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gdmnxn01a-00 8/2/23 Holzforschung Austria HFA, SP

Intermediate floor - gdmnxn01a-00

intermediate floor, solid wood construction, directly, wet, with filling, other surface

Performance rating

| Fire protection performance | REI | 60 | |
|--|-------------------------------------|--------------------------|--|
| maximum span = 5 m; ma construction) Classified by HFA | iximum load E _{d,fi} = 3 | 66 kN∕m² (without floor | |
| Germany | | | |
| F60 | | | |
| Load $E_{d,fi}$ according to the | German certification | document | |
| Corresponding proof: man | ufacturer-specific | | |
| Thermal performance | U Diffusion | suitable | |
| Acoustic performance | R _w (C;C _{tr}) | 75(-2;-8) dB | |
| | L _{n,w} (C _l) | 45(-1) | |
| Assessed by Müller-BBM | | | |
| Mass per unit area | m | 315.30 kg/m ² | |

Calculation based on gypsum plaster board type DF



| _ ^ | А | - | C | _ | | _ | | | -0 | · · · |
|-----|----------|----------------|----------|------------|----------|---|---|---|----|-------|
| | - | > | ۔ |) | | | | | | |
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| | | | | | | | | | | |
| 2 | 11 | Ŵ | | | | | _ | _ | _ | |
| 7 | // | W | | | | | | | | |
| 7 | 2 | W | | | Γ. | _ | | _ | | |
| 7/ | 1 | W | 0 | 0 | | | | | | |
| 7 | | ΛΛ | | | | | | | | |
| 7 | 4 | W | | 2 | | _ | | _ | | |
| 1 | 1 | W | 2 | s. | | | | | | |
| 7 | 11 | ٨٨ | | 1 | | | | | | |
| 77 | 1 | W | 1 | <u>.</u> | | _ | _ | _ | _ | |
| 7 | // | W | | | | _ | | _ | | |
| 7 | 2 | M | ~ | 22 | _ | _ | _ | | _ | |
| 77, | 11 | Ŵ | ÷., | | | _ | _ | _ | _ | |
| 7; | // | \overline{M} | - | s, î | | _ | | _ | | |
| 7 | 12 | М | 77 | <u>,</u> 1 | | | | | | _ |
| 1 | // | W | 10 | Ξ. | | _ | | _ | | |
| 1 | 1 | W | à. | ÷.,, | | _ | | _ | | |
| 7, | // | Ŵ | | | | | | | | |
| .7 | 11 | W | 10 | | | _ | | _ | | |
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| 7 | 1 | W | ÷., | s, ĉ | | | | | | |
| 1 | | W | | 0 | | _ | | _ | | |
| 7 | 1 | W | | 10 | | | | _ | | |
| 77 | <u>/</u> | M | 1 | | | | | | | |
| 7 | L | W | ÷ | 1 | _ | | _ | - | _ | _ |

Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

| | Thickness | s Building material | | Thermal performance | | | | |
|---|-----------|---|-------|---------------------|------|-------|----|--|
| | | | λ | µ min – max | ρ | с | EN | |
| А | 60.0 | cement screed | 1.330 | 50 - 100 | 2000 | 1.080 | A1 | |
| В | 0.2 | plastic separation layer | 0.200 | 100000 | 1400 | 1.400 | E | |
| С | 30.0 | impact sound absorbing subflooring MW-T [s' = 10 MN/m ³] | 0.035 | 1 | 68 | 1.030 | A1 | |
| D | 60.0 | elastic bonded fill (m' aprrox. 90 kg/m²) elastic bonded, m' = 90 kg/m² | 0.700 | 1 | 1500 | 1.000 | A1 | |
| Е | 0.2 | trickling protection | | | | | E | |
| F | 150.0 | cross laminated timber | 0.130 | 50 | 500 | 1.600 | D | |
| G | 12.5 | gypsum plaster board type DF | 0.250 | 10 | 800 | 1.050 | A2 | |
| G | 12.5 | gypsum fibre board | 0.320 | 21 | 1000 | 1.100 | A2 | |

Sustainability rating (per m²)

| OI3 _{Kon} | 52.5 | Built-in renewable materials Biogenic carbon in kg CO2-e. | kg ka COa | 73.410 105.680 |
|--------------------|------|--|--------------|-------------------|
| Calculated by HFA | | Energy use of Primary Energy Share of renewable PE | MJ % | 1032.850 31.25 |
| | | Calculated by TUM | | |

Database GaBi (ÖKOBAUDAT)

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Designation: Last updated: Source: Editor: gdmnxn01a-00 8/2/23 Holzforschung Austria HFA, SP

Details of sustainability rating

Database ecoinvent

| Lifecycle | GWP | AP | EP | ODP | POCP | |
|-----------|--------------------------|--------------------------|--------------------------|-------------|---------------|---------|
| (Phases) | [kg CO ₂ -e.] | [kg SO ₂ -e.] | [kg PO ₄ -e.] | [kg R11-e.] | [kg Ethen-e.] | |
| A1 - A3 | | 0.241 | 0.110 | 4,20E-6 | 0.065 | |
| | | | | | | |
| Lifecycle | PERE | PERM | PERT | PENRE | PENRM | PENRT |
| (Phases) | [M] | [M] | [LM] | [M] | [MJ] | [M] |
| A1 - A3 | 60.740 | 1026.000 | 1086.740 | 833.604 | 33.416 | 867.020 |

Database GaBi (ÖKOBAUDAT)

| Lifecycle | GWP | AP | EP | ODP | POCP | |
|-----------|--------------------------|--------------------------|--------------------------|-------------|---------------|---------|
| (Phases) | [kg CO ₂ -e.] | [kg SO ₂ -e.] | [kg PO ₄ -e.] | [kg R11-e.] | [kg Ethen-e.] | |
| A1 - A3 | | 0.153 | 0.027 | 3,93E-6 | 0.022 | |
| C1 - C4 | | 0.022 | 0.004 | 2,01E-7 | 0.002 | |
| A1 - C4 | | 0.180 | 0.032 | 4,14E-6 | 0.024 | |
| | | | | | | |
| Lifecycle | PERE | PERM | PERT | PENRE | PENRM | PENRT |
| (Phases) | [LM] | [MJ] | [MJ] | [MJ] | [M] | [LM] |
| A1 - A3 | 318.742 | 1249.360 | 1565.102 | 660.927 | 52.172 | 712.260 |
| C1 - C4 | 3.656 | -1243.500 | -1238.476 | 43.739 | 0.000 | 62.459 |
| A1 - C4 | 322.780 | 6.119 | 327.847 | 710.069 | 52.224 | 789.941 |