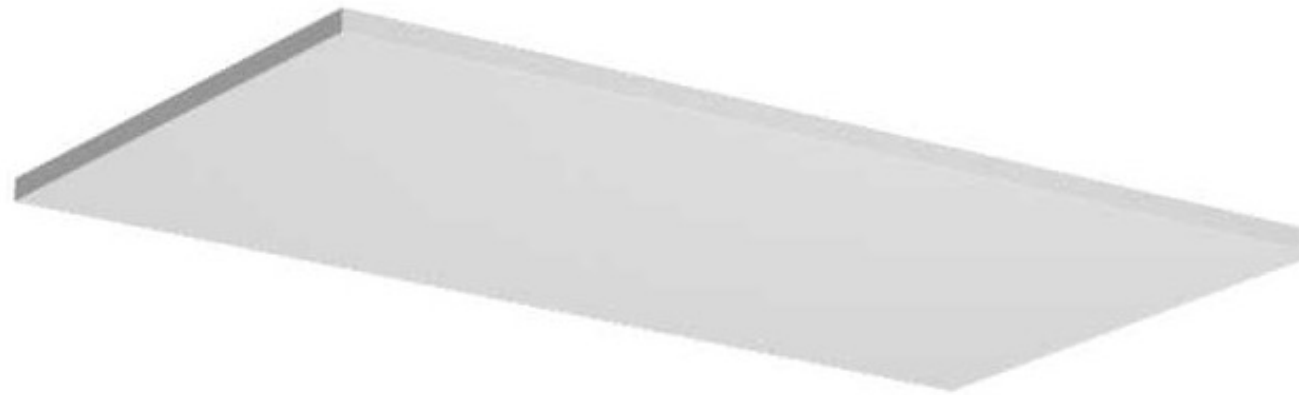


## Environmental Product Declaration (EPD)

According to ISO 14025 and EN  
15804+A2:2019

# StoSilent Board 100 S; 105 C; 110 S

|                      |                        |
|----------------------|------------------------|
| Registration number: | EPD-Kiwa-EE-245282-EN  |
| Issue date:          | 12-10-2026             |
| Valid until:         | 12-10-2031             |
| Declaration owner:   | Sto SE & Co. KGaA      |
| Publisher:           | Kiwa-Ecobility Experts |
| Programme operator:  | Kiwa-Ecobility Experts |
| Status:              | verified               |



## 1 General information

### 1.1 PRODUCT

StoSilent Board 100 S; 105 C; 110 S

### 1.2 REGISTRATION NUMBER

EPD-Kiwa-EE-245282-EN

### 1.3 VALIDITY

**Issue date:** 12-10-2026

**Valid until:** 12-10-2031

### 1.4 PROGRAMME OPERATOR

Kiwa-Ecobility Experts  
Wattstraße 11-13  
13355 Berlin  
DE



Raoul Mancke

*(Head of programme operations, Kiwa-Ecobility Experts)*



Dr. Ronny Stadie

*(Verification body, Kiwa-Ecobility Experts)*

### 1.5 OWNER OF THE DECLARATION

**Declaration owner:** Sto SE & Co. KGaA

**Address:** Ehrenbachstraße 1, D-79780 Stühlingen, Germany

**E-mail:** [infoservice@sto.com](mailto:infoservice@sto.com)

**Website:** <https://www.sto.com>

**Production location:** Liaver GmbH & Co KG

**Address production location:** Gewerbepark „Am Wald“ 17, 98693 Ilmenau, Germany

### 1.6 VERIFICATION OF THE DECLARATION

The independent verification is in accordance with the ISO 14025:2011. The LCA is in compliance with ISO 14040:2006 and ISO 14044:2006. The EN 15804+A2:2019 serves as the core PCR.

☐ Internal ☒ External



Vijay Thakur, Vijay Thakur

### 1.7 STATEMENTS

The owner of this EPD shall be liable for the underlying information and evidence. The programme operator Kiwa-Ecobility Experts shall not be liable with respect to manufacturer data, life cycle assessment data and evidence.

### 1.8 PRODUCT CATEGORY RULES

Kiwa-EE GPI R.4.0 Kiwa-Ecobility Experts, General Programme Instructions “Product Level”, Program EE 1201 (18.12.2025)

Kiwa-EE GPI R.4.0 Annex B1 Kiwa-Ecobility Experts, General Programme Instructions “Product Level” – Annex B1 Environmental Information Programme according to EN 15804 / ISO 21930, Program EE 1203 (18.12.2025)]

Kiwa-Ecobility Experts (Kiwa-EE) – Product Category Rules (PCR B) for acoustical ceiling and wall solutions (Draft, 2023-03-29, v1)

## 1 General information

### 1.9 COMPARABILITY

In principle, a comparison or assessment of the environmental impacts of different products is only possible if they have been prepared in accordance with EN 15804+A2:2019. For the evaluation of the comparability, the following aspects have to be considered in particular: PCR used, functional or declared unit, geographical reference, the definition of the system boundary, declared modules, data selection (primary or secondary data, background database, data quality), scenarios used for use and disposal phases, and the life cycle inventory (data collection, calculation methods, allocations, validity period). PCRs and general program instructions of different EPD program operators may differ. Comparability needs to be evaluated. For further guidance, see EN 15804+A2:2019 and ISO 14025.

### 1.10 CALCULATION BASIS

**LCA method R<THINK:** Ecobility Experts | EN15804+A2

**Characterization method:** RETHINK characterization method (see references for more details)

**LCA database profiles:** ecoinvent (for version see references)

**Version database:** v3.20f (20260507)

### 1.11 LCA BACKGROUND REPORT

This EPD is generated on the basis of the LCA background report 'StoSilent Board 100 S; 105 C; 110 S' with the calculation identifier ReTHiNK-145282.

