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# EPD VERIFICATION REPORT FOR PRODUCTS CALCULATED WITH THE GCCA EPD-TOOL IN THE INTERNATIONAL EPD SYSTEM

**INTRODUCTION**

This document serves as the verification report template of Environmental Product Declarations (EPDs) of products calculated with the GCCA EPD-tool. The template is aligned with the following documents:

* General Programme Instructions (GPI), version 5.0.1, available at [https://www.environdec.com](https://www.environdec.com/)
* PCR 2019:14, version 2.0.1, and applicable complementary PCR(s) (c-PCR(s)), available at <https://portal.environdec.com/>
* Verification Guidelines for ECO EPD Programme Operators, version 8.0 (December 2024), available at [https://www.eco-platform.org](https://www.eco-platform.org/)
* LCA Calculation Rules and Specifications for EPDs, version 2.0 (December 2024), available at [https://www.eco-platform.org](https://www.eco-platform.org/)

This template is mandatory to use for verification of EN 15804+A2 and EN 15941 compliant EPDs for products calculated with the GCCA EPD-tool in the International EPD System. A signed copy of this simplified verification report shall be submitted to the Secretariat via EPD Portal as part of the EPD publication process. The simplified verification report shall be available to any person upon request.

Make sure to always check the website (https://concrete-epd-tool.org/) for the latest version of this template.

**EPD INFORMATION**

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| Registration number of EPD(s): | Click or tap here to enter text. |
| Product name(s): | Click or tap here to enter text. |
| EPD owner: | Click or tap here to enter text. |
| Product Category Rule (PCR): *Registration number, name and version* Complementary PCR(s) (c-PCR(s)):  *Registration number, name and version* | Click or tap here to enter text. |
| EPD valid until:  *(YYYY-MM-DD) based on the approval date in the verification statement.* | Click or tap here to enter text. |
| If applicable, EPD Process Certificate valid until:  *(YYYY-MM-DD) based on the validity date in the certification.* | Click or tap here to enter text. |
| EPD new version date: | Click or tap here to enter text. |
| If applicable, previous revision date of the EPD(s): | Click or tap here to enter text. |
| If applicable, short description of the revision (update) of the EPD(s): | Click or tap here to enter text. |
| Additional comments from verifier: | Click or tap here to enter text. |

**VERIFICATION STATEMENT**

I hereby confirm that, following the checks performed, in accordance with the limits of the scope of our appointment, nothing has come to the independent third-party verifier’s attention to suggest any data errors or deviations from the requirements by the above-referenced EPD(s) and its project report, in terms of

* the underlying data used for the LCA calculations,
* the way the LCA calculations have been carried out and their compliance with the calculation rules,
* the presentation of environmental performance results,
* the presentation of additional environmental, social, and economic information, and
* any other information included in the declaration.

with respect to the procedural and methodological requirements in ISO 14020:2000, ISO 14025:2006, the General Programme Instructions of the International EPD System, ECO Platform standards, EN 15804:2012+A2:2019/AC:2021, and the PCR and applicable c-PCR(s).

I confirm that, in accordance with the limits of the scope of our appointment, the company-specific data has been examined as regards plausibility and consistency. The EPD owner is responsible for its factual integrity and that the product does not violate relevant legislation.

I confirm that I have sufficient knowledge and experience of construction products, the construction industry, relevant standards and the geographical area of the EPD to carry out this verification.

I confirm that I have been independent in my role as a verifier (or as EPD process owner/internal verifier acting under a valid EPD process certification) in accordance with the requirements in General Programme Instructions, i.e. I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

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| Title of the LCA report: | Click or tap here to enter text. |
| Date of issue of the LCA report: | Click or tap here to enter text. |
| Name of the LCA practitioner(s): | Click or tap here to enter text. |
| If applicable, level of assurance: | Verification should be at the reasonable assurance level, which entails a high level of confidence but does not guarantee absolute certainty. |
| If applicable, pre-verified tool used for EPD development:  *Name and version, Tool type, Tool validity* | GCCA EPD Tool v5.2, valid until changes affecting the calculations are introduced in PCR2019:14 or the applicable C-PCRs. |
| If applicable, name of the verifier(s) which has been replaced: | Click or tap here to enter text. |
| Name and organization of verifier:  *Name, and organisation of the individual verifier or Name of certification body and verifier* | Click or tap here to enter text. |
| If applicable, the name of the organization and the outsourced reviewer(s) involved in the verification process (GPI 5.0 Section 8.4.4): | Click or tap here to enter text. |
| Approval date: | Click or tap here to enter text. |
| Location: | Click or tap here to enter text. |
| Signature:  *Add as image or print and sign this document., In case of EPD Process Certification, the signature of EPD process owner may also be added.* |  |

# PART A: REQUIREMENTS ON THE LCA REPORT

This section is mandatory to verify, and all issues listed are mandatory to include in the LCA report, if not stated otherwise. Verification involves ensuring that each aspect is documented in the LCA report (termed “project report” in EN 15804+A2) and if it is in line with the requirements and guidelines in the applicable references. The structure of the following section aligns with the format presented in PCR 2019:14 Version 2.0,1, for consistency and ease of reference.

If the aspect is in line with the requirements and/or accepted by the verifier, the box “Checked and Approved” can be ticked. If the aspect is optional, the box “N/A” can be ticked.

**A1 – GENERAL INFORMATION**

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| **A1** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A1.1 | Data for verification is presented in the form of an LCA report – a systematic and comprehensive summary of the project documentation that supports the verification of an EPD. | PCR 2019:14 Section 5 |  | ☐ | ☐ |
| A1.2 | Reasons for performing the Life Cycle Assessment. | EN 15804+A2 Section 8.2 |  |  |  |
| A1.3 | Intended application (e.g., for EPD, databases, publication, etc.). | EN 15804+A2 Section 8.2 |  |  |  |
| A1.4 | Target group (B2B, B2C). | EN 15804+A2 Section 8.2 |  |  |  |
| A1.5 | Layout of the presentation: The presentation of data from the LCA modelling is done in a consistent way to cover the most important aspects related to the accuracy and relevance of the data. Data on unit processes, modules and life -cycle stages is described in a transparent way, including references to any data used. The same rules apply regardless of the type of data, i.e., for primary and secondary data, for data from databases and literature sources, from questionnaires, or derived from personal communication. | PCR 2019:14 Section 5.1 |  |  |  |
| A1.6 | The LCA report mentions:   1. The commissioner of LCA study, and the internal or external practitioner of the LCA study.   Title, version and issue date of LCA report. | EN 15804+A2 Section 8.2 |  |  |  |
| A1.7 | Statement that the Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804+A2 (date and version), PCR 2019:14 (date and version) and JRC characterization factors (use of latest version, i.e., EF 3.1) | EN 15804+A2 Section 8.1, 8.2 and Annex C.4,  PCR 2019:14 Section 4.9 |  | ☐ | ☐ |
| A1.8 | LCA report is written in English. | GPI 5 Section 8.3.1 |  | ☐ | ☐ |
| A1.9 | *Optional -* Any other independent verification of the data given in the LCI/LCA documentation is provided. | ECO Platform Verification Checklist Section 2.1 |  | ☐ | ☐ |
| A1.10 | The product falls under the definition of construction product, including raw materials and intermediate products that can among others be used as input to construction products. | PCR 2019:14 Section  2.2.1 |  |  |  |

**A2 – DESCRIPTION OF THE LCA MODELLING: MODELLING APPROACH**

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| **A2** |  | **REFERENCE** | **Pre-verified via GCCA EPD-Tool** | **CHECKED AND APPROVED** | **N/A** |
| A2.1 | The LCA modelling approach is attributional LCA (not consequential LCA). | GPI 5 Annex 1, PCR  2019:14 Section 4 |  |  |  |
| A2.2 | The presentation of data used in LCA modelling is done in a consistent way to cover the most important aspects related to the accuracy and relevance of the data. | EN 15804+A2, Section 8.4 |  |  |  |
| A2.3 | Transparent presentation of LCA modelling (for example by tables, screenshots from LCA software programs, etc.). | PCR 2019:14 Section 5.1 |  |  |  |
| A2.4 | Documentation:   * Primary data collected from manufacturing processes are documented on the process or site level. * Information on secondary data is reported on the level of aggregation available for use in the calculation. * Data and meta data relevant for the EPD are documented, as specified in the Section. | PCR 2019:14 Section 5.2 |  |  |  |
| A2.5 | Plausibility and consistency of data (mass balance, energy balance):   * Equations and total sums: Mass balance of inputs and outputs, e.g., mass balance of (renewable and non-renewable) material resource (feedstock) inputs and outputs (products/waste/emissions/secondary materials). * CO and CO2 emissions coherent with the mass input of fossil energetic resources.   The energy indicators coherent with the energy resources used. | EN 15804+A2, Section 8.4 |  |  | ☐ |
| A2.6 | If there is an applicable and valid c-PCR, it is used in case it has been valid for at least 90 days when the EPD is verified and additional requirements within the c-PCR are followed. | PCR 2019:14 Section 1.1 |  |  |  |

**A3 – DESCRIPTION OF THE LCA MODELLING: GOAL AND SCOPE DEFINITION**

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| **A3** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A3.1 | The following information on goal and scope are included:   1. Definition of declared or functional unit, including technical specifications, product lifespan and reference service life, when relevant, 2. Description of key methodological elements, including documentation and justification of procedures for allocation, averaging data, and cut-off, 3. The technical system (type of system, geographical location, system boundary, and description of life-cycle stages/modules including omissions of life-cycle stages/modules), 4. Assumptions in the modelling of module D, including transparent information on the net flow entering module D | GPI 5 Section 8.3.1.2,  PCR 2019:14 Section 5.2 |  |  |  |

**A4 – DESCRIPTION OF THE LCA MODELLING: INVENTORY ANALYSIS**

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| **A4** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND**  **APPROVED** | **N/A** |
| A4.1 | The following information on inventory analysis is included:   1. The technical system (qualitative/quantitative description of unit processes, accounting for data confidentiality), 2. Data collection (primary/secondary data, collection procedures, time period for data collection, identification and handling of missing data and assessment of their influence on results, checks of data collection being performed, references, and other administrative information), 3. Assessment of data (internal quality assurance procedures; routines for identification, follow-up, and treatment of missing data; references to external critical reviews of data already assessed), 4. Presentation of LCI data and how they relate to the reference flow and the declared/functional unit. 5. Other key assumptions made. | GPI 5 Section 8.3.1.2,  PCR 2019:14 Section 5.2 |  |  |  |

**A5 – DESCRIPTION OF THE LCA MODELLING: IMPACT ASSESSMENT**

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| **A5** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A5.1 | The following information on impact assessment is included:   1. Results of the impact assessment, 2. References to all characterisation methods and factors used, and 3. A statement “the environmental performance results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks”. | GPI 5 Section 8.3.1.2,  PCR 2019:14 Section 5.2 |  |  |  |

