



## Apartment Block



|                      |           |
|----------------------|-----------|
| Region               | south     |
| Age Class            | 1984-1994 |
| Net leased area [m²] | 1672.1    |
| Storey Height [m]    | 2.7       |
| Storeys a.g.         | 4.0       |



### Exterior Wall

|                          |               |            |            |
|--------------------------|---------------|------------|------------|
| Type: massive-monolithic | U [W/m²K]     |            |            |
|                          | Actual: 0.370 | Min: 0.160 | Max: 0.600 |

| Layer | Material Name        | $t_i$ [m] | $\rho_i$ [kg/m³] | $\lambda_i$ [W/mK] | $c_i$ [J/kgK] | EPD <sub>1</sub> | EPD <sub>2</sub> |
|-------|----------------------|-----------|------------------|--------------------|---------------|------------------|------------------|
| 0     | interior plaster     | 0.01      | 1400             | 0.7                | 850           | 9                | -                |
| 1     | pumice hollow blocks | 0.3       | 1600             | 0.56               | 1050          | 13               | -                |
| 2     | mineral wool         | 0.08      | 60               | 0.04               | 850           | 3                | -                |
| 3     | exterior plaster     | 0.015     | 1600             | 0.87               | 850           | 1                | -                |

### Interior Wall

|  |               |            |            |
|--|---------------|------------|------------|
|  | U [W/m²K]     |            |            |
|  | Actual: 2.420 | Min: 0.140 | Max: 0.300 |

| Layer | Material Name | $t_i$ [m] | $\rho_i$ [kg/m³] | $\lambda_i$ [W/mK] | $c_i$ [J/kgK] | EPD <sub>1</sub> | EPD <sub>2</sub> |
|-------|---------------|-----------|------------------|--------------------|---------------|------------------|------------------|
| 0     | lime plaster  | 0.01      | 1600             | 0.7                | 850           | 9                | -                |
| 1     | solid brick   | 0.15      | 1800             | 0.7                | 850           | 13               | -                |
| 2     | lime plaster  | 0.01      | 1600             | 0.7                | 850           | 3                | -                |

### Roof

|              |               |            |            |
|--------------|---------------|------------|------------|
| Type: wooden | U [W/m²K]     |            |            |
|              | Actual: 0.150 | Min: 0.160 | Max: 0.500 |

| Layer | Material Name         | $t_i$ [m] | $\rho_i$ [kg/m³] | $\lambda_i$ [W/mK] | $c_i$ [J/kgK] | EPD <sub>1</sub> | EPD <sub>2</sub> |
|-------|-----------------------|-----------|------------------|--------------------|---------------|------------------|------------------|
| 0     | gypsum plasterboard   | 0.013     | 900              | 0.21               | 1228          | 18               | -                |
| 1     | rafters               | 0.08      | 600              | 0.13               | 1500          | 17               | -                |
| 2     | moving air layer      | 0.06      | 1.184            | 0.0261             | 1.005         | 12               | -                |
| 3     | polyethylene underlay | 0.005     | 900              | 0.35               | 2300          | 4                | -                |
| 4     | glass wool            | 0.14      | 120              | 0.04               | 840           | 5                | -                |
| 5     | roof tiles            | 0.02      | 1786             | 0.55               | 889           | 14               | -                |



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### Foundation

|               |               |            |            |
|---------------|---------------|------------|------------|
| Type: massive | U [W/m²K]     |            |            |
|               | Actual: 1.770 | Min: 0.170 | Max: 0.800 |

| Layer | Material Name       | $t_i$ [m] | $\rho_i$ [kg/m³] | $\lambda_i$ [W/mK] | $c_i$ [J/kgK] | EPD <sub>1</sub> | EPD <sub>2</sub> |
|-------|---------------------|-----------|------------------|--------------------|---------------|------------------|------------------|
| 0     | cement screed       | 0.04      | 2000             | 1.4                | 1000          | 8                | -                |
| 1     | mineral wool        | 0.01      | 60               | 0.04               | 850           | 3                | -                |
| 2     | reinforced concrete | 0.153     | 2400             | 2.04               | 776           | 11               | -                |

### Floor

|               |            |            |
|---------------|------------|------------|
| Actual: 2.420 | U [W/m²K]  |            |
|               | Min: 0.140 | Max: 0.300 |

| Layer | Material Name       | $t_i$ [m] | $\rho_i$ [kg/m³] | $\lambda_i$ [W/mK] | $c_i$ [J/kgK] | EPD <sub>1</sub> | EPD <sub>2</sub> |
|-------|---------------------|-----------|------------------|--------------------|---------------|------------------|------------------|
| 0     | cement screed       | 0.04      | 1950             | 1.4                | 1000          | 8                | -                |
| 1     | mineral wool        | 0.04      | 60               | 0.035              | 850           | 15               | -                |
| 2     | reinforced concrete | 0.2       | 2400             | 2.1                | 776           | 10               | -                |