## 2 Product

### 2.1 PRODUCT DESCRIPTION

This EPD calculates the environmental impact of StoSilent Board 100 S, StoSilent Board 105 C and StoSilent Board 110 S. The input data used is based on StoSilent Board 110 S which demonstrates the highest environmental impact of the group due to its mass per m<sup>2</sup>. Therefore, the calculation is considered a worst-case approach in regard to the product group.

The StoSilent products are acoustic boards made of expanded glass granulate for suspended ceiling and wall structures in accordance with EN 13964:2014 for Suspended ceilings - Requirements and test methods.

Area of application

- interior
- for suspended ceiling and wall structures

| Materials                | Weight (%) |
|--------------------------|------------|
| Expanded glass granulate | 80 - 90    |
| Adhesive Fleece          | 1.5 - 3.0  |
| Glass fiber, nonwoven    | 6.0 - 9.0  |
| Additive                 | < 3        |

For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) Regulation (EU) No. 305/2011 (CPR) applies. The product needs a declaration of performance taking into consideration EN 13964:2014 Ceiling membrane of suspended ceiling and the CE-marking. For the application and use the respective national provisions apply.

The UN CPC Code for the declared product is: 37990 Non-metallic mineral products n.e.c. (including mineral wool, expanded mineral materials, worked mica, articles of mica, non-electrical articles of graphite or other carbon and articles of peat)

### 2.2 APPLICATION (INTENDED USE OF THE PRODUCT)

For suspended ceiling and wall applications requiring acoustic performance.

Application:

- StoSilent Board 105 C: adhesive fixed
- StoSilent Board 110 S: screw fixed, bonded board joints
- StoSilent Board 100 S: screw fixed, bonded board joints

### 2.3 REFERENCE SERVICE LIFE

#### RSL PRODUCT

The Sustainable Building Assessment System BNB specifies the service life of acoustic boards as at least 50 years (Code: 354.115.25).

The use phase is not declared in this EPD, therefore the reference service life according to ISO 15686 is not reported.

#### USED RSL (YR) IN THIS LCA CALCULATION:

50

### 2.4 TECHNICAL DATA

#### StoSilent Board 100 S

- diffusion-equivalent air layer thickness: EN ISO 7783 0.12 m with coating
- reaction to fire: EN 13501-1 A2-s1, d0 with coating
- rated value of thermal conductivity  $\lambda$ : TIAP-655 based on EN 12667 0.09 W/(m\*K) with coating
- mass per unit area: 6.8 kg/m<sup>2</sup>
- Bulk density: 270 kg/m<sup>3</sup>
- sound absorption coefficient: EN ISO 11654 0.80 with coating: varies with suspension height and damping

#### StoSilent Board 105 C

- diffusion-equivalent air layer thickness: EN ISO 7783 0.13 m with coating
- reaction to fire: EN 13501-1 A2-s1, d0 with coating
- rated value of thermal conductivity  $\lambda$ : TIAP-655 based on EN 12667 0.08 W/(m\*K) with coating
- mass per unit area: 6.6 kg/m<sup>2</sup>
- raw density: 265 kg/m<sup>3</sup>
- sound absorption coefficient: EN ISO 11654 0.95 with coating varies with suspension height and damping

#### StoSilent Board 110 S

- diffusion-equivalent air layer thickness: EN ISO 7783 0.13 m with coating
- reaction to fire: EN 13501-1 A2-s1, d0 with coating
- rated value of thermal conductivity  $\lambda$ : TIAP-655 based on EN 12667 0.09 W/(m\*K) with coating

## 2 Product

- mass per unit area: 6.9 kg/m<sup>2</sup>
- raw density: 275 kg/m<sup>3</sup>
- sound absorption coefficient: EN ISO 11654 0.80 with coating varies with suspension height and damping

### 2.5 SUBSTANCES OF VERY HIGH CONCERN

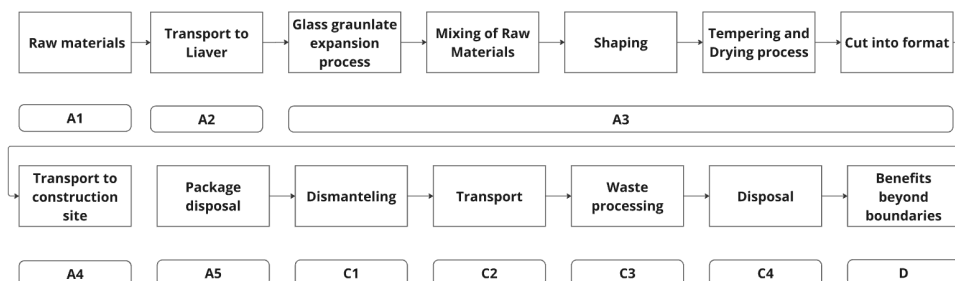
The product / At least one partial product contains substances from the ECHA list of candidates of substances of very high concern (SVHC) (dated 04 February 2026) exceeding 0.1 percentage by mass: **no**

The product / At least one partial product contains other CMR substances in categories 1A or 1B which are not on the candidate list, exceeding 0.1% by mass in at least one partial product: **no**

Biocidal products were added to this construction product or it has been treated with biocidal products (this then concerns a treated product as defined by the Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.): **no**

### 2.6 DESCRIPTION OF THE PRODUCTION PROCESS

StoSilent Board 100 S and 105 C and 110 S are manufactured at the production site in Ilmenau. In Ilmenau, all raw materials are mixed, formed into shape, dried, tempered, cut and sanded to format. The next production step includes lamination of non-woven fleece on front and rear under pressure, cut to format, application of edge coating and packaging.



