

Intermediate floor - gdrtn01a-04

intermediate floor, timber frame construction, not suspended, dry, with filling, other surface

Performance rating

Fire protection performance REI 30

maximum span = 5 m; maximum load $E_{d,fi} = 3,66 \text{ kN/m}^2$
 Classified by HFA

Thermal performance U 0.26 W/(m²K)
 Diffusion suitable

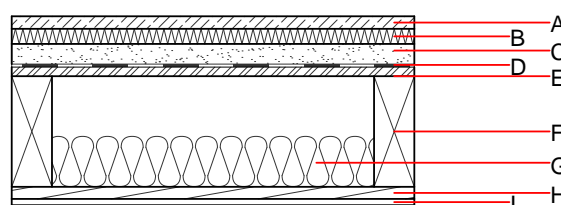
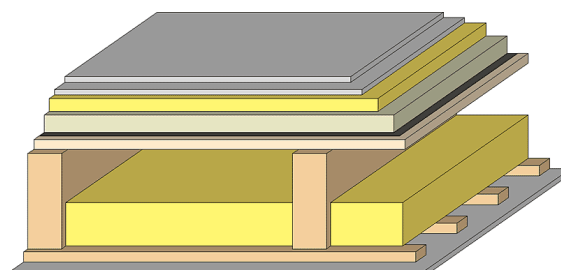
Calculated by HFA

Acoustic performance $R_w (C; C_{tr})$ 63(-3;-12) dB
 $L_{n,w} (C_i)$ 58(2)

Assessed by TGM

Mass per unit area m 135.80 kg/m²

Calculation based on GF



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 | 25.0 | dry screed | 0.210 | 8 | 900 | 1.050 | A1 |
| B | 30.0 | impact sound absorbing subflooring MW-T | 0.035 | 1 | 68 | 1.030 | A1 |
| C | 40.0 | fill | 0.700 | 1 | 1800 | 1.000 | A1 |
| D | | trickling protection | | | | | E |
| E | 18.0 | OSB | 0.130 | 200 | 600 | 1.700 | D |
| F | 220.0 | construction timber (80/...; e=*) | 0.120 | 50 | 450 | 1.600 | D |
| G | 100.0 | mineral wool [038; ≥33; ≥1000°C] | 0.038 | 1 | 33 | 1.030 | A1 |
| H | 24.0 | spruce wood cladding with spacing of cladding boards(24/100); a=400 | 0.120 | 50 | 450 | 1.600 | D |
| I | 12.5 | gypsum plaster board type DF or | 0.250 | 10 | 800 | 1.050 | A2 |
| I | 12.5 | gypsum fibre board | 0.320 | 21 | 1000 | 1.100 | A2 |

Sustainability rating (per m²)

Database ecoinvent

013_{Kon} 30.8

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 | | 0.139 | 0.053 | 2,37E-6 | 0.037 | |

| Lifecycle (Phases) | PERE [MJ] | PERM [MJ] | PERT [MJ] | PENRE [MJ] | PENRM [MJ] | PENRT [MJ] |
|-----------------------|--------------|--------------|--------------|---------------|---------------|---------------|
| A1 - A3 | 97.345 | 455.553 | 552.897 | 442.044 | 16.832 | 458.875 |