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Designation: gdrtxa02b-05
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

# Intermediate floor - gdrtxa02b-05

intermediate floor, timber frame construction, suspended, dry, with filling, other surface

## Performance rating

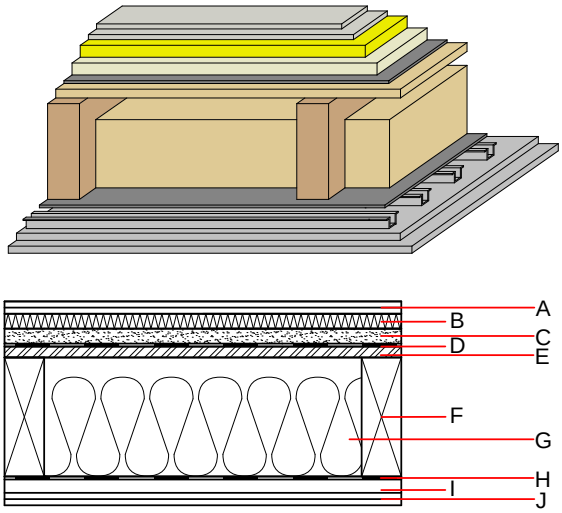
| | | |
|---|---|---|
| **Fire protection performance** | **REI** | 60/$K_2$60 |

Classified by HFA

**Germany**

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

| | | |
|---|---|---|
| **Thermal performance** | **U** | |
| | **Diffusion** | |
| **Acoustic performance** | **$R_w$ ($C;C_{tr}$)** | 78(-1;-7) dB |
| | **$L_{n,w}$ ($C_I$)** | 38(3) |
| **Mass per unit area** | **m** | 190.70 kg/m² |




## 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 | 25.0 | dry screed | 0.210 | 8 | 900 | 1.050 | A1 |
| B | 20.0 | impact sound absorbing subflooring MW-T [s'=10 MN/m³] | 0.035 | 1 | 68 | 1.030 | A1 |
| C | 60.0 | fill | 0.700 | 1 | 1500 | 1.000 | A1 |
| D | 0.2 | trickling protection | | | | | E |
| E | 22.0 | OSB | 0.130 | 200 | 600 | 1.700 | D |
| F | 240.0 | construction timber (80/..; e=*) | 0.120 | 50 | 450 | 1.600 | D |
| G | 200.0 | mineral wool [040; 30; ≥1000°C] | 0.040 | 1 | 30 | 1.030 | A1 |
| H | 0.2 | trickling protection | | | | | E |
| I | 27.0 | resilient channel cladding with spacing of cladding boards(24/100); a=400 | | | | | |
| J | 36.0 | gypsum plaster board type DF or | 0.250 | 10 | 800 | 1.050 | A2 |

## Sustainability rating (per m²)

**Database ecoinvent**

| | |
|---|---|
| **OI3$_{Kon}$** | 36.1 |

Calculated by HFA

**Database GaBi (ÖKOBAUDAT)**

| | | |
|---|---|---|
| **Built-in renewable materials** | **kg** | 34.440 |
| **Biogenic carbon in kg $CO_2$-e.** | **kg $CO_2$** | 51.130 |
| **Energy use of Primary Energy** | **MJ** | 1257.590 |
| **Share of renewable PE** | **%** | 27.89 |

## 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 | | 0.146 | 0.064 | 3,29E-6 | 0.027 | |

| Lifecycle (Phases) | PERE [MJ] | PERM [MJ] | PERT [MJ] | PENRE [MJ] | PENRM [MJ] | PENRT [MJ] |
|---|---|---|---|---|---|---|
| A1 - A3 | 119.178 | 609.464 | 728.643 | 586.936 | 37.054 | 623.990 |

**Database GaBi (ÖKOBAUDAT)**

| 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 | | 0.150 | 0.028 | 6,92E-7 | 0.034 | |
| C1 - C4 | | 0.018 | 0.004 | 9,24E-8 | 0.002 | |
| A1 - C4 | | 0.172 | 0.033 | 8,06E-7 | 0.036 | |

| Lifecycle (Phases) | PERE [MJ] | PERM [MJ] | PERT [MJ] | PENRE [MJ] | PENRM [MJ] | PENRT [MJ] |
|---|---|---|---|---|---|---|
| A1 - A3 | 344.060 | 891.130 | 1236.100 | 832.730 | 48.020 | 880.860 |
| C1 - C4 | 5.530 | -880.270 | -874.750 | 58.160 | -41.390 | 16.770 |
| A1 - C4 | 350.740 | 11.370 | 363.020 | 906.860 | 6.790 | 913.750 |