

## Intermediate floor - gdrnxa05a-01

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

### Performance rating

**Fire protection performance** REI 30

maximum span = 5 m; maximum load  $E_{d,fi}$  = 2,62 kN/m<sup>2</sup> (without floor construction and 12mm OSB; with ceiling beam 60/200)

Classified by IBS

Classified by HFA

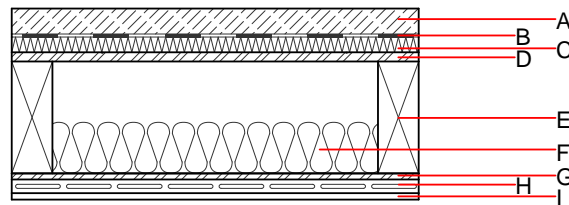
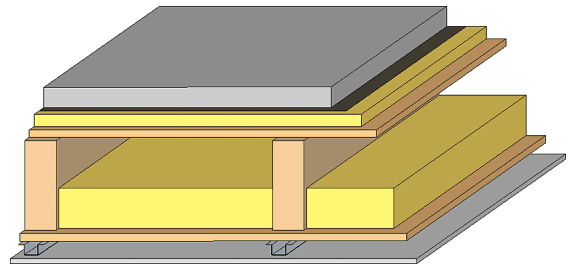
**Thermal performance** U 0.26 W/(m<sup>2</sup>K)  
Diffusion suitable

**Acoustic performance**  $R_w$  (C;C<sub>tr</sub>) 58(-2;-8) dB  
 $L_{n,w}$  (C<sub>i</sub>) 61(0)

Assessed by TGM

**Mass per unit area** m 149.80 kg/m<sup>2</sup>

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<br>EN |
|---|-----------|---|---------------------|-----------------|--------|-------|------------------------|
|   |           |   | $\lambda$           | $\mu$ min – max | $\rho$ | c     |                        |
| A | 50.0      | anhydrite 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°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 | 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 m<sup>2</sup>)

#### Database ecoinvent

013<sub>kon</sub> 40.7

Calculated by HFA

## Details of sustainability rating

### Database ecoinvent

| Lifecycle<br>(Phases) | GWP<br>[kg CO <sub>2</sub> -e.] | AP<br>[kg SO <sub>2</sub> -e.] | EP<br>[kg PO <sub>4</sub> -e.] | ODP<br>[kg R11-e.] | POCP<br>[kg Ethen-e.] |  |
|-----------------------|---------------------------------|--------------------------------|--------------------------------|--------------------|-----------------------|--|
| A1 - A3               |                                 | 0.165                          | 0.079                          | 2,82E-6            | 0.029                 |  |

| Lifecycle<br>(Phases) | PERE<br>[MJ] | PERM<br>[MJ] | PERT<br>[MJ] | PENRE<br>[MJ] | PENRM<br>[MJ] | PENRT<br>[MJ] |
|-----------------------|--------------|--------------|--------------|---------------|---------------|---------------|
| A1 - A3               | 119.409      | 502.666      | 622.074      | 577.950       | 25.504        | 603.454       |