### 2.7 CONSTRUCTION DESCRIPTION

The system build-up comprises a suspended sub-construction, StoSilent Board 105 C acoustic boards, and a force-transmitting adhesive bond. StoSilent Board 100 S and 110 S acoustic boards need to be screw-fixed onto the sub-construction. The StoSilent Board 105 C acoustic boards are fixed with an adhesive compound with high initial adhesion.

The highest substrate and application temperature for all system products is 30 °C. The maximum permitted relative humidity is 70 %. Only install the acoustic boards after the room has reached the suitable temperature and equilibrium humidity.

Installation for StoSilent Board **100 S and 110 S**:

1. Install the first acoustic board
2. Align the board
3. Screw the acoustic board
4. Apply the adhesive
5. Install the second acoustic board
6. Fix the acoustic board using screws
7. Bond the edges
8. Installing the boards
9. Install in the wall area
10. Filling and leveling coat
11. Knock off the adhesive

Installation for StoSilent Board **105 C**

1. Apply the adhesive onto the subconstruction profile
2. Position the acoustic board in the adhesive, gently press all the way around until the adhesive bears the weight of the acoustic board.
3. Apply the adhesive for the next acoustic board, position further acoustic board at the edge of an acoustic board that has already been stuck down.
4. Align the acoustic board. Press all board joints so they are at the same level.
5. Cut off the excess dry adhesive along the board edge.

## 3 Calculation rules

### 3.1 DECLARED UNIT

#### Acoustic Board

The declared unit is 1 m<sup>2</sup> of acoustic board in accordance with EN 13964:2014 for Suspended ceilings - Requirements and test methods. The scope of this LCA is cradle to gate with options A4 and A5, modules C1-C4 and module D.

Reference unit: m2

### 3.2 CONVERSION FACTORS

| Description               | Value    | Unit |
|---------------------------|----------|------|
| Reference unit            | 1        | m2   |
| Weight per reference unit | 6.938    | kg   |
| Conversion factor to 1 kg | 0.144134 | m2   |

### 3.3 SCOPE OF DECLARATION AND SYSTEM BOUNDARIES

This is a Cradle-to-gate with options, modules C1-C4 and module D EPD. The life cycle stages included are as shown below:

(X = module included, ND = module not declared)

| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| X  | X  | X  | X  | X  | ND | ND | ND | ND | ND | ND | ND | X  | X  | X  | X  | X |

The modules of the EN 15804 contain the following:

|                                                    |                                                                       |
|----------------------------------------------------|-----------------------------------------------------------------------|
| Module A1 = Raw material supply                    | Module B5 = Refurbishment                                             |
| Module A2 = Transport                              | Module B6 = Operational energy use                                    |
| Module A3 = Manufacturing                          | Module B7 = Operational water use                                     |
| Module A4 = Transport                              | Module C1 = Deconstruction / Demolition                               |
| Module A5 = Construction -<br>Installation process | Module C2 = Transport                                                 |
| Module B1 = Use                                    | Module C3 = Waste Processing                                          |
| Module B2 = Maintenance                            | Module C4 = Disposal                                                  |
| Module B3 = Repair                                 | Module D = Benefits and loads beyond the<br>product system boundaries |
| Module B4 = Replacement                            |                                                                       |

### 3.4 REPRESENTATIVENESS

This EPD is representative of StoSilent Board 100 S, StoSilent Board 105 C and StoSilent Board 110 S, produced by Sto SE & Co. KGaA in Lauingen, Germany. The results of this EPD are representative of the European Union. The scenarios included in this life cycle analysis are currently in use and are representative of one likely scenario.

### 3.5 CUT-OFF CRITERIA

Product stage (Module A1-A3)

3 Calculation rules

All input flows (e.g. raw materials, transportation, energy use, packaging, etc.) and output flows (e.g. production waste) are considered in this LCA. The total neglected input flows do therefore not exceed the limit of 5% of energy use and mass.

Construction process stage (A4-A5)

Module A4 accounts for the transportation of 1 m<sup>2</sup> of StoSilent board over 500 km. Module A5 accounts for the waste treatment of the product packaging. Energy use and waste during the installation phase are omitted.

End of life stage (Module C1-C4)

All input flows (e.g. energy use for demolition or disassembly, transport to waste processing, etc.) and output flows (e.g. end-of-life waste processing of the product, etc.) are considered in this LCA. The total neglected input flows do therefore not exceed the limit of 5% of energy use and mass. The end-of-life scenario is declared as 100 % landfill as one likely conservative scenario.

Benefits and Loads beyond the system boundary (Modul D)

All benefits and loads beyond the system boundary resulting from reusable products, recyclable materials and/or useful energy carriers leaving the product system are considered in this LCA.

Excluded processes

Following processes has not been taken into account in this life cycle analysis:

- The manufacture of equipment used in production, buildings or any other capital goods;
- The transportation of personnel to the production plant;
- The transportation of personnel within the production plant;
- Research and development activities; Long-term emissions

3.6 ALLOCATION

No allocation takes place during production. This LCA complies with the principle of modularity. There are no co-products that have to be taken into account.

The producer of StoSilent Board 100 S; 105 C; 110 S is under regulation from national authorities and follows the polluter pays principle.

3.7 DATA COLLECTION & REFERENCE PERIOD

This EPD project has been performed in January and February 2026 The year of study is from January to December 2025.

3.8 ESTIMATES AND ASSUMPTIONS

The end-of-life scenario is declared as 100 % landfill as one likely conservative scenario.

No product waste is accounted for at the construction site. If a board needs to be cut, the second half can be reused at another location. An assumption regarding construction losses can still be made if the declared environmental results from A1-A3, A4 and C and D are multiplied by a cut-off/breakage rate (Example: a 3% cut-off/breakage rate gives rise to a factor of 1.03 x environmental impact).

