

VERIFICATION REPORT FOR EPD OF CONSTRUCTION PRODUCT IN THE INTERNATIONAL EPD® SYSTEM

INTRODUCTION

This document serves as the verification report template of Environmental Product Declarations (EPD) of construction products, aligning with PCR 2019:14 and applicable complementary PCR (c-PCR), in the International EPD® System.

This template is mandatory to use for verification of EN 15804-compliant EPDs for construction products in the International EPD® System for both EPD verification and EPD Process Certification. A signed copy of this verification report shall be submitted to the Secretariat as a part of the EPD registration and publication. The verification report shall be available to any person upon request.

This is a living document, which is based on the ECO Platform Audit and Verification Guidelines for ECO EPD Programme Operators Version 5 dated May 2022. See www.environdec.com for the latest version.

EPD INFORMATION

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| Registration number of EPD(s): | S-P-04877 |
| Product name(s): | Stonewool board with Aluminium Foil |
| EPD owner: | RBS Ravago |
| Product Category Rules (PCR): <i>Registration number, name and version</i> | PCR 2019:14 Construction products (EN 15804:A2) Version 1.1 |
| Complementary PCR (c-PCR): <i>Registration number, name and version</i> | c-PCR005 Thermal insulation products (EN 16783: 2017) |
| If applicable, pre-verified tool: <i>Name and validity date (YYYY-MM-DD)</i> | Click to add text. |
| EPD valid until: <i>(YYYY-MM-DD) based on the approval date.</i> | 2027-09-15 |
| Additional comments from verifier: | Click to add 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 and its project report, in terms of


- the underlying data collected and used for the LCA calculations,
- the way the LCA-based calculations have been carried out to comply with the calculation rules,
- the presentation of environmental performance included in the EPD, 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 rules, EN 15804:2012+A2:2019/AC:2021, and the PCR and applicable c-PCR.

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 declaration 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 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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| Name and organization of verifier: | Luca Giacomello - Giacomello |
| Approval date | 2022-09-16 |
| Location | Torino, Italy |
| Signature: <i>Add as image or print and sign this document</i> |  |

In case of EPD Process Certification, the signature of EPD process owner may also be added.

VERIFICATION CHECKLIST PART A: CALCULATION RULES FOR THE LIFE CYCLE ASSESSMENT AND REQUIREMENTS ON THE LCA REPORT:

The following issues must be checked as a minimum. The check consists of checking if the issue is described in the LCA report (termed “project report” in EN 15804) and if it is line with the requirements and guidelines in the applicable reference (EN 15804, other standards and PCRs). Most issues are mandatory to check, some can be optional.

Any deviations from the requirements should be reported by the verifier. If the issue is in line with the requirements and/or accepted by the verifier, the box “done” can be ticked. If the LCA is already critically reviewed according to ISO 14044 before the verification, no duplications are necessary.

| 1 | GENERAL INFORMATION | MANDATORY (M) / OPTIONAL (O) | REFERENCE | CHECKED AND APPROVED | N/A |
|-----|--|---------------------------------|--|--------------------------|--------------------------|
| 1.1 | Commissioner of LCA study, LCA practitioner. | M | EN 15804 ch. 8.2 | √ | <input type="checkbox"/> |
| 1.2 | Date of issue of LCA report. | M | EN 15804 ch. 8.2 | √ | <input type="checkbox"/> |
| 1.3 | Statement that the Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804 (date and version) and applicable PCRs (date and version). | M | EN 15804 ch. 8.2 and applicable PCRs | √ | <input type="checkbox"/> |
| 1.4 | Any other independent verification of the data given in the LCI/LCA documentation? | O | | √ | <input type="checkbox"/> |
| 2 | STUDY GOAL | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 2.1 | Reasons for performing the Life Cycle Assessment. | M | EN 15804 ch. 8.2 | √ | <input type="checkbox"/> |
| 2.2 | Intended application (e.g. for EPD, databases, publication etc.). | M | EN 15804 ch. 8.2 | √ | <input type="checkbox"/> |
| 2.3 | Target group (B2B, B2C, ...). | M | EN 15804 ch. 8.2 | √ | <input type="checkbox"/> |
| 3 | FUNCTIONAL UNIT / DECLARED UNIT | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 3.1 | Functional / Declared unit, including relevant technical specification. | M | EN 15804 ch. 6.3.1-6.3.3 and applicable PCRs | √ | <input type="checkbox"/> |
| 3.2 | A factor for the conversion into kg, when applicable. | M | EN 15804 ch. 6.3.2-6.3.3 and applicable PCRs | <input type="checkbox"/> | √ |