**A6 – DESCRIPTION OF THE LCA MODELLING: INTERPRETATION**

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| **A6** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A6.1 | The following information on interpretation is included:   1. Identification of environmentally important aspects of the product system (e.g., inventory data, life-cycle stages and processes contributing substantially to the results), 2. Evaluation of impact assessment results (e.g., completeness check, sensitivity analysis/check, consistency check, uncertainty analysis) 3. Data quality assessment, which covers data that together contribute to at least 80% of the results of each of the declared environmental impact indicators (the assessment shall cover at least the geographical, technical, and temporal representativeness of the data (in line with requirements in Section A.5.4, based on EN 15941)), 4. Limitations of the LCA results identified by the data quality assessment and sensitivity analysis, 5. Conclusions and recommendations to specific decision makers based on the findings.   *Note: All parts of the interpretation are done in accordance with the goal and scope definition.* | GPI 5 Section 8.3.1.2,  PCR 2019:14 Section 5.2 |  |  |  |

**A7 – LCA METHOD: SYSTEM BOUNDARY**

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| **A7** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A7.1 | Information modules included:  The system boundary is defined based on the type of EPD (a-e, and type f).  *Note: EPDs of type c requires the use of a complementary PCR (c-PCR), and a functional unit, together with this main PCR.* | PCR 2019:14 Section  2.2.2  EN 15804+A2 Section 5.2 |  |  |  |
| A7.2 | Information modules included:  The four criteria are fulfilled to exclude the end-of-life stage (module C) for an EPD to be of type d or e. | PCR 2019:14 Section  2.2.2.1 |  |  |  |
| A7.3 | Information modules included:  If the product packaging contains biogenic carbon, module A5 is included (unless the EPD is of type a or d). | PCR 2019:14 Section  2.2.2.2, Annex 2 |  |  |  |
| A7.4 | Information modules included:  Products using energy in module B, include B6. | PCR 2019:14 Section  2.2.2.3 |  |  |  |
| A7.5 | Assigning energy carriers:  Each module includes the generation of electricity and production of fuels, steam and other energy carriers used in the module. | PCR 2019:14 Section  4.3.1 |  |  |  |
| A7.6 | Assigning losses:   * Each module includes the waste processing of waste generated in the module up to the end-of-waste state or final disposal; except waste processing of the product itself, which is included in life-cycle stage C. * Each module includes the upstream production and transport of such waste, i.e., any environmental burden related to a loss is included in the module in which the loss occurs. | PCR 2019:14 Section  4.3.2 and Figure 2 |  |  |  |
| A7.7 | Supporting activities:  Activities directly associated with the production at a site are included (e.g., the use of the production equipment), including supporting activities such as heating of, and water use at, premises.  *Note: The construction and end-of-life processes of infrastructure and capital goods, or research and development activities, are not considered supporting activities.* | PCR 2019:14 Section  4.3.3 |  |  |  |
| A7.8 | EPDs of Services:   * The execution of the service is assigned to module A5, regardless of whether the service is carried out in module A5 (construction services), modules B2-B5 (maintenance, repair, replacement, refurbishment services), or module C1 (demolition services) in perspective of the life cycle of the construction works. * Transports to the site where the service is carried out are assigned to module A4. | PCR 2019:14 Section  4.3.4 |  |  |  |
| A7.9 | Excluded Personnel Processes:  Business travel of personnel, travel to and from work by personnel, and research and development activities are excluded, unless the c-PCR says otherwise. Processes excluded based on the rules in this section are not considered when calculating the  percentages for applying the cut-off rules of PCR 2019:14 Section 4.4. | PCR 2019:14 Section  4.3.5 |  |  |  |
| A7.10 | *Infrastructure and capital goods:*  In general, the production and end-of-life processes of infrastructure and capital goods used in the product system are not included within the system boundaries.  *Note: There are a few exceptions to this rule, see PCR 2019:14 Section 4.5.6.* | PCR 2019:14 Section  4.3.6 |  |  |  |
| A7.11 | Infrastructure and capital goods:  If infrastructure/capital goods are included in a generic LCI dataset used, the database it has been derived from shall be declared in the EPD if the full dataset (i.e., not just the infrastructure/capital goods) contributes more than 5% to the cradle-to-gate results of any of the environmental impact indicators.  If an LCI database is used to model all upstream processes, where all datasets include infrastructure and capital good, then that can be stated instead of listing the inclusion of infrastructure and capital goods per life-cycle stage or process., PCR 2019:14  Section 4.3.6 | PCR 2019:14 Section  4.3.6 |  |  |  |
| A7.12 | Products using energy in the use stage:  Products using energy in the use stage, directly or indirectly, are included module B6.  Scenarios for module B6 represent normal (i.e., anticipated) use and are geographically representative and compliant with current regulations in the relevant geographic region. | PCR 2019:14 Section  4.3.7 |  |  |  |
| A7.13 | Other rules on setting system boundary:  Boundary in time: The period for which inputs to and outputs from the product system is accounted for is 100 years from the year that the LCA model best represents, considering the representativeness of the inventory data. This year, as far as possible, represent the year of the publication of the EPD.  *Note: Leachates from landfills occurring more than 100 years into the future shall not be accounted for (except for biogenic carbon, see Section 6.3.5.5 and EN 15804)* | PCR 2019:14 Section  4.3.8 |  |  |  |
| A7.14 | Other rules on setting system boundary:  Boundary to nature and other product systems: Flows are traced so that the main inputs to the LCI are resources from nature and outputs are emissions to nature. Agriculture, forestry, aquaculture, and similar production systems are part of the technical system, i.e., elementary flows that originate from applied substances (e.g., fertilisers) and eventually leave to water, soil or air are accounted for.  Geographical boundary: The geographical boundary reflects the physical reality of the product under study, accounting for the representativeness of technology, input materials and input energy. | PCR 2019:14 Section  4.3.8 |  |  |  |

**A8 – LCA METHOD: CUT-OFF RULES**

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| **A8** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A8.1 | All available data are used, where cut-offs should be avoided and are not done to “hide” data. | PCR 2019:14 Section 4.4 |  |  |  |
| A8.2 | LCI data include a minimum of 99% of total inflows (mass and energy) per unit process, and 95% of total inflows (mass and energy) per life-cycle stages A1-A3, A4-A5, and C1-C4, aggregated modules B1-B5 and B6-B7, and module D. At least 95% of the environmental impact per such aggregated module is included in LCI data. | EN 15804+A2 Section 6.3.6,  PCR 2019:14 Section 4.4 |  |  |  |
| A8.3 | Exclusion of LCI data based on the cut-off rule is based on a sensitivity analysis and/or conservative assumptions, and it is documented in the LCA report. | EN 15804+A2 Section 6.3.6,  PCR 2019:14 Section 4.4 |  |  |  |

**A9 – LCA METHOD: ALLOCATION RULES**

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| **A9** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A9.1 | To apply allocation, flows leaving the product system from modules A1-A5 have been identified as co-products, waste or flows that ceased to be waste, according to the end-of-waste criteria where outputs from life-cycle stages B and C are modelled as waste. | EN 15804+A2, Figure B1  PCR 2019:14, Section  4.5, 4.5.2 |  |  |  |
| A9.2 | Allocation rules are followed according to the new interpretation of EN 15804 where co-product allocation is not possible when the flow is waste, according to the polluter pays principle (PPP) of EN 15804. Thereof, waste allocation is applied for flows that ceased to be waste in modules A1-A3 and leaves the product system for use in a subsequent product system. | EN 15804+A2,  Section 6.3.5.1  PCR 2019:14, Section  4.5, 4.5.2 |  |  |  |
| A9.3 | Irrespective of the allocation between product systems, the inherent properties of the product and the packaging, such as calorific content or biogenic/fossil carbon content, are not allocated away and follow the physical downstream flow and the product system that finally uses it. | EN 15804+A2, Section 6.4.3.1  PCR 2019:14, Section 4.5 |  |  |  |
| A9.4 | The applicable allocation rules should be followed also for processes modelled with secondary datasets from databases. If secondary datasets have been modified before being used in the LCA model, conservative assumptions are used. | PCR 2019:14, Section 4.5 |  |  |  |
| A9.5 | Secondary datasets that do not follow the applicable allocation rules, and cannot be modified or proved to be conservative, are only used if this deviation is of minor importance for the LCA results. The deviation is clearly stated and justified in the LCA report, and the applied allocation method is in line with the allocation rules in ISO 14044. | PCR 2019:14, Section 4.5  PCR 2019:14, Section  4.5.1 |  |  |  |
| A9.6 | In co-product allocation:  The sum of inputs and outputs allocated to the product and co-products is equal to the total inputs and outputs of the allocated unit process, and consistent allocation procedures are uniformly applied to similar inputs and outputs of the product system.  *Note: No double counting or omission of inputs or outputs through allocation is permitted (unless a conservative assumption is made).* | PCR 2019:14, Section 4.5  PCR 2019:14, Section  4.5.1 |  |  |  |
| A9.7 | In co-product allocation:  The following stepwise procedure are applied:   1. Allocation is avoided, by dividing the unit process into two or more sub-processes and collecting LCI data for each sub- process. Note: this option shall not be used for joint co-production processes, based on ISO 21930. 2. Allocation is based on physical properties (e.g., mass, volume) when (i) there is a relevant underlying physical relationship between the products and co-products, and (ii) the difference in revenue per mass (or per energy unit in case of electricity, heat or similar) from the product and co-products is below 25%.   In all other cases, allocation is based on economic values of the product and co-products when they leave the unit process. A sensitivity analysis exploring the influence of the choice of economic value is included in the LCA report. | PCR 2019:14, Section  4.5.1  EN15804+A2 Section 6.3.5.1 |  |  |  |
| A9.8 | In co-product allocation:  Allocated co-products are not considered in the modelling of module D. | PCR 2019:14 Section  4.5.1 |  |  |  |
| A9.9 | In co-product allocation:  Economic allocation is used for processes producing co-products for use in cement and concrete. | PCR 2019:14 Section  4.5.1.1 |  |  |  |
| A9.10 | Documentation of allocation factors used and their (independent) sources. | ECO Platform Rules Aspect 11.6 |  |  |  |
| A9.11 | In waste allocation:  The system boundary to the next product system is set where the waste (e.g., the discarded product) reaches the end-of-waste state, i.e., when it has become a usable flow and the end-of-waste criteria have been fulfilled. (e.g., for reuse, recycling and/or  energy recovery). | PCR 2019:14 Section  4.5.2 |  |  |  |
| A9.12 | In waste allocation:  If it is unknown whether the end-of-waste criteria are fulfilled, a conservative assumption is made, where further waste processing and waste incineration/disposal are assigned to the product. | EN15804+A2 Section 6.3.5.5  PCR 2019:14 Section  4.5.2 |  |  |  |
| A9.13 | In waste allocation:  Flows from life cycle modules B and C leaving the product system are considered as waste and leave the product system when end-of-waste state is reached. If a flow never fulfils the end-of-waste criteria, the system boundary to the next product system is set after the last joint unit process and the flow leaves the product system without any environmental burden. | PCR 2019:14 Section  4.5.2 |  |  |  |
| A9.14 | In waste allocation:  Flows that have fulfilled the end-of-waste criteria (secondary materials and energy), are not subject to co-product allocation and accounted for in module D when calculating the net flow. | PCR 2019:14 Section  4.8.5 |  |  |  |
| A9.15 | In waste allocation:  For waste being recycled or reused, the environmental burden of processes until the end-of-waste state are assigned to the product system generating the waste, and processes after the end-of-waste state, if any, are assigned to the product system using the recycled/reused material flow (recycled materials are thereafter considered secondary materials). Internal scraps recycled in a manufacturing process are not considered an input of secondary material. | PCR 2019:14 Section  4.5.2 |  |  |  |
| A9.16 | In waste allocation:  For waste incinerators that are paid for incinerating the material (i.e., the wasted material has a negative economic value), the end-of-waste state is reached after the incineration (regardless of energy efficiency). This means that all the environmental burden of collection, pre-processing and incineration of the waste are assigned to the product system generating the waste, and that all the environmental burden of processes after the end-of-waste has been reached, for example related to making use of the energy, are assigned to the product system using the energy.  In contrast, if the end-of-waste state is reached before the incineration/combustion, the environmental burden of incineration/combustion (as well as processes occurring before incineration but after the end-of-waste has been reached, if any) are assigned to the product system using the energy. | PCR 2019:14 Section  4.5.2 |  |  |  |
| A9.17 | In waste allocation:  For landfilling of waste, the environmental burden of landfilling (leachates, fugitive CH4 and VOC emissions, etc.), and capturing and combustion of landfill gas (e.g., flaring), if any, are assigned to the product system generating the waste, regardless of whether or not energy is recovered.  Additional burdens related to making use of any recovered energy (e.g., refining captured gas, distribution in pipelines including leakages, storage, final combustion) are attributed to the product system using the energy. | PCR 2019:14 Section  4.5.2 |  |  |  |
| A9.18 | In waste allocation:  For waste that has not reached the end-of-waste state prior to being incinerated in life-cycle stage C, the energy efficiency of the incineration process determines whether it shall be assigned to modules C3 or C4:   * If the energy efficiency is equal to or higher than 60% for incineration installations in operation and permitted before 2009, and 65% for installations permitted after 2009, the incineration process is an energy recovery process and is assigned to C3.   If the energy efficiency is below 60/65%, the incineration process is a disposal process and is be assigned to C4. An exception is incineration of hazardous waste, which always are assigned to C4. | PCR 2019:14 Section  4.5.2 |  |  |  |
| A9.19 | Allocation of materials for recycling:  The method of allocating materials sent to recycling is according to the allocation rules, depending on whether the material is waste or co-product. Materials for recycling from modules B and C are always be allocated as waste. | PCR 2019:14 Section 4.5,  4.5.3 |  |  |  |
| A9.20 | Allocation of materials for recycling:  For Materials recycled internally in the same product system is a case of closed-loop recycling, no co-products leave the product system, and no allocation is applied. | PCR 2019:14 Section 4.5,  4.5.3 |  |  |  |
| A9.21 | Allocation of materials for recycling:  For materials recycled internally, within a company and/or a manufacturing site in modules A1-A3:   * Co-production allocation is applied if the material has economic value (unless it is classified as waste). If the co-product allocation is made on an economic basis, internal material value is used as a basis for this allocation. * If this economic value is zero, the flow is allocated as waste. This is clearly justified in the LCA report.   *Note: For a recycled material to be classified as waste, and not as a co-product, it is sufficient that one of the criteria of the end-of-waste state (see Section 4.5.2) at some point has ceased to be fulfilled. This means that there can be materials for recycling that have positive economic value but are still classified as waste and thus allocated according to the rules in Section 4.5.2.* | PCR 2019:14 Section 4.5,  4.5.3 |  |  |  |
| A9.22 | Allocation of materials for recycling:   * Recycled materials from a scrapyard where the origin is are assumed to be waste and allocated accordingly. * Scrap sent to a scrapyard are assumed to be waste and allocated accordingly.   *Note: Unless default data provided on* [*www.environdec.com/methodology*](http://www.environdec.com/methodology) *says otherwise.* | PCR 2019:14 Section 4.5,  4.5.3 |  |  |  |
| A9.23 | Allocation of materials for recycling:  If sector-averages or conservative assumptions are used to estimate the environmental burden of inputs of recycled materials, the data is not qualified as primary data. | PCR 2019:14 Section 4.5,  4.5.3 |  |  |  |
| A9.24 | Allocation of materials for recycling:  LCI datasets modelled using cut-off allocation (i.e., waste allocation) for pre-consumer recycled materials (from A1-A3 processes) that are not waste where waste allocation yields result differ more than 5% compared to results using co-product allocation, are adjusted manually by adding an environmental burden in compliance with EN 15804 or as a conservative assumption.  *Note: A conservative assumption may, for example, be to add an environmental burden that corresponds to primary production of the same material. If such a dataset is provided in an unallocated version, the LCA practitioner can use that version and manually apply the correct allocation*  *procedure. These data cannot be qualified as primary data (see PCR 2019:14 Section 4.6.1).* | PCR 2019:14 Section 4.5,  4.5.3 |  |  |  |