Due to the variations in systems for the different StoSilent boards, additional effort (energy, auxiliary material) in construction is omitted. It is advised to calculate the impact of the total system on a case-by-case basis.

1% cut off criteria have been applied for formulation and production data when applicable according to EN 15804+A2.

- A payload factor of 50 % was used for all truck transports, which in fact corresponds to a full delivery and empty return trip. A data set for a non-specific truck was used.

3.9 DATA QUALITY

Datasets from ecoinvent 3.9.1 (2022) have been used for calculation with R<think. The ecoinvent data therefore complies with the requirements of EN 15804 (background data not older than 10 years). Data concerning production has been gathered from the Production Management System used at the production site. No data of poor or very poor quality has been used for either time, geographical or technological representativeness.

The fair category dataset for “Glass cullet” accounts for more than 30 % of the core indicator Global warming potential - total of all declared modules including module D.

| Quality requirement | Specific requirement | Data quality level               | Notes |
|---------------------|----------------------|----------------------------------|-------|
|                     |                      | The collected data is from 2025. |       |
|                     |                      | The temporal                     | good  |

3 Calculation rules

|                       |                                                                            |                                                                                     |      |  |
|-----------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|--|
| Time related coverage | Age of data and minimum time period for data collection.                   | representativeness is less than 3 years                                             |      |  |
| Geographical coverage | Upstream: Unit process for raw material is collected for geographic region | Supplier data was collected and considered geographically in the model.             | good |  |
|                       | Core: Unit process for production should represent the real site.          | Specific data from the corresponding production site were used from 2025.           | good |  |
|                       | Downstream: End-of-life disposal should represent the region of disposal   | The end-of-life scenario is declared as a likely scenario for a bigger region (EU). | fair |  |
|                       |                                                                            |                                                                                     |      |  |

|                               |                                                                                                                  |                                                                                                                                                 |
|-------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical representative-ness | Individual countries might deviate.                                                                              |                                                                                                                                                 |
|                               | Qualitative assessment of the degree to which the data set reflects the true population of interest (technology) | Specific data from the corresponding production site was used if possible. If not, data from the same processes from other sites has been used. |

3.10 POWER MIX

The energy used consists of a market mix for Germany (residual mix, market based approach) and covers the foreground processes. The used electricity mix is calculated with an environmental impact of 0.748 kg CO2-eq/kWh.

## 4 Scenarios and additional technical information

### 4.1 TRANSPORT TO CONSTRUCTION SITE (A4)

For the transport from production place to assembly/user, the following scenario is assumed for module A4 of this EPD.

|                                                | Value and unit                                          |
|------------------------------------------------|---------------------------------------------------------|
| Vehicle type used for transport                | (ei3.9.1) Lorry (Truck) 16-32t, EURO6   market for (EU) |
| Fuel type and consumption of vehicle           | not available                                           |
| Distance                                       | 500 km                                                  |
| Capacity utilisation (including empty returns) | 50 % (loaded up and return empty)                       |
| Bulk density of transported products           | inapplicable                                            |
| Volume capacity utilisation factor             | 1                                                       |

### 4.2 ASSEMBLY (A5)

The following information describes the scenarios for flows entering the system and flows leaving the system at module A5.

#### FLOWS ENTERING THE SYSTEM

There are no significant environment impacts as a result of materials or energy used in the construction stage (A5).

#### FLOWS LEAVING THE SYSTEM

The following output flows leaving the system at module A5 are assumed.

| Description                                                                                                     | Value | Unit |
|-----------------------------------------------------------------------------------------------------------------|-------|------|
| Output materials as result of loss during construction                                                          | 0     | %    |
| Output materials as result of waste processing of materials used for installation/assembly at the building site | 0.000 | kg   |
| Output materials as result of waste processing of used packaging                                                | 1.172 | kg   |

### 4.3 DE-CONSTRUCTION, DEMOLITION (C1)

No inputs are needed for the product at the de-construction / demolition phase

### 4.4 TRANSPORT END-OF-LIFE (C2)

The following distances and transport conveyance are assumed for transportation during end of life for the different types of waste processing.

## 4 Scenarios and additional technical information

| Waste Scenario                                  | Transport conveyance                                                    | Not removed (stays in work)<br>[km] | Landfill<br>[km] | Incineration<br>[km] | Recycling<br>[km] | Re-use<br>[km] |
|-------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------|------------------|----------------------|-------------------|----------------|
| (ei3.9.1) Debris - STO mixed with 100% landfill | (ei3.9.1) Lorry (Truck), unspecified (default)   market group for (GLO) | 0                                   | 100              | 150                  | 50                | 0              |

The transport conveyance(s) used in the scenario(s) for transport during end of life has the following characteristics.

|                                                | Value and unit                                                          |
|------------------------------------------------|-------------------------------------------------------------------------|
| Vehicle type used for transport                | (ei3.9.1) Lorry (Truck), unspecified (default)   market group for (GLO) |
| Fuel type and consumption of vehicle           | not available                                                           |
| Capacity utilisation (including empty returns) | 50 % (loaded up and return empty)                                       |
| Bulk density of transported products           | inapplicable                                                            |
| Volume capacity utilisation factor             | 1                                                                       |

### 4.5 END OF LIFE (C3, C4)

The scenario(s) assumed for end of life of the product are given in the following tables.  
First the assumed percentages per type of waste processing are displayed, followed by the assumed amounts.

| Waste Scenario                                  | Region | Not removed (stays in work) [%] | Landfill [%] | Incineration [%] | Recycling [%] | Re-use [%] |
|-------------------------------------------------|--------|---------------------------------|--------------|------------------|---------------|------------|
| (ei3.9.1) Debris - STO mixed with 100% landfill | EU     | 0                               | 100          | 0                | 0             | 0          |

| Waste Scenario                                  | Not removed (stays in work) [kg] | Landfill [kg] | Incineration [kg] | Recycling [kg] | Re-use [kg]  |
|-------------------------------------------------|----------------------------------|---------------|-------------------|----------------|--------------|
| (ei3.9.1) Debris - STO mixed with 100% landfill | 0.000                            | 6.938         | 0.000             | 0.000          | 0.000        |
| <b>Total</b>                                    | <b>0.000</b>                     | <b>6.938</b>  | <b>0.000</b>      | <b>0.000</b>   | <b>0.000</b> |

### 4.6 BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY (D)

The presented Benefits and loads beyond the system boundary in this EPD are based on the following calculated Net output flows in kilograms and Energy recovery displayed in MJ Lower Heating Value.

