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gdrnxa05a-10 8/2/23 Holzforschung Austria HFA, PLB

Intermediate floor - gdrnxa05a-10

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

Performance rating

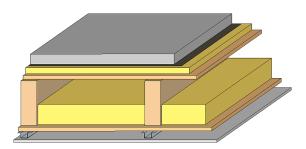
| Fire protection | REI | 30 |
|-----------------------|-----------------|---|
| performance | | |
| maximum span = 5 m; r | naximum load | $E_{d,fi} = 2,62 \text{ kN/m}^2$ (without floor |
| construction and 12mm | OSB; with ceili | ng beam 60/200) |
| Classified by HFA | | |
| Classified by HFA | | |
| Germany | | |

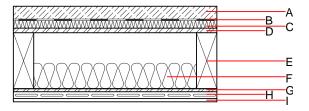
F30

Load $E_{d,fi}$ according to the German certification document Corresponding proof: DIN 4102-4:2016-05, Tabelle 10.12, Zeile 1

| Thermal performance | U Diffusion | suitable |
|------------------------|---|--------------------------|
| Acoustic performance | R _w (C;C _{tr}) L _{n,w} (C _l) | 58(-1;-7) dB 61(0) |
| Assessed by Müller-BBM | | |
| Mass per unit area | m | 158.10 kg/m ² |

Calculation based on gypsum plaster board type DF





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 | с | EN | | |
| ٩ | 50.0 | anhydrite screed | 0.700 | 10 | 2200 | 1.300 | A1 | |
| 3 | | plastic separation layer | 0.200 | 100000 | 1400 | 1.400 | E | |
| 2 | 30.0 | impact sound absorbing subflooring MW-T | 0.035 | 1 | 68 | 1.030 | A1 | |
| C | 18.0 | OSB | 0.130 | 200 | 600 | 1.700 | D | |
| - | 220.0 | construction timber (80/; e=625) | 0.120 | 50 | 450 | 1.600 | D | |
| - | 100.0 | Wood fibre insulation [039; 45] | 0.039 | 1 - 2 | 45 | 2.100 | E | |
| Ĵ | 12.0 | OSB | 0.130 | 200 | 600 | 1.700 | D | |
| ł | 27.0 | resilient channel | | | | | | |
| | 12.5 | gypsum plaster board type DF or | 0.250 | 10 | 800 | 1.050 | A2 | |
| | 12.5 | gypsum fibre board | 0.320 | 21 | 1000 | 1.100 | A2 | |

Sustainability rating (per m²)

| Database ecoinvent | | Database GaBi (ÖKOBAUDAT) | | | | |
|---------------------|------|---|--------------------|---------|--|--|
| OI3 _{Kon} | 38.2 | Built-in renewable materials | kg | 36.680 | | |
| Calculated by HFA | | Biogenic carbon in kg CO ₂ -e. | kg CO ₂ | 54.940 | | |
| carcalated by three | | Energy use of Primary Energy | MJ | 894.300 | | |
| | | Share of renewable PE | % | 27.33 | | |
| | | Calculated by TUM | | | | |

dataholz.eu – Catalogue of timber building materials, components and component connections reviewed to consider thermal, acoustic, fire performance requirements and ecological drivers for timber construction released by accredited testing institutes. These datasheets will generally be accepted as proofs of compliance by building authorities.

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Designation: Last updated: Source: Editor: gdrnxa05a-10 8/2/23 Holzforschung Austria HFA, PLB

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 | | 0.158 | 0.076 | 2,72E-6 | 0.029 | |
| | | | | | | |
| Lifecycle | PERE | PERM | PERT | PENRE | PENRM | PENRT |
| (Phases) | [LM] | [M] | [M] | [LM] | [MJ] | [MJ] |
| A1 - A3 | 127.914 | 595.135 | 723.050 | 568.172 | 32.259 | 600.431 |

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 | | 0.148 | 0.024 | 7,61E-7 | 0.034 | |
| C1 - C4 | | 0.009 | 0.002 | 5,72E-8 | 0.001 | |
| A1 - C4 | | 0.161 | 0.027 | 8,26E-7 | 0.034 | |
| | | | | | | |
| Lifecycle | PERE | PERM | PERT | PENRE | PENRM | PENRT |
| (Phases) | [MJ] | [MJ] | [LM] | [LM] | [MJ] | [M] |
| A1 - A3 | 242.490 | 777.006 | 1020.623 | 629.572 | 42.522 | 672.230 |
| C1 - C4 | 1.531 | -771.086 | -768.417 | 14.927 | -28.210 | 2.316 |
| A1 - C4 | 244.402 | 6.178 | 253.329 | 649.901 | 14.364 | 688.141 |