**A10 – LCA METHOD: DATA AND DATA QUALITY RULES**

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| **A10** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A10.1 | The quality of the data used in the LCA model is addressed in the LCA report. | PCR 2019:14 Section  4.6.1 |  |  |  |
| A10.2 | Primary data is used for (at least) the processes over which the product manufacturer (in EPDs of services: service provider) has operational control. Primary data is used also for other processes, when available, otherwise secondary data is used. | PCR 2019:14 Section  4.6.1 |  |  |  |
| A10.3 | Representative secondary data should be used in cases in which they are representative for the purpose of the EPD, for example for bulk and raw materials purchased on a spot market. | PCR 2019:14 Section  4.6.1 |  |  |  |
| A10.4 | Any data used (including proxy data) is based on attributional LCA modelling (e.g., not be based on marginal data and not include credits from system expansion). | PCR 2019:14 Section  4.6.1 |  |  |  |
| A10.5 | If primary or representative secondary data are not available, proxy data may be used. The use of proxy data is identified in the data quality assessment, where the assessment cover at least 80% of the of the results of each of the core environmental impact  indicators. | PCR 2019:14 Section  4.6.1 |  |  |  |
| A10.6 | Data quality requirements for primary data:   * Data is averaged over at least one year of operations (this year does not need to be a calendar year); deviations are justified. * When data is averaged over several machines or manufacturing sites, the production volume per machine/site is accounted. * The reference year of the data is less than five years old and is representative for the validity period of the EPD. * Inputs to and outputs from the product system are accounted for over a period of 100 years. * Data comply with the rules on system boundaries and the cut-off rules. * If primary data is not used it is justified in the LCA report. * For processes contributing with more than 10% to the GWP-GHG results of modules A1-A3 (for EPDs of services: modules A1-A5), the efforts for collecting primary data are documented in the LCA report. | PCR 2019:14 Section  4.6.2 |  |  |  |
| A10.7 | Data quality requirements for representative secondary data:   * The reference year is as current as possible and less than 10 years. * The cut-off rule is followed. * The allocation rules in are followed, including the provision of conservative assumptions. * The technological, geographical, and temporal coverage of the data as much as possible reflect the physical reality of the declared product/product group. * The data is checked for plausibility (e.g., by mass or energy balance, or by comparisons with other relevant sources of information). * Datasets from databases are from the latest version of the database. If not, the database version is not older than three years counting from when the EPD was published with a new validity period.   *Note: That the reference year is not necessarily the year of data collection, modelling, calculation, or publication.* | PCR 2019:14 Section  4.6.3 |  |  |  |
| A10.8 | EPD as a data source:  For an upstream EPD used as a data source to an EPD of a downstream product, the LCA model of the upstream EPD complies with the rules to which the downstream EPD is verified. Else, the use of the upstream EPD is proven to yield conservative results.   * If there are doubts about the accuracy or plausibility of any input data from an EPD (e.g., the reported share of specific/primary data), another data source or a conservative estimate should be used instead. * For an upstream EPD used as a data source, and not fully compliant with the LCA rules to which the downstream EPD is verified, the downstream EPD include a statement about this. The statement includes a description of the deviation and why   the upstream EPD was used as a data source. | PCR 2019:14 Section  4.6.4 |  |  |  |

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| A10.9 | A data quality assessment that complies with EN 15941 is done and reported in the LCA report per dataset. This assessment cover data that together contribute to at least 80% of the results of each of the declared environmental impact indicators.   * The assessment cover at least the geographical, technical, and temporal representativeness of the data, and account for the precision, completeness, consistency, and sources of the data, and classify the assessed data as primary data, representative secondary data, and proxy data, and justify the use of proxy data. * The assessment is done by using the data quality level and criteria schemes of UN Environment Global Guidance on LCA database development or the product environmental footprint (PEF) method (European Commission 2021). * The assessment fulfils other requirements in EN 15941.   *Note: Dataset here refers to both primary (including collected LCI as well as activity data) and secondary data.* | PCR 2019:14.0, Section  4.6.5 |  |  |  |
| A10.10 | The calculations of the shares of primary data are clearly shown in the LCA report, including, for each A1-A3 (A1-A5 for services) process contributing with more than 10% to the GWP-results, at least the data category (primary, representative secondary or proxy data) and its contribution to the GWP-GHG results. | PCR 2019:14.0, Section  4.6.6 |  |  |  |