## 4 Scenarios and additional technical information

| Waste Scenario                                  | Net output flow [kg] | Energy recovery [MJ] |
|-------------------------------------------------|----------------------|----------------------|
| (ei3.9.1) Debris - STO mixed with 100% landfill | -5.742               | 0.000                |
| <b>Total</b>                                    | <b>-5.742</b>        | <b>0.000</b>         |

## 5 Results

For the impact assessment long-term emissions (>100 years) are not considered. The results of the impact assessment are only relative statements that do not make any statements about end-points of the impact categories, exceedance of threshold values, safety margins or risks. The following tables show the results of the indicators of the impact assessment, of the use of resources as well as of waste and other output flows.

### 5.1 ENVIRONMENTAL IMPACT INDICATORS PER M2

#### CORE ENVIRONMENTAL IMPACT INDICATORS EN 15804+A2

| Abbr.     | Unit                     | A1      | A2      | A3       | A1-A3    | A4      | A5      | C1      | C2      | C3      | C4      | D       |
|-----------|--------------------------|---------|---------|----------|----------|---------|---------|---------|---------|---------|---------|---------|
| GWP-total | kg CO <sub>2</sub> eq.   | 1.89E+0 | 1.07E-1 | 1.42E+0  | 3.42E+0  | 7.50E-1 | 2.00E+0 | 0.00E+0 | 1.03E-1 | 0.00E+0 | 4.22E-2 | 7.38E+0 |
| GWP-f     | kg CO <sub>2</sub> eq.   | 1.86E+0 | 1.07E-1 | 3.33E+0  | 5.30E+0  | 7.49E-1 | 6.77E-2 | 0.00E+0 | 1.03E-1 | 0.00E+0 | 4.22E-2 | 7.33E+0 |
| GWP-b     | kg CO <sub>2</sub> eq.   | 2.22E-2 | 3.45E-5 | -1.91E+0 | -1.89E+0 | 2.41E-4 | 1.94E+0 | 0.00E+0 | 3.35E-5 | 0.00E+0 | 1.84E-5 | 3.82E-2 |
| GWP-luluc | kg CO <sub>2</sub> eq.   | 1.60E-3 | 5.29E-5 | 4.08E-3  | 5.73E-3  | 3.70E-4 | 9.30E-5 | 0.00E+0 | 3.67E-4 | 0.00E+0 | 2.55E-5 | 4.93E-3 |
| ODP       | kg CFC 11 eq.            | 2.23E-8 | 2.33E-9 | 1.01E-7  | 1.26E-7  | 1.63E-8 | 1.85E-9 | 0.00E+0 | 1.83E-9 | 0.00E+0 | 1.22E-9 | 9.66E-8 |
| AP        | mol H <sup>+</sup> eq.   | 9.75E-3 | 2.34E-4 | 6.74E-3  | 1.67E-2  | 1.64E-3 | 4.45E-4 | 0.00E+0 | 4.93E-4 | 0.00E+0 | 3.18E-4 | 5.64E-2 |
| EP-fw     | kg P eq.                 | 6.75E-5 | 8.71E-7 | 1.83E-4  | 2.52E-4  | 6.09E-6 | 6.21E-7 | 0.00E+0 | 1.02E-6 | 0.00E+0 | 4.11E-7 | 1.44E-4 |
| EP-m      | kg N eq.                 | 1.63E-3 | 5.77E-5 | 1.71E-3  | 3.41E-3  | 4.03E-4 | 1.96E-4 | 0.00E+0 | 1.87E-4 | 0.00E+0 | 1.21E-4 | 7.95E-3 |
| EP-T      | mol N eq.                | 2.08E-2 | 6.01E-4 | 1.94E-2  | 4.08E-2  | 4.20E-3 | 2.17E-3 | 0.00E+0 | 2.00E-3 | 0.00E+0 | 1.31E-3 | 9.67E-2 |
| POCP      | kg NMVOC eq.             | 7.20E-3 | 3.64E-4 | 8.32E-3  | 1.59E-2  | 2.54E-3 | 6.25E-4 | 0.00E+0 | 6.82E-4 | 0.00E+0 | 4.55E-4 | 2.89E-2 |
| ADP-mm    | kg Sb-eq.                | 4.45E-5 | 3.50E-7 | 6.23E-6  | 5.10E-5  | 2.45E-6 | 1.33E-7 | 0.00E+0 | 3.23E-7 | 0.00E+0 | 5.85E-8 | 3.82E-5 |
| ADP-f     | MJ                       | 3.90E+1 | 1.52E+0 | 4.91E+1  | 8.96E+1  | 1.06E+1 | 5.32E-1 | 0.00E+0 | 1.47E+0 | 0.00E+0 | 1.05E+0 | 8.38E+1 |
| WDP       | m <sup>3</sup> world eq. | 1.49E+0 | 7.14E-3 | 3.24E-1  | 1.82E+0  | 4.99E-2 | 8.10E-3 | 0.00E+0 | 9.05E-3 | 0.00E+0 | 4.71E-2 | 1.32E+0 |

