



## Apartment Block



|                                   |           |
|-----------------------------------|-----------|
| Region                            | south     |
| Age Class                         | 1958-1968 |
| Net leased area [m <sup>2</sup> ] | 1168.8    |
| Storey Height [m]                 | 2.7       |
| Storeys a.g.                      | 4.0       |



### Exterior Wall

|                          |                        |            |            |
|--------------------------|------------------------|------------|------------|
| Type: massive-monolithic | U [W/m <sup>2</sup> K] |            |            |
|                          | Actual: 0.450          | Min: 0.180 | Max: 1.400 |

| Layer | Material Name    | t <sub>i</sub> [m] | ρ <sub>i</sub> [kg/m <sup>3</sup> ] | λ <sub>i</sub> [W/mK] | c <sub>i</sub> [J/kgK] | EPD <sub>1</sub> | EPD <sub>2</sub> |
|-------|------------------|--------------------|-------------------------------------|-----------------------|------------------------|------------------|------------------|
| 0     | interior plaster | 0.01               | 1400                                | 0.7                   | 850                    | 9                | -                |
| 1     | mineral wool     | 0.06               | 60                                  | 0.04                  | 850                    | 4                | -                |
| 2     | slag blocks      | 0.365              | 1350                                | 0.7                   | 1050                   | 2                | -                |
| 3     | exterior plaster | 0.0155             | 1600                                | 0.87                  | 850                    | 1                | -                |

### Interior Wall

|  |                        |            |            |
|--|------------------------|------------|------------|
|  | U [W/m <sup>2</sup> K] |            |            |
|  | Actual: 2.170          | Min: 0.190 | Max: 2.100 |

| Layer | Material Name | t <sub>i</sub> [m] | ρ <sub>i</sub> [kg/m <sup>3</sup> ] | λ <sub>i</sub> [W/mK] | c <sub>i</sub> [J/kgK] | EPD <sub>1</sub> | EPD <sub>2</sub> |
|-------|---------------|--------------------|-------------------------------------|-----------------------|------------------------|------------------|------------------|
| 0     | gypsum        | 0.015              | 850                                 | 0.3                   | 1000                   | 9                | -                |
| 1     | solid brick   | 0.15               | 1800                                | 0.79                  | 850                    | 4                | -                |
| 2     | gypsum        | 0.015              | 850                                 | 0.3                   | 1000                   | 2                | -                |

### Roof

|              |                        |            |            |
|--------------|------------------------|------------|------------|
| Type: wooden | U [W/m <sup>2</sup> K] |            |            |
|              | Actual: 0.210          | Min: 0.180 | Max: 1.400 |

| Layer | Material Name    | t <sub>i</sub> [m] | ρ <sub>i</sub> [kg/m <sup>3</sup> ] | λ <sub>i</sub> [W/mK] | c <sub>i</sub> [J/kgK] | EPD <sub>1</sub> | EPD <sub>2</sub> |
|-------|------------------|--------------------|-------------------------------------|-----------------------|------------------------|------------------|------------------|
| 0     | interior plaster | 0.01               | 1400                                | 0.7                   | 850                    | 9                | -                |
| 1     | rafters          | 0.08               | 455                                 | 0.14                  | 1500                   | 17               | -                |
| 2     | moving air layer | 0.06               | 1.184                               | 0.0261                | 1.005                  | 11               | -                |
| 3     | wood wool        | 0.12               | 469                                 | 0.08                  | 1470                   | 16               | -                |
| 4     | reedy mat        | 0.01               | 215                                 | 0.081                 | 2000                   | 5                | -                |
| 5     | roof tiles       | 0.02               | 1786                                | 0.55                  | 889                    | 12               | -                |



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### Foundation

| Type: massive | U [W/m²K]     |            |            |
|---------------|---------------|------------|------------|
|               | Actual: 1.340 | Min: 0.180 | Max: 1.500 |

| 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     | cement screed  | 0.04      | 1950             | 1.4                | 1000          | 8                | -                |
| 1     | mineral wool   | 0.01      | 60               | 0.04               | 850           | 4                | -                |
| 2     | ceiling bricks | 0.225     | 1788             | 0.87               | 868           | 14               | -                |