**A11 – LCA METHOD: OTHER LCA RULES**

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| **A11** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A11.1 | Mass balance approaches are not used in LCA modelling, with two exceptions:   1. Biogas supplied through grids and used for energy purposes in the product system. 2. The "rolling average percentage method" (defined as mass balance model in ISO 22095. | PCR 2019:14 Section  4.7.1 |  |  |  |
| A11.2 | Electricity modelling:  For the modelling of internally generated electricity, data for that electricity are used in case no contractual instrument demonstrating the origin of that electricity has been sold to a third party. If such contractual instruments have been sold to a third party, the electricity is modelled as it was from the grid. | PCR 2019:14 Section  4.7.2 |  |  |  |
| A11.3 | Electricity modelling:   1. Internally generated electricity that exits the product system is not deducted from inputs of electricity. 2. Internally generated electricity leaving the product system, including electricity from energy recovered in waste treatment, is allocated according to the allocation rules and considered in module D. | PCR 2019:14 Sections  4.5, 4.7.2 and 4.8.5 |  |  |  |
| A11.4 | Electricity modelling:  For the modelling of electricity from a directly connected supplier, data for that electricity, obtained from the supplier, should be used, if there is a dedicated transmission line between the supplier and the facility using the electricity and no contractual instruments have been sold to a third party. If there is no dedicated transmission line or if contractual instruments have been sold to a third party, the electricity is modelled as it was from the grid.  *Note: If data cannot be obtained from the supplier, proxy data representing the same power source may be used.* | PCR 2019:14 Sections  4.5 and 4.7.2 |  |  |  |
| A11.5 | Electricity modelling:  For the modelling of electricity from the grid, market-based modelling is used (except for specific processes, see PCR 2019:14 Section 4.8). In market-based modelling, contractual instruments may be used.  If a contractual instrument (e.g., Guarantees of Origin) has been used to model electricity, the following requirements are fulfilled:   1. Convey the information associated with the unit of energy delivered together with the characteristics of its generation of production, 2. Be ensured with a unique claim (by an external and independent organisation), 3. Be tracked and redeemed, retired, or cancelled by or on behalf of the reporting entity, 4. Be produced as close as possible to the period to which the contractual instrument is applied and comprises a corresponding timespan, 5. Be produced in the country, or within the market boundaries where electricity use occurs, if the grid is interconnected.   Electricity with contractual instruments is not virtually allocated to specific products unless a separate energy supply and contract is in place. | EN 15941  PCR 2019:14 Section  4.7.2, |  |  |  |
| A11.6 | Electricity modelling:  If a contractual instrument (e.g., Guarantees of Origin) has been used to model electricity, documentation on the purchase and cancellation is provided to the verifier, including:   1. The generator/provider of the electricity 2. Type(s) and quantity of electricity 3. Purchaser of the contractual instrument 4. Periods for issue and validity of the contractual instrument 5. The documentation on contractual instruments should include the addresses of the power plants, tracking numbers, and information on the existence of a certificate on direct coupling (yes/no). If this information is not available, it shall be justified. 6. If proof of cancellation is not available, the manufacturer proved (to verifier) that they have asked for this from the provider of the contractual instrument. | PCR 2019:14 Section  4.7.2 |  |  |  |
| A11.7 | Electricity modelling:  After specific electricity backed up by a contractual instrument, the residual mix or the consumption mix on the market are the next options in the hierarchy for electricity modelling, according to specific rules per life cycle stage.  *Note 1: If the residual grid mix of the market is not publicly available, it can conservatively be assumed to be the consumption mix of the market minus the renewables of that mix. The market is defined as being the (residual or consumption) grid mix of the country where the electricity is used, with exceptions for specific countries for which a sub-national (residual or consumption) grid mix is used: Australia, Brazil, Canada, China, India, and USA*  *Note 2: The residual electricity mix is the mix when all contract-specific electricity that has been sold to other customers has been subtracted from the total consumption mix.* | PCR 2019:14 Section  4.7.2 |  |  |  |
| A11.8 | Electricity modelling:  The manufacturer has made a commitment to buy contractual instruments for the full validity period of the EPD. | PCR 2019:14 Section  4.7.2  PCR 2019:14 Section 4.8 |  |  |  |
| A11.9 | Electricity modelling:  If a residual mix is used in the LCA model and there is no available LCI dataset on the residual mix (e.g., from a database), the residual mix is calculated. For countries that are AIB members, the residual mix is calculated following AIB’s residual mix calculation methodology for electricity (AIB 2024). The method used to calculate the residual mix is reported in the LCA report  and checked to be correct. | PCR 2019:14 Section  4.7.2 |  |  |  |
| A11.10 | Electricity modelling:  For an entity (e.g., a manufacturing site) producing more than one product, contractual instruments for electricity are assigned to a subset of the products unless a separate electricity supply and electricity contract is in place. If the contract for purchased electricity is made at a site level, any contractual instruments purchased are evenly assigned to all products produced at the site. Accordingly, if a site produces several products, the purchased contractual instruments in one year correspond to the electricity used to produce the corresponding annual sales volume of all the products. | PCR 2019:14 Section  4.7.2 |  |  |  |
| A11.11 | Electricity modelling:  The outlined market-based electricity modelling approach is used for the main environmental performance results.  *Note: results based on location-based electricity modelling (i.e., using the consumption mix on the market to model all electricity used in the*  *product system and in module D) may be declared in a subsection of the environmental performance section, see PCR 2019:14 Section 6.4.7. This declaration may be done only for a subset of indicators (e.g., GWP-GHG) or life-cycle stages (e.g., A1-A3).* | PCR 2019:14 Section  4.7.2 |  |  |  |
| A11.12 | Electricity modelling:  The LCI data for the generation of electricity used in modules B-D is based on the electricity consumption mix on the market.  *Note: If the EPD owner has indirect or direct operational control over a particular process in module B or C (which, e.g., may be the case for EPDs of certain construction services); then the hierarchy in row A6.4 for module A is applicable for that process.* | PCR 2019:14 Section  4.7.2 |  |  |  |
| A11.13 | Electricity modelling:  If location-based electricity is used in upstream secondary datasets for modelling modules A1-A3, this is justified and declared. | PCR 2019:14 2.0 Section  4.7.2.5 |  |  |  |
| A11.14 | Biogas modelling:  The use of biogas from an internal generation or dedicated supplier is assumed in the LCA model, provided no biogas certificates have been sold to a third-party. Else, residual gas mix is assumed. | EN 15941 Section E.2.3, PCR 2019:14 2.0 Section  4.7.3 |  |  |  |
| A11.15 | Biogas modelling:  Internally generated biogas that exits the product system, including biogas from recovered waste treatment, is not deducted from inputs of biogas, and is allocated according to allocation rules and considered in module D. | EN 15941 Section E.2.3 |  |  |  |
| A11.16 | Biogas modelling:  For biogas supplied through a grid and used for energy purposes in the studied product system, market-based modelling is used (except for specific processes mentioned in the PCR 2019:14 Section 4.8), following the rules from EN 15941:   * Biogas certificates are only used if the gas is supplied from a grid and if the supplier can guarantee that the biogas meets the requirements for tracking and traceability. Gas from a grid purchased without certificates are modelled using the residual mix. * As long as AIB (see Section 4.7.2) or an equivalent registry organisation does not provide datasets for residual gas mixes and this is not provided in generic LCI databases, the residual mix is calculated following AIB’s residual mix calculation methodology for electricity (AIB 2024) as closely as possible or be conservatively assumed to consist of 100% natural gas. * For an entity (e.g., a manufacturing site) producing more than one product, biogas certificates are not assigned to a subset of the products unless a separate biogas supply and biogas contract is in place. Accordingly, if the contract for purchased biogas is made at a site level, any biogas certificates purchased are evenly assigned to all products produced at the site. If a site produces several products, the biogas certificates purchased in one year shall, thus, correspond to the biogas used to produce the corresponding annual sales volumes of all the products.   *Note: For gas grids without contractual instruments fulfilling the above criteria, the residual mix will be identical to the consumption mix.* | PCR 2019:14 Section 4.5,  4.7.3.2 and 4.8 |  |  |  |
| A11.17 | Biogas modelling:  For gas supplied in a grid and used as feedstock, location-based modelling is used; in other words, the consumption mix are assumed (i.e., the annual average mix of biogas and natural gas supplied in the grid). | PCR 2019:14 Section  4.7.3.2 |  |  |  |
| A11.18 | Biogas modelling:  The outlined market-based modelling for biogas supplied in a grid and used for energy purposes, is used for the main environmental performance results. | PCR 2019:14 Section  4.7.3.2 |  |  |  |

**A12 – LCA METHOD: SPECIFIC RULES PER LIFE CYCLE DATA AND MODULE D**

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| **A12** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A12.1 | For modules A1-A5:  Primary data is used for processes under operational control of the EPD owner. | PCR 2019:14 Section 4.8 |  |  |  |
| A12.2 | For product stage, A1-A3:   * Clear description of what the modules cover. * Primary data are used for processes under operational control of the EPD owner, if primary data is not used, this is justified. * System boundary to nature (e.g., in the case of forests between nature and technosphere). * Use of secondary materials and secondary fuels and waste produced (check end-of-waste state). * Fulfilment of requirements regarding offsetting. | PCR 2019:14 Section  4.8.1  EN15804+A2 Section 6.3.5.2 |  |  |  |
| A12.3 | For product stage, electricity used in A1-A3 processes is modelled according to this priority order:   1. Market-based modelling, using: a specific electricity mix as generated, or purchased by an electricity supplier, demonstrated by a contractual instrument (e.g., Guarantees of Origin), or the residual electricity mix on the market. 2. Location-based modelling, i.e., the electricity consumption mix on the market. For main results, this option is not used for A1-A3 processes over which the manufacturer (often the EPD owner) has direct control (but it may be used when calculating additional results). If location-based electricity modelling is used in upstream secondary datasets, this is   justified and declared in the LCA report. | PCR 2019:14 Section  4.8.1, Section 4.7.2.5 |  |  |  |
| A12.4 | For construction stage, A4-A5:   * Clear description of system boundaries * Primary data are used for processes under operational control of the EPD owner. * Transport of the product to the construction site are described, if relevant, and be modelled according to the priority specified in the PCR. * Electricity used in transports or construction/installation are modelled using the electricity consumption mix on the market, except for processes under direct or indirect operational control of the EPD owner, for which the electricity modelling hierarchy of Section 4.8.1 is followed. * End-of-life processes of the packaging of the product are included in module A5. The modelling of these and other end- of-life processes in modules A4-A5 follow the rules for defining end-of-life scenarios outlined in Section 4.8.4. | PCR 2019:14 Section  4.8.2  EN 15804+A2 Section 6.3.5.3 |  |  |  |

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| A12.5 | For use stage, B1-B7   * Clear description of what the modules cover. * Primary data shall be used for processes under operational control of the EPD owner. * Data on direct emissions in module B1 should be based on documented tests, verified studies in conjunction with average or typical product use, or recommendations concerning suitable product use. Whenever applicable, test methods are internationally recognised. * The electricity use for the use/operation of the product are modelled using the electricity consumption mix on the market, except for processes under direct or indirect operational control of the EPD owner, for which the electricity modelling hierarchy of PCR 2019:14 Section 4.8.1 is followed. * Products using energy in the use stage, directly or indirectly, include module B6. Key assumptions regarding the applied scenario in module B6 shall be documented in the EPD. | EN 15804+A2 Sections  6.3.5.4 and 7.3.3  PCR 2019:14 Sections  4.3.7 and 4.8.3 |  |  |  |
| A12.6 | For end-of-life stage, modules C1-C4:   * Clear description of what the modules cover. * Primary data are used for processes under operational control of the EPD owner. * Electricity uses are modelled using the electricity consumption mix on the market, except for processes under direct operational control of the EPD owner, for which the electricity modelling hierarchy of Section 4.8.1 are followed. * Scenarios are realistic and representative for the most probable end-of-life treatment alternatives considering the geographical scope of the EPD. * Scenarios do not include processes or procedures that are not in current use, or which have not been demonstrated to be practical. * If any of the declared scenarios is a mix of end-of-life alternatives (reuse, recycling, incineration with energy recovery, landfill, etc.), also the corresponding 100% scenarios (100% reuse, 100% recycling, 100% incineration with energy   recovery, 100% landfill, etc.) are declared. | EN 15804+A2 Sections 6.3.5.5  PCR 2019:14 Section  4.8.4 |  |  |  |
| A12.7 | For end-of-life stage, modules C1-C4:  If data specific for the intended market is missing for the modelling of demolition/deconstruction in module C1, the transports in module C2, the sorting and treatment of materials in C3, or the compacting of inert construction waste for landfills (including backfilling) in module C4, and the product is intended to be part of a building or construction works as built, the default data in  Table 4 are used. | PCR 2019:14 Section  4.8.4, Table 4 |  |  |  |
| A12.8 | Consequences for recovered material/energy beyond the product life cycle (module D):   * Net flows of secondary material/energy that enter or leave the product system (fulfilling the end-of-waste criteria) are declared in module D and have not been subject to co-product allocation. * The results of module D are declared and considered separately from the results of modules A-C. * Module D is modelled according to the rules from PCR 2019:14 and EN 15804. | EN 15804+A2 Section 6.3.5.6  PCR 2019:14 Section  4.8.5 |  |  |  |

