

Intermediate floor - gdrnxa03a-04

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

Performance rating

Fire protection performance REI 30

maximum span = 5 m; maximum load $E_{d,fi} = 2,62 \text{ kN/m}^2$
 Classified by HFA

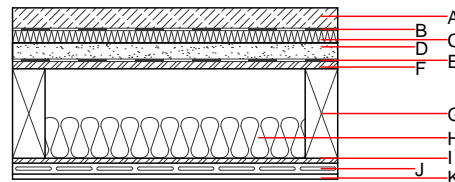
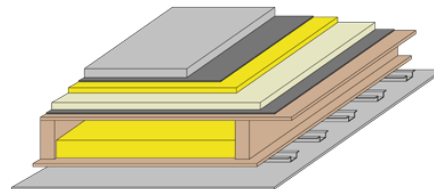
Thermal performance U Diffusion 0.24 $\text{W}/(\text{m}^2\text{K})$
 suitable

Calculated by HFA

Acoustic performance $R_w (C; C_{tr})$ 67(-8; 17) dB
 $L_{n,w} (C_i)$ 50(6)

Assessed by TGM

Mass per unit area m



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 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 | 40.0 | fill | 0.700 | 1 | 1800 | 1.000 | A1 |
| E | | trickling protection | | | | | E |
| F | 18.0 | OSB | 0.130 | 200 | 600 | 1.700 | D |
| G | 220.0 | construction timber (80/...; e=*) | 0.120 | 50 | 450 | 1.600 | D |
| H | 100.0 | mineral wool [038; ≥33; ≥1000°C] | 0.038 | 1 | 33 | 1.030 | A1 |
| I | 12.0 | OSB | 0.130 | 200 | 600 | 1.700 | D |
| J | 27.0 | resilient channel | | | | | |
| K | 12.5 | gypsum plaster board type DF or | 0.250 | 10 | 800 | 1.050 | A2 |
| K | 12.5 | gypsum fibre board | 0.320 | 21 | 1000 | 1.100 | A2 |

Sustainability rating (per m^2)

Database ecoinvent

$OI3_{Kon}$ 44.8

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 | | 0.188 | 0.081 | 2,73E-6 | 0.045 | |

| Lifecycle (Phases) | PERE [MJ] | PERM [MJ] | PERT [MJ] | PENRE [MJ] | PENRM [MJ] | PENRT [MJ] |
|-----------------------|--------------|--------------|--------------|---------------|---------------|---------------|
| A1 - A3 | 122.896 | 523.630 | 646.525 | 596.360 | 29.327 | 625.687 |