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| 3.3 | <p>If EPD of multiple products:</p> <p>a) Description of the type of EPD (based on average results, based on representative product, based on highest results of the included products, i.e. worst-case results, or Sector EPD).</p> <p>b) If average results, a description of how the average has been calculated. If a representative product, a justification of the choice of representative product.</p> | M | EN 15804 ch. 8.2 and applicable PCRs | <input type="checkbox"/> | √ |
| 4 | PRODUCT DESCRIPTION | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 4.1 | <p>Composition of the product.</p> <p>The level of detail: the main components necessary to understand what type of product is concerned (detailed mass description is not necessary if confidential). In case of multiple products: at minimum qualitative description of averages and qualitative description of ranges.</p> | M | ISO 14025 | √ | <input type="checkbox"/> |
| 4.2 | <p>Description of technical and functional characteristics and area of intended application in the building. In case of multiple products: at minimum qualitative description of averages and qualitative description of ranges of functions.</p> | M | Applicable PCRs | √ | <input type="checkbox"/> |
| 4.3 | <p>Flow diagram of main production processes and visualization of system boundaries. Level of detail: see 4.1.</p> | M | ISO 14025 | √ | <input type="checkbox"/> |
| 5 | SYSTEM BOUNDARIES IN ACCORDANCE WITH THE MODULAR DESIGN OF EN 15804 | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 5.1 | <p>Description of the life-cycle stages/modules declared. Omissions of life-cycle stages declared.</p> | M | | √ | <input type="checkbox"/> |
| 5.2 | <p>Comprehensive declaration of modules A1-A3 (A1-A5 for services) + C + D as a minimum requirement unless the three conditions for type d) and e) described in PCR 2019:14 chapter 2.2.2 are met, then only modules A1-A3 (A1-A5 for services) applies.</p> | M | EN 15804 ch. 5.2 and applicable PCRs | √ | <input type="checkbox"/> |
| 5.3 | <p>A1 to A3: System boundary</p> <p>a) Description of all processes the modules cover</p> <p>b) System boundary to nature (e.g. between forest and technosphere in wood production)</p> <p>c) Use of secondary materials and secondary fuels and waste produced</p> <p>d) Specification of the “end-of-waste state” for material leaving A1-A3 as waste</p> <p>e) If part of the energy calculation: Reference to the contract/certificate of green electricity</p> <p>f) No offsetting allowed</p> | <p>M</p> <p>CO₂ certificates optional</p> | EN 15804 ch. 6.3.5.2 and applicable PCRs | √ | <input type="checkbox"/> |

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| 5.4 | <p>A1 to A3: Allocation of co-products:</p> <p>a) Selection of the allocation factors for co-product allocation</p> <p>b) Justification of selected allocation method (economic, physical)</p> <p>c) Justification of specific allocation processes (e.g. if data are not available to allocate according to the EN 15804 rules)</p> <p>d) No declaration of loads and benefits in Module D from allocation in A1-A3.</p> | M | EN 15804 ch. 6.4.3.2 and annex B.1, and CEN TR 16970 ch. 6.4.3.2 ff | <input type="checkbox"/> | √ |
| 5.5 | A4 to A5 (optional module: mandatory for services): Clear description of all processes the modules cover. | M | EN 15804 ch. 6.3.5.3 and applicable PCRs | √ | <input type="checkbox"/> |
| 5.6 | Accounting for losses in the modules in which they arise (e.g. A4, during transport to construction site). | M | EN 15804 ch. 6.3.5.1 | √ | <input type="checkbox"/> |
| 5.7 | B1 to B5 (optional module): Description of all processes the modules cover. | M | EN 15804 ch. 6.3.5.4 and applicable PCRs | √ | <input type="checkbox"/> |
| 5.8 | B6 and B7 (optional module): Description of all processes the modules cover. | M | EN 15804 ch. 6.3.5.4 and applicable PCRs | √ | <input type="checkbox"/> |
| 5.9 | C1 to C4: Description of all processes the modules cover. | M | EN 15804 ch. 6.3.5.5 and applicable PCRs | √ | <input type="checkbox"/> |
| 5.10 | <p>C3:</p> <p>a) Waste treatment</p> <p>b) Materials for recycling</p> <p>c) Impacts of recycling processes to achieve end-of-waste state</p> <ul style="list-style-type: none"> - Justification that the end-of-waste state has been reached - Existing purpose - Existing market or demand - Compliance with technical requirements and legal guidelines - Fulfils limit values for Substances of Very High Concern (SVHC). | M | EN 15804 ch. 6.3.5.5, ch. 7.2.4.4 (Table 8) and annex B.1, and applicable PCRs | √ | <input type="checkbox"/> |