**A13 – LCA METHOD: ENVIRONMENTAL PERFORMANCE AND LCI INDICATORS**

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| **A13** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A13.1 | Environmental impact indicators are declared:  All core environmental impact indicators are declared for each module, including GWP-GHG:   * Climate change potential (GWP) – fossil (kg CO2eq) * Climate change potential (GWP) – biogenic (kg CO2eq) * Climate change potential (GWP) – LULUC (kg CO2eq) * Climate change potential (GWP) – total (kg CO2eq) * Climate change potential (GWP) – GHG (kg CO2eq) * Ozone depletion potential (ODP) (kg CFC-11eq) * Acidification (AP) (mol H+eq) * Eutrophication potential (EP) - freshwater (kg P eq) * Eutrophication potential (EP) - marine (kg N eq) * Eutrophication potential (EP) - terrestrial (mol N eq) * Formation potential of tropospheric ozone (POCP) (kg NMVOC eq) * Abiotic depletion potential for non-fossil resources– minerals and metals (kg Sg eq) * Abiotic depletion potential for fossil resources– fossil fuels (MJ, net calorific value) * Water depletion potential (WDP) (m3) | EN 15804+A2 Section  7.2.3 Table 3  PCR 2019:14 Section 4.9 [Indicators of](https://www.environdec.com/pcr/env-perf-indic/env-perf-indic-gpi5/indic-env-impact#waterdeprivation) [Environmental Impact |](https://www.environdec.com/pcr/env-perf-indic/env-perf-indic-gpi5/indic-env-impact#waterdeprivation) [EPD International](https://www.environdec.com/pcr/env-perf-indic/env-perf-indic-gpi5/indic-env-impact#waterdeprivation) |  |  |  |
| A13.2 | Additional environmental impact indicators, are calculated and declared for each module:   * Particular Matter emissions (Disease incidence) * Ionizing radiation, human health (kBq U235 eq) * Eco-toxicity (CTUe) * Human toxicity, cancer effects (CTUh) * Human toxicity, non-cancer (CTUh) * Land use related impacts/Soil quality (dimensionless)   *Note: These environmental impact indicators may be included in the EPD but shall be mentioned as an entry of “ND” or as text.* | EN 15804+A2 Section  7.2.3 Table 4  PCR 2019:14 Section 4.9 |  |  |  |

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| A13.3 | Indicators based on LCI describing resource use:   * Use of renewable primary energy excluding renewable primary energy resources used as raw materials (PERE) (MJ) * Use of renewable primary energy resources used as raw materials (PERM) (MJ) * Total use of renewable primary energy resources (PERT) (MJ) * Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (PENRE) (MJ) * Use of non-renewable primary energy resources used as raw materials (PENRM) (MJ) * Total use of non-renewable primary energy re-sources (PENRT) (MJ) * Use of secondary material; RSF = Use of renewable secondary fuels (SM) (MJ) * Use of non-renewable secondary fuels (NRSF) (MJ) * Use of net fresh water (FW) (MJ)   *Note: The result tables only contain values or the letters “ND” (Not Declared). It is not possible to specify ND for mandatory indicators. ND shall only be used for voluntary parameters that are not quantified because no data is available.* | EN 15804+A2 Section  7.2.4 Tables 6  PCR 2019:14 Section 4.9 [www.environdec.com/indi](http://www.environdec.com/indicators) [cators](http://www.environdec.com/indicators) |  |  |  |
| A13.4 | Environmental information describing waste categories:   * Hazardous waste disposed (kg) * Non-hazardous waste disposed (kg) * Radioactive waste disposed (kg)   *Note: The result tables only contain values or the letters “ND” (Not Declared). It is not possible to specify ND for mandatory indicators. ND shall only be used for voluntary parameters that are not quantified because no data is available.* | EN 15804+A2 Section  7.2.4 Tables 7  PCR 2019:14 Section 4.9 [www.environdec.com/indi](http://www.environdec.com/indicators) [cators](http://www.environdec.com/indicators) |  |  |  |
| A13.5 | Environmental information describing output flows:   * Components for re-use (kg) * Material for recycling (kg) * Materials for energy recovery (kg) * Exported energy, electricity (kg) * Exported energy, thermal (MJ per energy carrier)   *Note: The result tables only contain values or the letters “ND” (Not Declared). It is not possible to specify ND for mandatory indicators. ND shall only be used for voluntary parameters that are not quantified because no data is available.* | EN 15804+A2 Section  7.2.4 Tables 8  PCR 2019:14 Section 4.9 [www.environdec.com/indi](http://www.environdec.com/indicators) [cators](http://www.environdec.com/indicators) |  |  |  |
| A13.6 | Justification of other indicators and characterisation methods applied. | PCR 2019:14 Section 4.9 |  |  |  |
| A13.7 | The latest version of characterisation factors released by JRC been used taking account of the period of transition (i.e., EF 3.1). | PCR 2019:14 Section 4.9 |  |  |  |

**A14 – LCA METHOD: SPECIFIC RULES PER EPD TYPE**

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| **A14** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A14.1 | For Sector EPDs the rules in the PCR and GPI are followed. | GPI 5 Annex 9  PCR 2019:14 Section  4.10.3 |  |  |  |
| A14.2 | For EPDs owned by a trader:   * The same data quality requirements and other rules as EPDs published by a manufacturer under the same PCR are applied. * The transportation from the manufacturer(s) to a central warehouse or to the border of the market of the EPD scope are included and be based on primary data. * In case of retailer/wholesaler, also the transportation to the store of the retailer/wholesaler are included and based on primary data. * If the trader uses its own packaging, the production of the packaging is included and be based on primary data. These transports, processes of the central warehouse or the store of retailer/wholesaler, and packaging processes, are assigned to module A3. * The location of the central warehouse or store of retailer/wholesaler is declared in addition to the location of the manufacturing site(s), see PCR 2019:14 Section 6.4.4. | GPI 5 Annex 9  PCR 2019:14 Section  4.10.4 |  |  |  |
| A14.3 | For EPDs owned by a trader:  If the EPD owned by a trader is based on EPD(s) of manufacturer(s), the verification is done based on the same PCR with the same version number in terms of the first digit (e.g., an EPD based on version 1.0.0 of a PCR can be used as input to an EPD based on version 1.1.0 of the same PCR).  The manufacturer’s EPDs are referred to in the trader’s EPD; the reference includes registration number of the EPD and the EPD programme in which it is published. | PCR 2019:14 Section  4.10.4 |  |  |  |
| A14.4 | For EPD of product not yet on the market:   * The LCA model of the forthcoming product are based on the LCA model of the similar product. * If the LCA model of the forthcoming product is based on a non-sibling EPD, the EPD owner proved that the data quality requirements are met.   *Note: If the LCA model of a valid sibling EPD is used when modelling the forthcoming product, the data quality requirements in Annex A and applicable PCR can be assumed to be fulfilled.* | GPI 5 Annex 9  PCR 2019:14 Section  4.10.5 |  |  |  |

**A15 – EPD/LCA DEVELOPED WITH A PRE-VERIFIED TOOL**

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| **A15** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A15.1 | For pre-verified tools, the LCA report serves as a complementary document to the tool project report, which is generated by the tool and includes data and information that is unique to users’ input. If the tool does not generate an LCA report, justification is provided during the application, including an explanation of how the data and information are handled. | GPI 5 section 8.6.8.2 |  |  |  |
| A15.2 | The tool project report and pilot EPD(s) should support the structuring of the LCA report. The LCA report shall include:   * Relevant information for EPD verification, * Reference to the tool version and the tool project report, * Description and explanation of the variable input data and the main drivers for the indicator results, and * Description of the data quality of the variable input data. | GPI 5 section 8.6.8.2 |  |  |  |

**A16 – ADDITIONAL INFORMATION**

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| **A16** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A16.1 | If additional information is given, check the documentation:   * Laboratory results/measurements listed in the content declaration. * Laboratory results/measurements listed in the functional/technical performance. * Documentation on the declared technical information on individual life cycle stages not taken into consideration in the construction product's LCA (but applicable building assessment (e.g., transport routes, energy consumption during the use stage, cleaning cycles etc.) * Laboratory results/measurements pertaining to the declared emissions in indoor air, oil or water during the use stage. * All declared information is in line with requirements in the PCR. | EN 15804+A2 Section 8.2 |  |  |  |
| A16.2 | Where relevant: ensure that information additional to EN 15804+A2 is either verified or has been verified/certified by others e.g., by reference to standards or other publicly accepted test requirements. |  |  |  |  |

**A17 – REFERENCES AND DOCUMENTATIONS**

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| **A17** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| A17.1 | Reference section is included in the LCA report. | GPI 5 Section 8.6.8.2 |  |  |  |
| A17.2 | Documentation of the relevant technical information, e.g., recycling or reuse rates, with references. | GPI 5 Section 8.6.8.2 |  |  |  |
| A17.3 | Presentation and justification of allocations in the use of secondary materials or secondary fuels as raw materials. | EN 15804+A2 Section  6.4.3 and 8.2 |  |  |  |
| A17.4 | Presentation and justification of allocations in the plant (allocation between different products/production lines in a plant). | EN 15804+A2 Section  6.4.3 and 8.2 |  |  |  |
| A17.5 | Documentation on background data (specific and/or generic):   * name of the data record, * its source (database, bibliographic source, etc.),   year of data collection and its representativeness | EN 15941,  EN 15804+A2 Annex E |  |  |  |
| A17.6 | Documentation of data quality for all datasets with a major contribution, together contributing to at least 80% of the results of the core environmental impact indicators. | EN 15941,  EN 15804+A2 Annex E |  |  |  |
| A17.7 | Documentation of allocation factors used and their (in dependent) sources. |  |  |  |  |
| A17.8 | If applicable: transparent documentation of the calculations of biogenic carbon content of product and packaging in CO2-eq. | EN 15804+A2 Section  7.2.5 and Table 9 |  |  |  |
| A17.9 | If additional information is given, check the documentation:   * Laboratory results/measurements listed in the content declaration. * Laboratory results/measurements listed in the functional/technical performance. * Documentation on the declared technical information on individual life cycle stages not taken into consideration in the construction product's LCA; applicable PCR applicable building assessment (e.g., transport routes, energy consumption during the use stage, cleaning cycles etc.) * Laboratory results/measurements pertaining to the declared emissions in indoor air, oil or water during the use stage.   All declared information is in line with requirements in the PCR | EN 15804+A2 Section 8.3 |  |  |  |
| A17.10 | The lifespan is documented. | EN 15804+A2 Section  6.3.4 and Annex A |  |  |  |

# PART B: REQUIREMENTS ON THE EPD

This whole section is mandatory to verify, and all aspects listed are mandatory to include in the EPD, if not stated otherwise. The rules for the EPD format can be found in EN 15804 Section 7 and in EN 15942.

