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Designation: Last updated: Source: Editor: awropo19a-06 8/2/23 Holzforschung Austria HFA, SP

# External wall - awropo19a-06

external wall, timber frame construction, not ventilated, without dry lining, with rendering, other surface

#### Performance rating A Fire protection **REI** from inside 60 **REI** from outside 60 performance В maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 32,0 kN/m С Classified by HFA Е U Thermal performance $0.20 \text{ W/(m^2 K)}$ Diffusion F suitable Calculated by HFA G Acoustic performance $R_w$ (C;C<sub>tr</sub>) 51(-3;-9) dB L<sub>n,w</sub> (C<sub>l</sub>) Assessed by MA39 D Mass per unit area m 73.40 kg/m<sup>2</sup> Calculation based on gypsum plaster board type DF

Note: e=625

### Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

|   | Thickness | Building material                            | Thermal per | rformance   |      |       | Reaction to fire |
|---|-----------|--|-------------|-------------|------|-------|------------------|
|   |           |  | λ           | µ min – max | ρ    | с     | EN               |
| 4 | 7.0       | plaster                                      | 1.000       | 10 - 35     | 2000 | 1.130 | A1               |
| В | 60.0      | wood-fibre insulation board WF-PT [045; 180] | 0.045       | 5 - 7       | 180  | 2.100 | E                |
| С | 15.0      | fibreboard (MDF)                             | 0.140       | 11          | 600  | 1.700 | D                |
| D | 160.0     | construction timber (60/; $e=*$ )            | 0.120       | 50          | 450  | 1.600 | D                |
| - | 160.0     | cellulose fibre [040; E]                     | 0.040       | 1 - 2       | 55   | 2.000 | E                |
| - | 15.0      | OSB (sealed with airtight tape)              | 0.130       | 200         | 600  | 1.700 | D                |
| Ĵ | 12.5      | gypsum plaster board type DF or              | 0.250       | 10          | 800  | 1.050 | A2               |
| 5 | 12.5      | gypsum fibre board                           | 0.320       | 21          | 1000 | 1.100 | A2               |

## Sustainability rating (per m<sup>2</sup>)

#### Database ecoinvent

OI3<sub>Kon</sub>

Calculated by HFA

30.1

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### Details of sustainability rating

#### Database ecoinvent

| Lifecycle             | GWP                      | AP                       | EP                       | ODP           | POCP          |               |
|-----------------------|--------------------------|--------------------------|--------------------------|---------------|---------------|---------------|
| (Phases)              | [kg CO <sub>2</sub> -e.] | [kg SO <sub>2</sub> -e.] | [kg PO <sub>4</sub> -e.] | [kg R11-e.]   | [kg Ethen-e.] |               |
| A1 - A3               |                          | 0.141                    | 0.060                    | 2,52E-6       | 0.020         |               |
|                       |                          |                          |                          |               |               |               |
|                       |                          |                          |                          | 1             | 1             |               |
| Lifecycle             | PERE                     | PERM                     | PERT                     | PENRE         | PENRM         | PENRT         |
| Lifecycle<br>(Phases) | PERE<br>[MJ]             | PERM<br>[MJ]             | PERT<br>[MJ]             | PENRE<br>[MJ] | PENRM<br>[MJ] | PENRT<br>[MJ] |

dataholz.eu – Catalogue of timber building materials, components and component connections reviewed to consider thermal, acoustic, fire performance requirements and ecological drivers for timber construction released by accredited testing institutes. These datasheets will generally be accepted as proofs of compliance by building authorities.