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| 5.11 | <p>C4: Is the complete waste disposal process included in this module? Is its inclusion described transparently and is it plausible?</p> <p>Carefully check the correct allocation for deposition of biogenic material: The degradation of a product's biogenic carbon content in a solid waste disposal site, declared as GWP biogenic, shall be calculated without time limit. Any remaining biogenic carbon is treated as an emission of biogenic CO2 from the technosphere to nature.</p> | M | EN 15804 ch. 6.3.5.5 and ch. 6.3.5.6 | √ | <input type="checkbox"/> |
| 5.12 | <p>D: System boundary and contents of module justified</p> <p>Assumptions with regard to substituted processes in D incl. year of reference, e.g. assumptions with regard to substitution of electricity and power production. Assumptions regarding quality of the recovered material are documented and justified.</p> | M | EN 15804 ch. 6.3.5.6 | √ | <input type="checkbox"/> |
| 5.13 | <p>D: No benefits or loads of allocated co-products</p> <p>The calculation of the net flows is documented, described transparently and plausible, particularly regarding:</p> <p>a) amount of input material recovered from a previous system;</p> <p>b) amount of output material to be recovered in a subsequent system;</p> <p>c) material losses between the point of end-of-waste and point of substitution.</p> | M | EN 15804 ch. 6.3.5.6 and ch. 6.4.3.3, and applicable PCRs | √ | <input type="checkbox"/> |
| 6 | POWER MIX (E.G. ELECTRICITY) | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 6.1 | <p>Selection of the power mix.</p> <p>Documentation of reference year for the dataset.</p> | M | CEN/TR 16970, CEN/TR 15941 and applicable PCRs | √ | <input type="checkbox"/> |

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| 6.2 | <p>If applicable: Supplier-specific electricity (e.g. Guarantees of Origin, GO) shall be valid for at least the upcoming year and the manufacturer shall make a commitment to buy GO for the full validity period of the EPD. Other contractual instruments than GO may be used, as long as reliability, traceability, and the avoidance of double counting are ensured, which is the case if the instrument guarantees that the electricity product (adopted from ISO 14067):</p> <ul style="list-style-type: none"> a) conveys the information associated with the unit of electricity delivered together with the characteristics for the generator, b) is assured with a unique claim, c) is tracked and redeemed, retired or cancelled by or on behalf of the reporting entity, d) is as close as possible to the period to which the contractual instrument is applied and comprises a corresponding timespan, and e) is produced within the country, or within the market boundaries where consumption occurs if the grid is interconnected. | M | ISO 14067 and applicable PCRs | <input type="checkbox"/> | √ |
| 6.3 | <p>Has the inventory data for the generation of electricity used in A1-A3 (A1-A5 for services) been modelled based on below?</p> <ul style="list-style-type: none"> a) Specific electricity mix as generated, or purchased from an electricity supplier, demonstrated by a GO or similar. b) Residual electricity mix of the electricity supplier on the market. c) Residual electricity mix on the market. d) Electricity consumption mix on the market. This option shall not be used for electricity used in processes over which the manufacturer (EPD owner) has direct <p>Note 1: 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.</p> <p>Note 2: "The market" in the above hierarchy may correspond to a national electricity market, if this can be justified.</p> <p>Note 3: For electricity markets without trade of GO (or similar), the residual mix will, however, be identical to the consumption mix.</p> | M | Applicable PCRs | √ | <input type="checkbox"/> |
| 6.4 | <p>An additional set of results, based on modelling of electricity used in module A using location-based approach (instead of the market-based approach using GO and residual mix), may be included LCA report.</p> | O | | <input type="checkbox"/> | √ |