### Window System

| Glazing | EPD <sub>Gl</sub> | Frame type | EPD <sub>Fr</sub> | window wall share |
|---------|-------------------|------------|-------------------|-------------------|
| 2       | 16                | pvc        | 6                 | 0.20694           |

### Heating System

| Generator 1                       | EPD | Heating energy carrier | EPD |
|-----------------------------------|-----|------------------------|-----|
| boiler_gas_medium_low_temperature | 2   | gas                    | 7   |



## Apartment Block

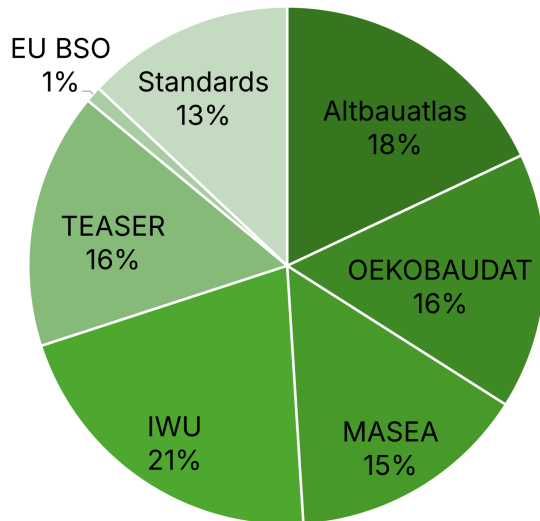


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## EPD Summary Table

| SPN | Full EPD ID                          | Material Title                                                          |
|-----|--------------------------------------|-------------------------------------------------------------------------|
| 1   | 004f3f4e-5bb8-4d9e-a104-6999a9e8ad5b | Gypsum lime plaster                                                     |
| 2   | 230155d8-a5df-4b32-b6e9-46bdbcf526b3 | Gas low temperature boiler 20-120 kW (upright unit)                     |
| 3   | 50d421e2-3a7b-4659-92a4-f20d6a52fcf0 | Mineral wool (facade insulation)                                        |
| 4   | 6869f7c1-1b2b-4f30-afc9-823a0104f1d9 | Damp insulation PE                                                      |
| 5   | 7091503e-34e5-44cd-9acb-7c2f16f6097f | Foam glass insulation material                                          |
| 6   | 73de9e80-8ed2-47d8-b5b6-854c84166f24 | Window sash PVC-U                                                       |
| 7   | 84aa7483-9824-49a9-a3e3-f9fb092ea7b7 | Use - 1 kWh of final energy from gas calorific value (according to GEG) |
| 8   | 86d919ee-8f30-4ca4-9b7e-717aecba6ac0 | Cement screed                                                           |
| 9   | 9a670d29-efb9-4fde-95ab-182a0b1e7280 | Lime gypsum interior plaster                                            |
| 10  | Synthetic_2                          | Concrete C30/37 with reinforcement steel                                |
| 11  | Synthetic_7                          | Ready-mix concrete C30/37 with reinforcement steel                      |
| 12  | Synthetic_8                          | Air layer                                                               |
| 13  | a1dec7-6fa9-4266-bc86-da75b3653b06   | Lightweight concrete block from 100% natural pumice                     |
| 14  | a6d60a75-7a4e-4dfc-87cc-fd40f68d279a | Roofing tiles (including accessories)                                   |
| 15  | ac779922-219f-4730-9aef-a7da84d334c1 | Mineral wool (floor insulation)                                         |
| 16  | dcf38066-e336-46a7-b0a8-b2453dd2872d | Window glass, single                                                    |
| 17  | efa55966-4f29-4f15-bfec-8c08b3945923 | Glued laminated timber                                                  |
| 18  | f6878cee-a4bd-43da-a830-c64b975cb957 | DRY SCREED PLASTERBOARD / Tool                                          |



This archetype represents :

- **1.10%** of all Apartment Blocks
- **9.44%** of all Apartment Blocks of the specific region

| Data source | Link                                                                                                                                                           |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Altbauatlas | <a href="https://www.altbauatlas.de/index.php">https://www.altbauatlas.de/index.php</a>                                                                        |
| OEKOBAUDAT  | <a href="https://www.oekobaudat.de/en.html">https://www.oekobaudat.de/en.html</a>                                                                              |
| IWU         | <a href="https://datenbasis.iwu.de/">https://datenbasis.iwu.de/</a><br><a href="https://wohngebaeuedaten2016.iwu.de/">https://wohngebaeuedaten2016.iwu.de/</a> |
| MASEA       | <a href="https://www.masea-ensan.de/">https://www.masea-ensan.de/</a>                                                                                          |
| TEASER      | <a href="https://ebc-tools.eonerc.rwth-aachen.de/en/teaser">https://ebc-tools.eonerc.rwth-aachen.de/en/teaser</a>                                              |
| EU BSO      | <a href="https://building-stock-observatory.energy.ec.europa.eu/database/">https://building-stock-observatory.energy.ec.europa.eu/database/</a>                |