**GWP-total**=Global Warming Potential total (GWP-total) | **GWP-f**=Global Warming Potential fossil fuels (GWP-fossil) | **GWP-b**=Global Warming Potential biogenic (GWP-biogenic) | **GWP-luluc**=Global Warming Potential land use and land use change (GWP-luluc) | **ODP**=Depletion potential of the stratospheric ozone layer (ODP) | **AP**=Acidification potential, Accumulated Exceedance (AP) | **EP-fw**=Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater) | **EP-m**=Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine) | **EP-T**=Eutrophication potential, Accumulated Exceedance (EP-terrestrial) | **POCP**=Formation potential of tropospheric ozone (POCP) | **ADP-mm**=Abiotic depletion potential for non fossil resources (ADP mm) | **ADP-f**=Abiotic depletion for fossil resources potential (ADP fossil) | **WDP**=Water (user) deprivation potential, deprivation-weighted water consumption (WDP)

## 5 Results

### ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS EN 15804+A2

| Abbr.  | Unit              | A1      | A2       | A3      | A1-A3   | A4       | A5       | C1      | C2       | C3      | C4       | D       |
|--------|-------------------|---------|----------|---------|---------|----------|----------|---------|----------|---------|----------|---------|
| PM     | disease incidence | 9.16E-8 | 7.95E-9  | 7.66E-8 | 1.76E-7 | 5.56E-8  | 5.41E-9  | 0.00E+0 | 1.02E-8  | 0.00E+0 | 6.95E-9  | 7.39E-7 |
| IR     | kBq U235 eq.      | 7.45E-2 | 7.71E-4  | 7.25E-2 | 1.48E-1 | 5.39E-3  | 4.78E-4  | 0.00E+0 | 5.75E-4  | 0.00E+0 | 2.78E-4  | 9.48E-2 |
| ETP-fw | CTUe              | 1.38E+1 | 7.53E-1  | 1.07E+1 | 2.52E+1 | 5.26E+0  | 7.95E-1  | 0.00E+0 | 1.09E+0  | 0.00E+0 | 4.93E-1  | 6.12E+1 |
| HTP-c  | CTUh              | 1.00E-9 | 4.88E-11 | 3.24E-9 | 4.29E-9 | 3.41E-10 | 2.96E-10 | 0.00E+0 | 5.45E-11 | 0.00E+0 | 1.79E-11 | 2.70E-9 |
| HTP-nc | CTUh              | 3.20E-8 | 1.08E-9  | 1.59E-8 | 4.90E-8 | 7.55E-9  | 9.43E-10 | 0.00E+0 | 1.18E-9  | 0.00E+0 | 2.25E-10 | 7.65E-8 |
| SQP    | Pt                | 8.79E+0 | 9.20E-1  | 1.69E+2 | 1.79E+2 | 6.43E+0  | 3.74E-1  | 0.00E+0 | 1.16E+0  | 0.00E+0 | 2.09E+0  | 1.89E+1 |

**PM**=Potential incidence of disease due to PM emissions (PM) | **IR**=Potential Human exposure efficiency relative to U235 (IRP) | **ETP-fw**=Potential Comparative Toxic Unit for ecosystems (ETP-fw) | **HTP-c**=Potential Comparative Toxic Unit for humans (HTP-c) | **HTP-nc**=Potential Comparative Toxic Unit for humans (HTP-nc) | **SQP**=Potential soil quality index (SQP)

### CLASSIFICATION OF DISCLAIMERS TO THE DECLARATION OF CORE AND ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS

| ILCD classification | Indicator                                                                                           | Disclaimer |
|---------------------|-----------------------------------------------------------------------------------------------------|------------|
| ILCD type / level 1 | Global warming potential (GWP)                                                                      | None       |
|                     | Depletion potential of the stratospheric ozone layer (ODP)                                          | None       |
|                     | Potential incidence of disease due to PM emissions (PM)                                             | None       |
| ILCD type / level 2 | Acidification potential, Accumulated Exceedance (AP)                                                | None       |
|                     | Eutrophication potential, Fraction of nutrients reaching freshwater end compartment (EP-freshwater) | None       |
|                     | Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine)         | None       |
|                     | Eutrophication potential, Accumulated Exceedance (EP-terrestrial)                                   | None       |
|                     | Formation potential of tropospheric ozone (POCP)                                                    | None       |
|                     | Potential Human exposure efficiency relative to U235 (IRP)                                          | 1          |
|                     | Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)                          | 2          |
| ILCD type / level 3 | Abiotic depletion potential for fossil resources (ADP-fossil)                                       | 2          |
|                     | Water (user) deprivation potential, deprivation-weighted water consumption (WDP)                    | 2          |
|                     | Potential Comparative Toxic Unit for ecosystems (ETP-fw)                                            | 2          |
|                     | Potential Comparative Toxic Unit for humans (HTP-c)                                                 | 2          |
|                     | Potential Comparative Toxic Unit for humans (HTP-nc)                                                | 2          |

## 5 Results

| ILCD classification                                                                                                                                                                                                                                                                                                                                                                                                                                          | Indicator                          | Disclaimer |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Potential Soil quality index (SQP) | 2          |
| <p><b>Disclaimer 1</b> – This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.</p> |                                    |            |
| <p><b>Disclaimer 2</b> – The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.</p>                                                                                                                                                                                                                                                |                                    |            |