**B1 – CONTENT AND FORMAT OF EPD: COVER PAGE**

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| --- | --- | --- | --- | --- | --- |
| **B1** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B1.1 | EPD includes following information on cover page:   * Text “Environmental Product Declaration in accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021”, prominently visible * Statement: “An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see [www.environdec.com](http://www.environdec.com/)” * If applicable: a statement of conformity with ISO 21930:2017 * If applicable; a statement of conformity with other standards (e.g., ISO 14067, ISO 14026) and methodological guidelines. | EN 15804+A2 Section 7.1,  GPI 5 Section 7.4.1,  PCR 2019:14 Section  6.4.1 |  |  |  |
| B1.2 | EPD includes following information on cover page:   * Name of declared product(s) * Name and logotype of EPD owner * EPD registration number as issued by the programme operator (EPD-IES-XXXXXXX:XXX) | EN 15804+A2 Section 7.1,  GPI 5 Section 7.4.1,  PCR 2019:14 Section  6.4.1 |  |  |  |
| B1.3 | EPD includes following information on cover page:   * The text “Environmental Product Declaration” and/or “EPD”. * Programme: The International EPD System, [www.environdec.com](http://www.environdec.com/) * Programme operator: EPD International AB * If applicable, Name of Licensee, in the case of EPDs registered through a regional or national licensee, * Logotype of the International EPD System, the national/regional licensee or the co-location center (CLC) (if applicable), * ECO EPD logotype as approved by the ECO Platform. | EN 15804+A2 Section 7.1,  GPI 5 Section 7.4.1,  PCR 2019:14 Section  6.4.1 |  |  |  |

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| B1.4 | EPD includes following information on cover page:   * Version date: 20YY-MM-DD, applicable for updated EPDs * Validity date: 20YY-MM-DD | EN 15804+A2 Section 7.1,  GPI 5 Section 7.4.1,  PCR 2019:14 Section  6.4.1 |  |  |  |
| B1.5 | For EPDs of multiple products from the same company, following information on cover page:   * A statement that the EPD covers multiple products and a list of all products covered (if more than 10 products, the list of products may instead be included in the product information section of the EPD; then this list shall be referred to on the cover page) and, * Information on the type of EPD: “EPD of multiple products, based on the average results of the product group”, “EPD of multiple products, based on a representative product”, “EPD of multiple products, based on several representative   products”, “EPD of multiple products, based on worst-case results”. | EN 15804+A2 Section 7.1,  GPI 5 Section 7.4.1,  PCR 2019:14 Section  6.4.1 |  |  |  |
| B1.6 | For sector EPDs:   * A statement that the EPD is a sector EPD. * Following information on the cover page: “Sector EPD based on an average product” or “Sector EPD based on a worst- case product”. | GPI 5 Section 7.4.1  PCR 2019:14 Section  6.4.1 |  |  |  |
| B1.7 | For EPDs of products not yet on the market or for EPDs of products recently on the market, a disclaimer both on cover page and product information section:  - “Product [choose applicable: not yet/recently] on the market – Results of this EPD shall be used with care as the LCI data is not yet based on 1 year of production which may result in increased uncertainty”. | GPI 5 Annex A.9.4,  PCR 2019:14 Section  6.4.1 |  |  |  |
| B1.8 | If applicable; information about dual registration of EPD in another programme, such as registration number and logotype. | GPI 5 Section 7.4.1  PCR 2019:14 Section 6,1  and 6.4.1 |  |  |  |
| B1.9 | EPDs is published in English, if it is published in other languages, EPDs in other languages shall have identical content as the version in English, use the same registration number, and also be uploaded on [www.environdec.com.](http://www.environdec.com/) | GPI 5 Section 7.4.1  PCR 2019:14 Section 6,1  and 6.4.1 |  |  |  |

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| B1.10 | If an EPD is published in an additional language as a self-declaration, it shall contain the following disclaimer on the cover page (translated to the language of the self-declaration):  - "This is a self-declared translation of an EPD [add registration number of the verified and valid EPD] that can be accessed at [add link/reference to the verified EPD] and is published for convenience purposes. Only the original EPD is valid and binding between parties.” | GPI 5 Section 7.4.1  PCR 2019:14 Section 6,1  and 6.4.1 |  |  |  |

**B2 – GENERAL INFORMATION**

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| **B2** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B2.1 | The address of the programme operator: EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden, E-mail: [support@environdec.com.](mailto:support@environdec.com) | GPI 5 Section 7.4.2  PCR 2019:14 Section  6.4.2 |  |  |  |
| B2.2 | Information on PCR according to Table 5 in PCR 2019:14:   * CEN standard EN 15804 serves as the core Product Category Rules (PCR).   *If the EPD complies with ISO 21930, “ISO standard ISO 21930” shall be added to the above text.*   * Product Category Rules (PCR): <name, registration number, version and UN CPC code(s)>   *If applicable, the corresponding information about c-PCR shall also be included. In case of an adopted c-PCR, the information shall state the name and version number of the original c-PCR document as well as the name and version number given to the c-PCR after adoption in the International EPD System.*   * PCR review was conducted by: <name and organisations of the review chair, and information on how to contact the chair through the programme operator>   *If applicable, the corresponding information about c-PCR shall also be included.* | GPI 5 Section 7.4.2  PCR 2019:14 Section  6.4.2, Table 5 |  |  |  |
| B2.3 | Information on third-party verification presented according to section 6.4.2.3 in PCR 2019:14. Please see Table 6 (Information on Verification) in PCR 2019:14. | GPI 5 Section 7.4.2  PCR 2019:14 Section  6.4.2, Table 6 |  |  |  |
| B2.4 | EPD includes the statement:  - “The EPD owner has the sole ownership, liability, and responsibility for the EPD.” | GPI 5 Section 7.4.2  PCR 2019:14 Section  6.4.2 |  |  |  |

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| B2.5 | EPD includes the following statement on the requirements for comparability of EPDs, adapted from ISO 14025 and ISO 14020:  - “EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the  same version of characterisation factors); and be valid at the time of comparison.” | EN 15804 Section 7.1,  GPI 5 Section 7.4.2  PCR 2019:14 Section  6.4.2 |  |  |  |

**B3 – INFORMATION ABOUT EPD OWNER**

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| **B3** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B3.1 | Address and contact information of the EPD owner.  If applicable, address and contact information of the LCA practitioner commissioned by the EPD owner. | EN 15804 Section 7.1,  GPI 5 Section 7.4.3  PCR 2019:14 Section  6.4.3 |  |  |  |
| B3.2 | Description of the organisation of the EPD owner. This may include information on product-related or management system-related certifications and other relevant work the organisation wants to communicate.  Any information related to environmental, economic, or social sustainability shall follow the rules in Sections 6.4.8 and 6.4.9 in PCR 2019:14. | GPI 5 Section 7.4.3  PCR 2019:14 Section  6.4.3 |  |  |  |

**B4 – PRODUCT INFORMATION**

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| **B4** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B4.1 | Product identification by name, and an unambiguous identification of the product by standards, concessions, or other means. | EN 15804 Section 7.1  GPI 5 Section 7.4.4  PCR 2019:14 Section  6.4.4 |  |  |  |
| B4.2 | Visual representation (e.g., an image) of the product. | GPI 5 Section 7.4.3  PCR 2019:14 Section  6.4.3 |  |  |  |
| B4.3 | Identification of the product (name and code) according to the UN CPC product classification system, if there is an applicable code. | GPI 5 Section 7.4.4  PCR 2019:14 Section  6.4.4 |  |  |  |
| B4.4 | Description of:   * the product in accordance with the product classification system(s) used, and description of the technical performance of the product, including its application/intended use and key functionalities, * the expected influence on the operational aspects and impact of the building or other construction work, as well as restrictions to a type of construction or building. | GPI 5 Section 7.4.4  PCR 2019:14 Section  6.4.4 |  |  |  |
| B4.5 | Technical/actual lifespan, if applicable. | GPI 5 Section 7.4.4  PCR 2019:14 Section  6.4.4 |  |  |  |
| B4.6 | Brief description of main processes of manufacturing (for EPDs of goods) or service provision (for EPDs of services). |  |  |  |
| B4.7 | Name of manufacturer(s) (if EPD of goods) or service provider(s) (if EPD of services), if different from the EPD owner. |  |  |  |
| B4.8 | Location of the manufacturing site(s), including, as a minimum, the city (or municipality). |  |  |  |
| B4.9 | In case of EPDs owned by a trader, the location of the final process in direct control of the trader, including, as a minimum, the city (or municipality). | GPI 5 Section 7.4.4  PCR 2019:14 Section  6.4.4 |  |  |  |

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| B4.10 | References to any relevant websites for more information or explanatory materials. | GPI 5 Section 7.4.4  PCR 2019:14 Section  6.4.4 |  |  |  |

**B5 – CONTENT DECLARATION**

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| **B5** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B5.1 | Content declaration shall be included. If the content declaration is left empty, for EPDs of intangible products, such as services, an explanation shall be provided in the EPD. If, however, the service involves leasing of a physical product (rental service) used in several construction works, the content of that product shall be declared. | PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.2 | The mass (weight) of one unit of a product, as purchased or per declared unit. | GPI 5 Section 7.2.5, 7.4.5  PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.3 | Content of the product as a list of materials and substances, and their mass.  *Note: Proprietary materials and substances of confidential nature are exempted from the above requirement (see Section 8.2.3 of the GPI). If not declared, these shall be replaced by a generic term/description of the material/substance and/or a range of values.* | GPI 5 Section 7.2.5, 7.4.5  PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.4 | The mass (per declared unit) and the content of distribution and/or consumer packaging shall be declared, when applicable.  The gross mass of materials in the content declaration shall cover 100% of one unit of product and its packaging, except for EPDs of multiple products based on worst-case results. | GPI 5 Section 7.2.5, 7.4.5  PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.5 | Biogenic carbon content in product as follows:   1. If the biogenic carbon content in the product is ≥5%: this share (in mass-%) shall be declared along with the mass of biogenic carbon content in kg C per product or declared unit. 2. If it is <5%: this may be declared.   *Note: For EPDs claiming compliance with ISO 21930, the biogenic carbon content shall additionally be declared in terms of kg CO2 eq.* | GPI 5 Section 7.2.5, 7.4.5  PCR 2019:14 Section  6.4.5 |  |  |  |

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| B5.6 | Biogenic carbon content in packaging as follows:   1. a) If the biogenic carbon content in the packaging is ≥5%: this share shall be declared. 2. b) If it is <5%: this may be declared.   *Note: The share of recycled content of the packaging material may also be declared; if the share of pre-consumer recycled content is declared, it shall be declared separately from the share of post-consumer recycled content.* | GPI 5 Section 7.2.5, 7.4.5  PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.7 | Post-consumer recycled content as follows:   1. If the post-consumer recycled content in the product is ≥5%: this share shall be declared. 2. If it is <5%: this may be declared.   *Note: The share of pre-consumer recycled content of the product may also be declared, and shall then be declared separately from the share of post-consumer recycled content.* | GPI 5 Section 7.2.5, 7.4.5  PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.8 | If the share of biogenic/recycled material is unknown, this part of the content declaration can be left out or be declared as 0% (a conservative estimate) or unknown. | GPI 5 Section 7.2.5, 7.4.5  PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.9 | EPDs of multiple products or sector EPDs shall include a description what the content declaration represents. | GPI 5 Section 7.2.5, 7.4.5  PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.10 | Information on the environmental and hazardous/toxic properties of substances in the candidate list of Substances of Very High Concern (SVHCs) in the product shall be declared, if the substance constitutes more than 0.1% of the weight of the product or any component of the product. | GPI 5 Section 7.2.5, 7.4.5  PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.11 | Other information on substances with hazardous/toxic properties that can be of concern for human health and/or the environment, if required by normative standards or regulation applicable in the market for which the EPD is valid. Note that declaration of hazardous/toxic substances shall be done irrespective of whether the substances have been included or excluded from the LCA model. | GPI 5 Section 7.2.5, 7.4.5  PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.12 | The declared share of biogenic/recycled materials shall be based on the actual share of biogenic/recycled material in the product. As such, the declared content may be different from the product content as stated in the LCA model (as this may partly be based on generic LCI data). | GPI 5 Section 7.2.5, 7.4.5  PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.13 | The content declaration shall be consistent with the product’s technical data sheet (if any). The product’s safety data sheet (if any) shall be made available to the verifier, for example to enable confirmation of presence/absence of SVHC in the product. | GPI 5 Section 7.2.5, 7.4.5  PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.14 | Several sets of results, reflecting different products, shall not be declared in the same EPD. | GPI 5 Annex 9,  PCR 2019:14 Section  6.4.5 |  |  |  |
| B5.15 | For EPDs based on multiple manufacturing sites, the difference in GWP-GHG results for modules A1-A3 (A1-A5 for services) between the reported result and the results for the underlying sites shall be reported in percentage, if the difference is above 10%. If the difference is below 10%, the actual difference or “<10%” shall be reported.  *Note: If an EPD covers several manufacturing sites in A3, the manufacturing sites shall be listed in the product information section of the EPD (see PCR 2019:14 Section 6.4.4).* | GPI 5 Annex 9  PCR 2019:14 Section  4.10.2 |  |  |  |

