3 | 76.792 | 473.735 | 550.526 | 533.912 | 49.237 | 583.150 |