### 5.2 INDICATORS DESCRIBING RESOURCE USE AND ENVIRONMENTAL INFORMATION BASED ON LIFE CYCLE INVENTORY (LCI)

#### PARAMETERS DESCRIBING RESOURCE USE

| Abbr. | Unit | A1      | A2      | A3      | A1-<br>A3 | A4      | A5      | C1      | C2      | C3      | C4      | D        |
|-------|------|---------|---------|---------|-----------|---------|---------|---------|---------|---------|---------|----------|
| PERE  | MJ   | 2.65E+0 | 2.39E-2 | 1.71E+1 | 1.97E+1   | 1.67E-1 | 1.58E-2 | 0.00E+0 | 2.09E-2 | 0.00E+0 | 8.89E-3 | 1.76E+0  |
| PERM  | MJ   | 0.00E+0 | 0.00E+0 | 1.64E+1 | 1.64E+1   | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0  |
| PERT  | MJ   | 2.65E+0 | 2.39E-2 | 3.34E+1 | 3.61E+1   | 1.67E-1 | 1.58E-2 | 0.00E+0 | 2.09E-2 | 0.00E+0 | 8.89E-3 | 1.76E+0  |
| PENRE | MJ   | 2.46E+1 | 1.52E+0 | 4.77E+1 | 7.38E+1   | 1.06E+1 | 5.32E-1 | 0.00E+0 | 1.48E+0 | 0.00E+0 | 1.05E+0 | 8.38E+1  |
| PENRM | MJ   | 1.44E+1 | 0.00E+0 | 1.35E+0 | 1.58E+1   | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | -1.14E-2 |
| PENRT | MJ   | 3.90E+1 | 1.52E+0 | 4.91E+1 | 8.96E+1   | 1.06E+1 | 5.32E-1 | 0.00E+0 | 1.48E+0 | 0.00E+0 | 1.05E+0 | 8.38E+1  |
| SM    | Kg   | 5.74E+0 | 0.00E+0 | 1.72E-1 | 5.91E+0   | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0  |
| RSF   | MJ   | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0   | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0  |
| NRSF  | MJ   | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0   | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0  |
| FW    | m³   | 2.93E-2 | 2.39E-4 | 1.42E-2 | 4.38E-2   | 1.67E-3 | 6.37E-4 | 0.00E+0 | 3.80E-4 | 0.00E+0 | 1.13E-3 | 3.71E-2  |

**PERE**=Use of renewable primary energy excluding renewable primary energy resources used as raw materials | **PERM**=Use of renewable primary energy resources used as raw materials | **PERT**=Total use of renewable primary energy resources | **PENRE**=Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials | **PENRM**=Use of non-renewable primary energy resources used as raw materials | **PENRT**=Total use of non-renewable primary energy resources | **SM**=Use of secondary material | **RSF**=Use of renewable secondary fuels | **NRSF**=Use of non-renewable secondary fuels | **FW**=Net use of fresh water

## 5 Results

### OTHER ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

| Abbr. | Unit | A1      | A2      | A3      | A1-A3   | A4      | A5      | C1      | C2      | C3      | C4      | D       |
|-------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| HWD   | Kg   | 5.07E-5 | 9.68E-6 | 1.64E-4 | 2.24E-4 | 6.77E-5 | 3.14E-6 | 0.00E+0 | 9.41E-6 | 0.00E+0 | 5.57E-6 | 3.50E-4 |
| NHWD  | Kg   | 4.14E-1 | 7.56E-2 | 3.72E-1 | 8.62E-1 | 5.29E-1 | 1.07E+0 | 0.00E+0 | 9.75E-2 | 0.00E+0 | 6.94E+0 | 6.02E-1 |
| RWD   | Kg   | 5.72E-5 | 5.00E-7 | 8.07E-5 | 1.38E-4 | 3.50E-6 | 3.27E-7 | 0.00E+0 | 3.38E-7 | 0.00E+0 | 1.55E-7 | 6.05E-5 |

**HWD**=Hazardous waste disposed | **NHWD**=Non-hazardous waste disposed | **RWD**=Radioactive waste disposed

### ENVIRONMENTAL INFORMATION DESCRIBING OUTPUT FLOWS

| Abbr. | Unit | A1      | A2      | A3      | A1-A3   | A4      | A5      | C1      | C2      | C3      | C4      | D       |
|-------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| CRU   | Kg   | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| MFR   | Kg   | 0.00E+0 | 0.00E+0 | 7.15E-1 | 7.15E-1 | 0.00E+0 | 1.28E-1 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| MER   | Kg   | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 |
| EET   | MJ   | 0.00E+0 | 0.00E+0 | 2.42E-1 | 2.42E-1 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 4.16E+0 |
| EEE   | MJ   | 0.00E+0 | 0.00E+0 | 1.40E-1 | 1.40E-1 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 0.00E+0 | 2.41E+0 |

**CRU**=Components for re-use | **MFR**=Materials for recycling | **MER**=Materials for energy recovery | **EET**=Exported Energy, Thermic | **EEE**=Exported Energy, Electric

