

Intermediate floor - gdrnxa05b-01

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

Performance rating

Fire protection performance REI 60

maximum span = 5 m; maximum load $E_{d,fi} = 3,66 \text{ kN/m}^2$ (without floor construction and 12mm OSB; with ceiling beam 80/200)

Classified by IBS

Classified by HFA

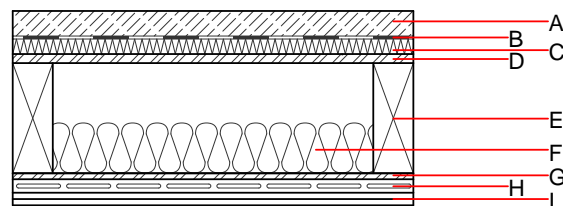
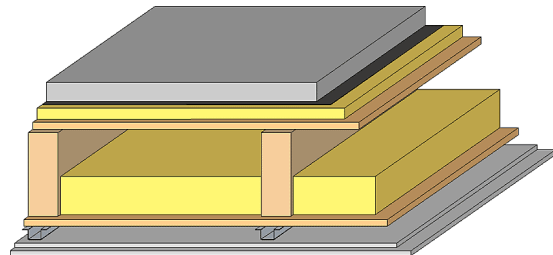
Thermal performance U Diffusion 0.25 W/(m²K) suitable

Acoustic performance R_w (C;C_{tr}) 58(-2;-8) dB
 $L_{n,w}$ (C_i) 60(0)

Assessed by TGM

Mass per unit area m 169.80 kg/m²

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 EN |
|---|-----------|---|---------------------|-----------------|--------|-------|---------------------|
| | | | λ | μ min – max | ρ | c | |
| 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 | impact sound absorbing subflooring MW-T | 0.035 | 1 | 68 | 1.030 | A1 |
| D | 18.0 | OSB | 0.130 | 200 | 600 | 1.700 | D |
| E | 200.0 | construction timber (80/...; e=625) | 0.120 | 50 | 450 | 1.600 | D |
| F | 100.0 | mineral wool [040; ≥ 16 ; $< 1000^\circ\text{C}$] | 0.040 | 1 | 16 | 1.030 | A1 |
| G | 12.0 | OSB | 0.130 | 200 | 600 | 1.700 | D |
| H | 27.0 | resilient channel | | | | | |
| 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

013_{Kon} 43.1

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 | | 0.170 | 0.081 | 3,10E-6 | 0.030 | |

| Lifecycle (Phases) | PERE [MJ] | PERM [MJ] | PERT [MJ] | PENRE [MJ] | PENRM [MJ] | PENRT [MJ] |
|-----------------------|--------------|--------------|--------------|---------------|---------------|---------------|
| A1 - A3 | 121.693 | 502.666 | 624.359 | 618.232 | 25.504 | 643.736 |