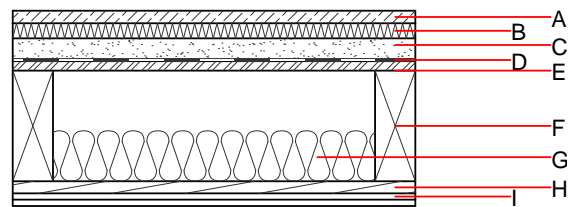
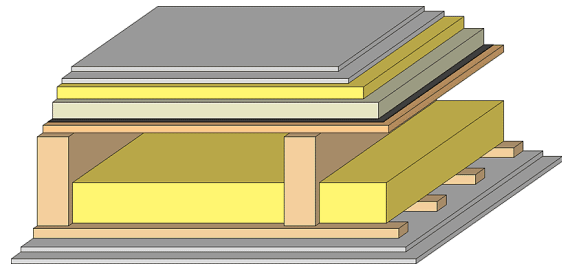


### Intermediate floor - gdrtn01b-06

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

#### Performance rating

|                                                                                        |                                     |                                                  |
|----------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------|
| <b>Fire protection performance</b>                                                     | REI                                 | 60                                               |
| maximum span = 5 m; maximum load $E_{d,fi} = 3,66 \text{ kN/m}^2$<br>Classified by HFA |                                     |                                                  |
| <b>Thermal performance</b>                                                             | U<br>Diffusion                      | 0.27 $\text{W}/(\text{m}^2\text{K})$<br>suitable |
| Calculated by HFA                                                                      |                                     |                                                  |
| <b>Acoustic performance</b>                                                            | $R_w (C;C_{tr})$<br>$L_{n,w} (C_i)$ | 63(-5;-12) dB<br>58(1)                           |
| Assessed by TGM                                                                        |                                     |                                                  |
| <b>Mass per unit area</b>                                                              | m                                   | 144.30 $\text{kg}/\text{m}^2$                    |
| 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<br>EN |
|---|-----------|--------------------------------------------------------------------------|---------------------|-----------------|--------|-------|------------------------|
|   |           |                                                                          | $\lambda$           | $\mu$ min – max | $\rho$ | 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     | sheep wool [0,041; R=16]                                                 | 0.041               | 1               | 16     | 1.720 | E                      |
| H | 24.0      | spruce wood cladding with spacing of cladding boards(24/100);<br>$a=400$ | 0.120               | 50              | 450    | 1.600 | D                      |
| 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 $\text{m}^2$ )

##### Database ecoinvent

$OI3_{kon}$  26.2

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               |                                 | 0.108                          | 0.047                          | 2,62E-6            | 0.021                 |  |

| Lifecycle<br>(Phases) | PERE<br>[MJ] | PERM<br>[MJ] | PERT<br>[MJ] | PENRE<br>[MJ] | PENRM<br>[MJ] | PENRT<br>[MJ] |
|-----------------------|--------------|--------------|--------------|---------------|---------------|---------------|
| A1 - A3               | 97.821       | 487.670      | 585.491      | 437.903       | 17.145        | 455.049       |