**B6 – LCA INFORMATION**

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| **B6** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B6.1 | Geographical scope of the EPD per module, i.e., which countries/regions the modules A1-A5, B and C are modelled to represent. *Note: The geographical scope can be “global” e.g., for module A1, if the raw materials are produced in several continents, or for modules B or C, if the EPD represents a product sold on the global market.*  If this section declares results for additional scenarios for modules A4-D that represent different geographical scopes, the declared  geographical scope shall reflect the main scenario.  If applicable: To comply with ISO 21930, the indicators in ISO 21930 applicable for the geographical context shall be declared. | GPI 5 Section 7.4.6  PCR 2019:14 Section 1.4,  and 6.4.6 |  |  |  |
| B6.2 | EPDs based on this PCR without using a c-PCR shall use a declared unit. If mass is not used as declared or functional unit, the EPD shall declare a conversion factor to mass (this is not applicable for EPDs of services).  In addition, physical properties of the product shall be declared as follows (may not be applicable for EPDs of services):   * If the declared unit is given in an area unit, area density (kg/m2) and thickness (m) * If the declared unit is given in a volume unit, volumetric mass density (kg/m3) * If the declared unit is given in a length unit, linear mass density (kg/m) * If the declared unit is given in terms of piece(s) or item(s), mass (kg) per piece/item * If the declared unit is given in another unit, the volumetric mass density (kg/m3).   If relevant, the coverage area per unit of product (e.g., m2/kg, m2/m3, m2/item) shall be declared. For example, this may be relevant for products such as paints, primers, sealants, flooring materials, and insulation materials. | PCR 2019:14 Section 4.2  and 6.4.6 |  |  |  |

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| B6.3 | Functional unit:   * Functional unit is used for EPD type c, * Functional unit is used when specified in the c-PCR. | PCR 2019:14 Section  2.2.2 |  |  |  |
| B6.4 | Reference service life (RSL) and its relationship with the technical/actual lifespan, if applicable. If a reference service life (RSL) or lifespan is declared in the EPD, declaration of the scenario on which the RSL is based, in accordance with the LCA report.  *Note: RSL shall only be declared if defined as part of the FU according to a c-PCR, unless the PCR says otherwise.* | EN 15804+A2 Section  7.3.3.2 + Annex A, GPI 5 Section 7.4.6, PCR  2019:14 Section 4.2.1 and  6.4.6 |  |  |  |
| B6.5 | Description of the EPD system boundary as:   1. “cradle-to-gate with modules C1-C4 and module D”, 2. “cradle-to-gate with options, modules C1-C4, module D and optional modules”, 3. “cradle-to-grave and module D”, 4. “cradle to gate”, 5. “cradle to gate with options”, 6. “cradle to gate with modules A1-A5 and optional modules”,   depending on the type of system boundary defined in and permitted by the PCR and applicable c-PCR. | EN 15804 Section 7.2.2,  GPI 5 Section 7.4.6,  PCR 2019:14 Section  6.4.6 |  |  |  |
| B6.6 | Information on which life-cycle stages are not considered (if any), with a justification for the omission. | GPI 5 Section 7.4.6  PCR 2019:14 Section  6.4.6 |  |  |  |
| B6.7 | Process flow diagram of the product system:   * divided into the life-cycle stages and modules (or other division of the product life cycle, if defined in the PCR), * showing the main processes and the system boundary of the LCA.   The diagram shall make it clear when the end-of-waste state is reached for main input flows of reused/recycled materials and recovered energy, and for output flows of reused/recycled materials and recovered energy exiting the end-of-life stage. | EN 15804+A2: Section 7.2.1,  GPI 5 Section 7.4.6  PCR 2019:14 Section  6.4.6 |  |  |  |
| B6.8 | Name and version of the LCA software, if applicable. | GPI 5 Section 7.4.6  PCR 2019:14 Section  6.4.6 |  |  |  |

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| B6.9 | If recycled material is a main input to, or output from, the product system, the allocation procedure shall be clearly described.  If the recycled material inputs contribute more than 10% to the GWP-GHG results of modules A1-A3, the GWP-GHG intensity of that recycled material (in kg CO2 eq./tonne) shall be declared in the EPD.  *Note: This includes information on whether the allocation has been based on real data and/or estimates, whether it is a conservative estimate, and the percentage of recycled material that was assumed to come with, and without, an environmental burden.* | GPI 5 Section 7.4.6  PCR 2019:14 Section  6.4.6, and 4.5.3 |  |  |  |
| B6.10 | A summary of the data quality assessment shall be included in the LCA section of the EPD, in line with Section 7.3.3 in EN 15941. Among others, this summary shall specify the data collection period of primary data for manufacturing (EPDs of goods) or service provision processes (EPDs of services), including justifications for any deviations from using a one-year data collection period.  c-PCRs may set further requirements on the assessment. | EN 15804+A2 Section 6.3.8.3,  EN 15941 Section 7.3.3  PCR 2019:14 Section  4.6.5 |  |  |  |
| B6.11 | For all processes contributing with more than 10% to the GWP-GHG results of modules A1-A3 (for EPDs of services: modules A1-A5), the following shall be declared in the EPD:   * Type of source: “database”, “collected data”, or “EPD”, etc. * Source: database and its version number, provider of data (e.g., “EPD owner”, “supplier”), EPD registration number (unless confidential), etc. * Reference year (if confidential, this can be phrased as, e.g., “<5 years old”). * Data category: “primary data” or “secondary data” (optionally divided into “representative secondary data” and “proxy data”). * If infrastructure/capital goods are included within the system boundaries, this is described in the EPD. The description includes which life-cycle stages or processes that infrastructure/capital goods are included for. | GPI 5 Annex 5.4,  PCR 2019:14 Section  4.6.5 |  |  |  |
| B6.12 | The total share of primary data contributing to the declared GWP-GHG results of modules A1-A3 (A1-A5 for services) shall be declared in the EPD. If more than 90%, “>90%” may be reported. This share should also be declared for each process contributing with more than 10% to the GWP-GHG results of modules A1-A3 (for EPDs of services: modules A1-A5).  In connection to the reported shares of primary data, the EPD shall include the following statement:  “The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does  not capture all relevant aspects of data quality and is not comparable across product categories." | PCR 2019:14, Section  4.6.5.1 |  |  |  |
| 6.13 | Description of scenario(s) used in the modelling of downstream stages and module D, if applicable, see Sections 4.8.2 to 4.8.5 in PCR 2019:14. | GPI 5 Section 7.4.6  PCR 2019:14 Section  6.4.6 |  |  |  |

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| 6.14 | If an EPD from a supplier is used as a data source in the EPD, and if it is not possible to calculate the share of primary data, the following shall be done:   * The upstream EPD shall conservatively be assumed to be based on 0% primary data or an estimated share based on information in the upstream EPD and/or other similar EPDs. * If an estimate is done, the following statement shall be included: “The reported share of primary data is associated with uncertainty, as an EPD [or: several EPDs] used as data source lack information on the share of primary data.” | GPI 5 Annex 5.4,  PCR 2019:14 Section  4.6.5.1 |  |  |  |
| 6.15 | Declared modules and geographical scopes are reported in a table, and the following rules apply:   * Modules/processes/life-cycle stages declared shall be noted with “X” and the ones not declared as “ND”. * Geographical scope shall be reported by country code(s) (e.g., UK, FR, DE) and/or name of the region(s) (e.g., EU 27, Global). | GPI 5 Section 7.4.6  PCR 2019:14 Section  6.4.6, Table 10 |  |  |  |
| 6.16 | Any application of the cut-off rules, including LCI data excluded based on cut-offs, shall be described in the EPD. | PCR 2019:14 Section 4.4 |  |  |  |
| 6.17 | For product stage, modules A1-A3:  In a subsection of the environmental performance section, the EPD may include additional results based on location-based electricity modelling for all processes, including the manufacturing processes in module A3 and processes under operational control of the EPD owner. | GPI 5 Section 6.4.7,  PCR 2019:14 Section  4.8.1 |  |  |  |
| 6.18 | For construction product stage, modules A4-A5:  Any scenarios used shall be clearly described in the EPD, including information in conformance with Tables 10 and 11 in EN 15804, when applicable. The electricity mix used in these processes shall be documented in the EPD, if relevant (in line with Table 10 of EN 15804).  Transport of the product to the construction site shall be described in the EPD, if relevant, and be modelled according to th is priority:   1. Actual transportation modes and distances to a specific customer or market, representing the geographical scope of the EPD. 2. A weighted average of transportation modes and distances, based on transportation to several customers or markets, representing the geographical scope of the EPD. 3. A default transportation scenario of relevance to the product category and (for the product category) common markets, if specified in the c-PCR. | EN 15804+A2 Section 7.3, Table 10 and 11,  PCR 2019:14 Section  4.8.2 |  |  |  |
| 6.19 | For construction product stage, modules A4-A5:  Electricity used in transports or construction/installation is modelled using the electricity consumption mix on the market, except for processes under operational control of the EPD owner, for which the electricity modelling hierarchy described above (B6.18) is applied. | GPI Annex 7.1,  PCR 2019:14 Section  4.8.2 |  |  |  |

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| 6.20 | For use stage, modules B1-B7:  Primary data is used for processes under operational control of the EPD owner, and any scenarios used are clearly described in the EPD, including the information to be declared according to Table 12 in EN 15804, when applicable.  The electricity use for the use/operation of the product shall be modelled using the electricity consumption mix on the market, except for processes under direct or indirect operational control of the EPD owner, for which the electricity modelling hierarchy described above (B6.16) is applied. The electricity mix of the use/operation shall be declared in the EPD, if relevant. | EN 15804+A2 Section 7.3, Table 12,  PCR 2019:14 Section  4.8.3 |  |  |  |
| 6.21 | For end-of-life stage, modules C1-C4:  If any of the declared scenarios is a mix of end-of-life alternatives (reuse, recycling, incineration with energy recovery, landfill, etc.), also the corresponding 100% scenarios (100% reuse, 100% recycling, 100% incineration with energy recovery, 100% landfill, etc.) shall be declared. | PCR 2019:14 Section  4.8.4 |  |  |  |
| 6.22 | For end-of-life stage, modules C1-C4, the following general rules are considered when defining end-of-life scenarios:   * Scenarios are realistic and representative for the most probable end-of-life treatment alternatives considering the geographical scope of the EPD, with the exception that relevant 100% scenarios shall be declared (see above) even if they are not realistic. * Scenarios do not include processes or procedures that are not in current use, or which have not been demonstrated to be practical. * Scenarios shall be described in the EPD, reflecting possible and realistic end-of-life treatment alternatives in the included markets, including the information to be declared according to Table 15 in EN 15804, when applicable. The description of C2 processes include distances and means of transports and should include the additional information on transports outlined for A4 processes in Table 10 of EN 15804. The description of C3 processes include the amount of materials being sorted.   The assumed scenarios shall be described in the EPD, in a way that makes it clear that they reflect possible and realistic end-of- life treatment alternatives in the markets reflected in the geographical scope of the EPD, including the information to be declared according to Table 15 in EN 15804, when applicable. The electricity mix of the end-of-life stage shall be documented in the EPD,  if relevant. | EN 15804+A2 Section 7.3, Table 10, Table 15,  PCR 2019:14 Section  4.8.4 |  |  |  |