## 5 Results

### 5.3 INFORMATION ON BIOGENIC CARBON CONTENT PER M2

#### BIOGENIC CARBON CONTENT

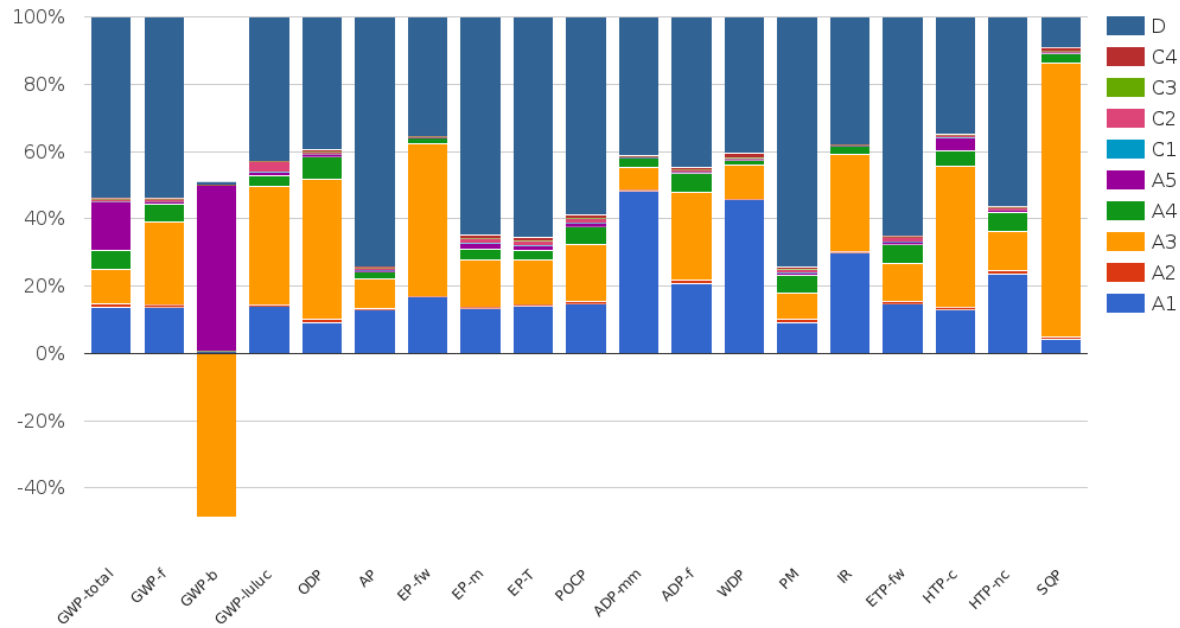
The following Information describes the biogenic carbon content in (the main parts of) the product at the factory gate per m2:

| Biogenic carbon content                           | Amount | Unit |
|---------------------------------------------------|--------|------|
| Biogenic carbon content in the product            | 0      | kg C |
| Biogenic carbon content in accompanying packaging | 0.5259 | kg C |

#### UPTAKE OF BIOGENIC CARBON DIOXIDE

The following amount of carbon dioxide uptake is taken into account. Related uptake and release of carbon dioxide in downstream processes are not taken into account in this number although they do appear in the presented results. One kilogram of biogenic Carbon content is equivalent to 44/12 kg of biogenic carbon dioxide uptake.

| Uptake Biogenic Carbon dioxide | Amount | Unit              |
|--------------------------------|--------|-------------------|
| Packaging                      | 1.928  | kg CO2 (biogenic) |



The figure above shows the influence of the different life stages on the LCA results. Module D contributes the largest share of several indicators due to the credits and burdens calculated beyond the system boundary. SQP, ODP, EP-fw, and HTP-c are dominated by production (A3).

The energy used during production (A3) contributes the second highest impact for GWP-f and ADP-f after module D.

The raw materials used in AI contribute the second highest impact for AP, ADP-mm and WDP.

The second highest impact after module D is split for GWP-total, EP-m, EP-T and POCP and IR between A1 and A3. Module A5 has approximately the same impact for GWP-total

## 6 Interpretation of results

as A1 and A3. GWP-b is evenly split between A3 and A5 due to the uptake and release of biogenic carbon dioxide of the packaging.

## 7 References

**ISO 14040**

ISO 14040:2006-10, Environmental management - Life cycle assessment - Principles and framework; EN ISO 14040:2006

**ISO 14044**

ISO 14044:2006-10, Environmental management - Life cycle assessment - Requirements and guidelines; EN ISO 14044:2006

**ISO 14025**

ISO 14025:2011-10: Environmental labels and declarations — Type III environmental declarations — Principles and procedures

**EN 15804+A2**

EN 15804+A2: 2019: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

**Kiwa-EE GPI R.4.0** Kiwa-Ecobility Experts, General Programme Instructions “Product Level”, Program EE 1201 (18.12.2025)

**Kiwa-EE GPI R.4.0 Annex B1** Kiwa-Ecobility Experts, General Programme Instructions “Product Level” – Annex B1 Environmental Information Programme according to EN 15804 / ISO 21930, Program EE 1203 (18.12.2025)

**c-PCR Kiwa GmbH, Ecobility Experts**

Kiwa-Ecobility Experts (Kiwa-EE) – Product Category Rules (PCR B) for acoustical ceiling and wall solutions (Draft, 2023-03-29, v1)

**DIN EN ISO 7783**

DIN EN ISO 7783:2019-02, Bestimmung der Wasserdampfdurchlässigkeit – Schalenverfahren (ISO 7783: 2018);

**DIN EN 13501-1**

DIN EN 13501-1, 2018-Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests: 2019-05;

**DIN EN 12667**

DIN EN 12667:2001-05, Bestimmung des Wärmedurchlasswiderstandes nach dem Verfahren mit dem Plattengerät und dem Wärmestrommessplatten-Gerät;

**DIN EN 11654**

DIN EN ISO 11654:1997-07, Akustik– Schallabsorber für die Anwendung in Gebäuden;

**ISO 15686**

ISO 15686, Buildings and constructed assets Service life planning, various parts;

## 7 References

**EN 13964**

EN 13964:2014, Suspended ceilings — Requirements and test methods;

**Regulation (EU) No 305/2011**

Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC Text with EEA relevance;

**Regulation (EU) No 528/2012**

Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products Text with EEA relevance;

**BBSR**

Federal Office for Building and Regional Planning  
Bundesinstitut für Bau, Stadt und Raumforschung (BBSR):  
Nutzungsdauer von Bauteilen für Lebenszyklusanalyse  
nach Bewertungssystem Nachhaltiges Bauen (BNB);

**UN CPC Ver. 3.0, last updated on 30 June 2025**

## 8 Contact information

| Publisher                                                                                                                                                                                                                                                                                           | Operator                                                                                                                                                                                                                                                                                            | Owner of declaration                                                                                                  |
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