### Floor

| Actual: 2.170 | U [W/m²K]  |            |
|---------------|------------|------------|
|               | Min: 0.190 | Max: 2.100 |

| 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     | floating cement screed | 0.05      | 1940             | 1.4                | 1000          | 18               | -                |
| 1     | mineral wool           | 0.03      | 60               | 0.09               | 850           | 13               | -                |
| 2     | reinforced concrete    | 0.18      | 2104             | 2.04               | 776           | 10               | -                |

### Window System

| Glazing | EPD <sub>Gl</sub> | Frame type | EPD <sub>Fr</sub> | window wall share |
|---------|-------------------|------------|-------------------|-------------------|
| 2       | 15                | pvc        | 6                 | 0.17674           |

### Heating System

| Generator 1                       | EPD | Heating energy carrier | EPD |
|-----------------------------------|-----|------------------------|-----|
| boiler_gas_medium_low_temperature | 3   | gas                    | 7   |



## Apartment Block

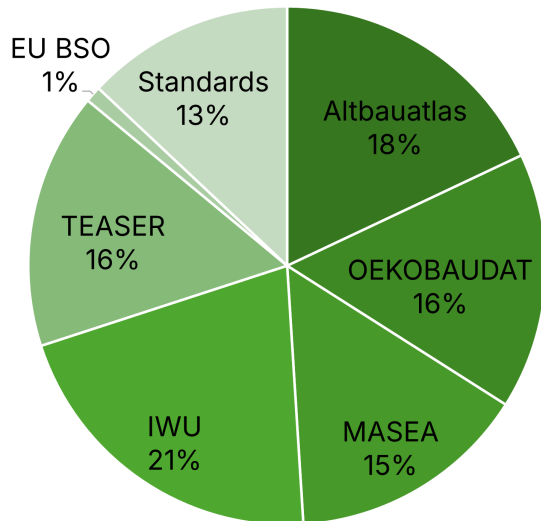


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## EPD Summary Table

| SPN | Full EPD ID                          | Material Title                                                                                                                          |
|-----|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 004f3f4e-5bb8-4d9e-a104-6999a9e8ad5b | Gypsum lime plaster                                                                                                                     |
| 2   | 0a7ca5e9-a056-48a0-8cd6-db0b10d2005c | Building products made of concrete and concrete elements - Firmengruppe Max Bögl - Concrete C30/37 ground granulated blast furnace slag |
| 3   | 230155d8-a5df-4b32-b6e9-46bdbcf526b3 | Gas low temperature boiler 20-120 kW (upright unit)                                                                                     |
| 4   | 50d421e2-3a7b-4659-92a4-f20d6a52fcf0 | Mineral wool (facade insulation)                                                                                                        |
| 5   | 51fa051b-38fb-422f-96e2-b2ee6e6f9445 | Wallcoverings on cellulose fibre base                                                                                                   |
| 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_8                          | Air layer                                                                                                                               |
| 12  | a6d60a75-7a4e-4dfc-87cc-fd40f68d279a | Roofing tiles (including accessories)                                                                                                   |
| 13  | ac779922-219f-4730-9aef-a7da84d334c1 | Mineral wool (floor insulation)                                                                                                         |
| 14  | cc0d7baa-755a-4a4a-baf3-4fe53d68a041 | Sand-lime brick                                                                                                                         |
| 15  | dcf38066-e336-46a7-b0a8-b2453dd2872d | Window glass, single                                                                                                                    |
| 16  | ee0c4b18-f9c9-44d1-8766-36db08856a2f | Wood fiber insulation - dry process (German average)                                                                                    |
| 17  | efa55966-4f29-4f15-bfec-8c08b3945923 | Glued laminated timber                                                                                                                  |
| 18  | fe371be5-c72f-4203-8569-a085ef375ba4 | CALCIUM SULPHATE FLOWING SCREED AND CONVENTIONAL CALCIUM SULPHATE SCREED                                                                |



This archetype represents :

- 10.65% of all Apartment Blocks
- 12.86% 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>                |