**B7 – ENVIRONMENTAL PERFORMANCE**

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| **B7** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B7.1 | The declared results are identical with the respective values in the LCA report. | EN 15804 Section 7.2 |  | ☐ | ☐ |
| B7.2 | The results of modules A1-A3 shall be declared in aggregated form. | PCR 2019:14 Section 4.9 |  |  |  |
| B7.3 | LCA results of the product, including the indicators and impact assessment methods, and associated disclaimers.  Declaration of the variation in results between products and sites in line with requirements in PCR 2019:14 Section 4.10, if applicable, and any other declaration of variation in results. | EN 15804 Section 6.4.4,  7.2.3, 7.2.4, 7.2.5 7.5 and  8.2,  GPI 5 Section 7.4.7  PCR 2019:14 Section  6.4.7 |  |  |  |
| B7.4 | The following statements shall be included:   * ”The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.” * If the EPD covers the end-of-life stage: “The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).” For services, “A1-A3” shall be replaced by “A1-A5”. | EN 15804 Section 6.4.4,  7.2.3, 7.2.4, 7.2.5 7.5 and  8.2,  GPI 5 Section 7.4.7  PCR 2019:14 Section  6.4.7 |  |  |  |
| B7.5 | If biogenic carbon leaving the product system in module A5 (see Annex 2 in PCR 2019:14) or recovered energy leaving the product system in modules A5 or C (see Annex 3) have been balanced out already in modules A1-A3, a statement in this regard shall be included. | EN 15804 Section 6.4.4,  7.2.3, 7.2.4, 7.2.5 7.5 and  8.2,  GPI 5 Section 7.4.7  PCR 2019:14 Section  6.4.7 |  |  |  |
| B7.6 | The environmental performance section of the EPD shall only include one set of results. This section may declare additional LCA results in a separate subsection. This subsection shall clearly describe the scenario/method used, including how it differs from the scenario/method of the main environmental performance results. The following additional results may be declared:   * Results for additional scenarios for modules A4-D. If this is done, the most representative scenario (for the geographical scope of the EPD) shall be declared as the main environmental performance results, and the other scenarios shall be declared in this separate subsection. * Results of an alternative modelling approach, if such approach is explicitly allowed by the applicable c-PCR or PCR 2019:14. * Alternative environmental performance results based on location-based electricity and/or biogas modelling. This means that the consumption mix on the market is used to model all electricity/gas used in the product system (including manufacturing processes in module A3 (for EPDs of goods) or service provision processes in module A5 (for EPDs of   services) and other processes under operational control of the EPD owner). | GPI 5 Section 7.4.7  PCR 2019:14 Section  6.4.7 |  |  |  |
| B7.7 | If other inventory indicators data declared in the EPD, if relevant and useful for EPD users, this data shall, not be declared in the main body of the EPD, but in an annex. | PCR 2019:14, Section 4.9 |  |  |  |

**B8 – CONTENT AND FORMAT OF EPD: GENERAL ASPECTS**

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| **B8** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B8.1 | Unit and quantities:  The International System of Units (SI units) shall be used where available. | PCR 2019:14 Section 6.2 |  |  |  |
| B8.2 | Unit and quantities:  The thousand separator and decimal mark in the EPD shall follow one of the following styles (a number with six significant figures shown for illustration):   * SI style (French version): 1 234,56 * SI style (English version): 1 234.56   In the event of potential confusion or intended use of the EPD in markets where different symbols are used, the EPD shall state which symbols are used for thousand separator and decimal mark. | PCR 2019:14 Section 6.2 |  |  |  |
| B8.3 | Variations, in percentage, between two numbers shall be calculated by dividing the absolute value of the difference between the numbers by the average of the numbers and then multiplying by 100.  When the rules ask for the declaration of variation between more than two numbers, the maximum variation shall be declared. | PCR 2019:14 Section 6.2 |  |  |  |
| B8.4 | The result tables shall:   * only contain values or the letters “ND” (Not Declared). It is not possible to specify ND for mandatory environmental performance indicators. ND shall only be used for optional indicators that are not quantified because no data is available. * contain no blank cells, hyphens, less than or greater than signs, or letters (except “ND”). * use the value “0” only for parameters that have been calculated to be zero.   use footnotes to explain any limitation to the result value. | PCR 2019:14 Section 6.2 |  |  |  |
| B8.5 | Use of Images in EPD:  Images may in themselves be interpreted as an environmental claim (such as trees, mountains, and wildlife that are not related to the declared product) and shall, therefore, be used with caution and in compliance with national legislation and best practices in the markets in which the EPD is intended to be used.  If the EPD claiming compliance with ISO 14026, it shall fulfil the requirements on footprint graphics in ISO 14026. | PCR 2019:14 Section 6.3 |  |  |  |
| B8.6 | Sections of the EPD:  The EPD shall include the sections listed below. Other sections shall not be included, and other headings shall not be used, unless an applicable PCR says otherwise.   * Cover page * General information * Information about EPD owner * Product information * Content declaration * LCA information * Environmental performance * Abbreviations * References * Version history   The following section shall be included, if applicable:  Information related to sector EPDs | PCR 2019:14 Section 6.4 |  |  |  |

**B9 – ADDITIONAL ENVIRONMENTAL, SOCIAL AND ECONOMIC INFORMATION**

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| **B9** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B9.1 | If applicable, the following sections may be included in the EPD as a section:   * Additional environmental information * Additional social and economic information | PCR 2019:14 Section 6.4 |  |  |  |
| B9.2 | ‘Any additional environmental, social and economic information declared shall be substantiated and verifiable, and be derived using appropriate methods and be specific, accurate, not misleading, and relevant to the specific product and country. | GPI 5, Section 7.4.8  PCR 2019:14, Section  6.4.8 and 6.4.9 |  |  |  |
| B9.3 | The optional additional environmental information section shall not include any claims (e.g., including certificates), related to the environmental performance indicators or other LCA indicators, that do not comply with the LCA rules of this PCR. For example, carbon-neutrality claims are not allowed, neither are claims on the reductions of GHG emissions, or reporting of certificates, based  on a mass balance approach. | GPI 5, Section 7.4.8  PCR 2019:14, Section  6.4.8 and 6.4.9 |  |  |  |
| B9.4 | If additional environmental, social and/or economic information is declared, check/find the (example) documentation on laboratory results/measurements:   * listed in the content declaration, * listed in the functional/technical performance, * pertaining to the declared emissions in indoor air, oil or water during the use stage. | EN 15804+A2 Section 8.3 |  |  |  |

**B10 – INFORMATION RELATED TO SECTOR EPDs**

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| **B10** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B10.1 | For sector EPDs, the following information added:   * List (name) of the contributing manufacturers that the sector EPD covers, * Description of how the selection of the sites/products has been done and how the declared (average or worst-case) results were determined, and * No claims that the sector EPD results are representative for a certain manufacturer or its product. * a statement that the document covers the average/worst-case values for an entire or partial product category (specifying the percentage of representativeness) and, hence, the declared product is an average/worst-case that is not available for purchase on the market.   If the GWP-GHG result of a sector EPD and the GWP-GHG results between the represented sectors, sites or products differ by more than 10% for modules A1-A3 (A1-A5 for services), these variations shall be reported in the EPD and the reason for the  variations shall be qualitatively described. If the variation is below 10%, the actual variation or “<10%” shall be declared. | GPI 5, Section 7.4.10  PCR 2019:14, Section  6.4.10 |  |  |  |

**B11 – VERSION HISTORY**

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| **B11** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B11.1 | A section describing the current and previous versions of the EPD, including the version dates. The first version shall be described as the “original version of the EPD”. For each subsequent version, a description of the differences versus the previously published version shall be included. | GPI 5, Section 7.4.10  PCR 2019:14, Section  6.4.10 |  |  |  |

**B12 – EPD PUBLICATION**

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| **B12** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B12.1 | EPDs based on this PCR shall be made digitally available in the machine-readable ILCD+EPD format. The machine-readable Excel file shall be checked by the verifier within the EPD Portal. | PCR 2019:14, Section 6 |  |  |  |
| B12.2 | The content of EPDs published in different formats shall be consistent with each other, if applicable. | PCR 2019:14, Section 6 |  |  |  |
| B12.3 | Information entered in the EPD Portal by the EPD Owner is aligns with the information documented within the EPD (pdf document). EPD Portal cannot contain any information not in the EPD. | GPI 5, Section 7 |  |  |  |

**B13 – REFERENCES AND ABBREVIATIONS**

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| **B13** |  | **REFERENCE** | **PRE-VERIFIED VIA GCCA EPD-TOOL** | **CHECKED AND APPROVED** | **N/A** |
| B13.1 | A section shall be included describing all abbreviations used in the EPD. | PCR 2019:14, Section  6.4.12 |  |  |  |
| B13.2 | A list of all sources referred to in the EPD and in the LCA report, including the GPI (including version number) and PCR (registration number, name, and version) used to develop the LCA and the EPD. | GPI 5, Section 7.4.13  PCR 2019:14, Section  6.4.13 |  |  |  |

# DIALOGUE BETWEEN VERIFIER AND EPD OWNER DURING THE VERIFICATION PROCESS

The dialogue between the external verifier and EPD owner\* during the verification process shall be documented. Any deviations from the requirements, the dialogue between verifier and EPD owner, and as well improvements made following the verification process shall be documented in a transparent way and in English.

For EPD Process Certification, the process defined by the certification body for documentation of verification shall instead be followed and the certificate provided during EPD registration.

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| **NO** | **CHAPTER, ARTICLE, PARAGRAPH, TABLE** | **TYPE OF COMMENT\*\*** | **REFERENCE TO VERIFICATION REPORT OR PROGRAMME INSTRUCTIONS** | **VERIFIER COMMENT AND RECOMMENDATION** | **EPD OWNER ANSWER** | **FINAL VERIFIER STATEMENT** |
| **1** |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |
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*Rows may be added/deleted, as needed. If preferred by the verifier, the dialogue may be provided in an Excel format.*

*\* The EPD owner may outsource certain LCA tasks (see GPI 5.0, section 4.2.2) to a third party, such as an LCA consultant. In this case, the outsourced LCA consultant should involve in the dialogue. However, the EPD owner shall remain responsible of any outsourced tasks and shall be involved in them and aware about their content.*

*\*\* Editorial (Ed), General (Ge) or Technical (Te)*