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| 6.5 | <p>If the contractual situation of the electricity used is not clear, a sensitivity analysis shall be reported in the LCA report.</p> <p>Note: In some countries, parts of the electricity from renewable energy sources might be sold/exported as renewable electricity without being excluded from the supplier mix. For this reason, in such cases a sensitivity analysis applying the relevant consumption grid mix shall be conducted and reported in the LCA report to demonstrate the difference in results of the electricity tracking instruments.</p> | M | ISO 14087 | <input type="checkbox"/> | √ |
| 8 | CRITERIA FOR EXCLUDING INPUTS AND OUTPUTS | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 8.1 | Selection of the cut-off criteria, description of application of the criteria and assumptions in line with standard and PCR. | M | EN 15804 ch. 6.3.6 and ch. 8.2, and applicable PCRs | √ | <input type="checkbox"/> |
| 8.2 | List of excluded processes. | M | EN 15804 ch. 8.2 | √ | <input type="checkbox"/> |
| 9 | DATA COLLECTION, SELECTED GENERIC DATA | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 9.1 | Selection and use of generic data justified and validity demonstrated. | M | EN 15804 ch. 6.3.7, CEN/TR 15941 and applicable PCR | √ | <input type="checkbox"/> |
| 9.2 | Documentation on generic data: Name of the data record and its source (database, literary source, etc.). | M | CEN/TR 15941, EN 15804 ch. 6.3.7 and applicable PCRs | √ | <input type="checkbox"/> |
| 9.3 | <p>Data collection, including handling of data quality issues, according to LCA rules</p> <ul style="list-style-type: none"> a) Assessment period for each module considered in the LCA (e.g. one-year average, etc.) b) Appropriateness of generic data (temporal, geographical, technological) c) Declaration of other assumptions concerning generic data, e.g. about data gaps d) Omissions of life-cycle stages, processes e) Assumptions regarding energy and electricity production incl. year of reference. It should also be transparent which electricity/energy model is applied as avoided product if energy recovery is included in the optional Module D. f) Assumptions concerning other relevant background data where relevant for the system boundary. | M | ISO 14044:2006, section 4.3.2, Documentation ISO 14040 and, EN 15804 ch. 6.3.7 and ch. 6.3.8 | √ | <input type="checkbox"/> |
| 10 | VALIDITY OF DATA | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |

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| 10.1 | <p>Data adheres to the following requirements:</p> <ul style="list-style-type: none"> a) Age < 10 years for generic data b) Age < 5 years for specific data c) Specific data based on 1-year average (unless deviations are justified). For products not yet on the market, see the GPI. d) Time period of 100 years, in case of a landfill scenario: longer if relevant e) Complies with physical reality of the product as far as possible, in terms of geographical and technological coverage f) Integrity of generic data records, system limit and cut-off criteria for generic data records validity demonstrated. g) Does the documentation format follow the current ILCD format and nomenclature? | M | EN 15804 ch. 6.3.8, CEN/TR 15941, applicable PCRs and GPI | √ | <input type="checkbox"/> |
| 10.2 | <p>Documentation of:</p> <ul style="list-style-type: none"> a) Name of the data record, its source (database, bibliographic source, etc.), and year of data collection and its representativeness b) Handling missing data c) Data quality assessment that covers at least 80% of the absolute impact of any core environmental indicators. | | EN 15804 ch. 6.3.8 and Annex E, CEN/TR 15941 and, applicable PCRs | √ | <input type="checkbox"/> |
| 10.3 | Manufacturing data should be reproducible, e.g. by available data management systems. Random checks could be carried out or based on importance; some data could be checked in the verification. | O | | √ | <input type="checkbox"/> |
| 11 | DEVELOPMENT OF SCENARIOS AT PRODUCT LEVEL IN MODULES A4-A5-B-C-D | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 11.1 | Statement that the scenarios included are currently in use and are representative for one of the most probable alternatives. Additional declaration of representative mixes for the relevant region is permissible. | M | EN 15804 ch. 6.3.9 and applicable PCRs | √ | <input type="checkbox"/> |
| 11.2 | Documentation of the relevant technical information, e.g. recycling or reuse rates, with reference to the literature source. | M | | <input type="checkbox"/> | √ |
| 12 | ALLOCATIONS | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 12.1 | General allocation principles applied (avoidance of allocation, no double counting / omissions, uniform application of the allocation rules etc.) | M | ISO 14044:2006 ch. 4.3.4 | √ | <input type="checkbox"/> |

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| 12.2 | Presentation and justification of allocations in the use of secondary materials or secondary fuels as raw materials. | M | EN 15804 ch. 6.4.3 and ch. 8.2, and applicable PCRs | √ | <input type="checkbox"/> |
| 12.3 | Presentation and justification of allocations in the plant (allocation between different products/production lines in a plant) | M | | √ | <input type="checkbox"/> |
| 12.4 | If applicable: Presentation and justification of allocation of multi-input processes (e.g. landfilling or incineration) | M | | √ | <input type="checkbox"/> |
| 12.5 | Co-product allocation correctly applied. | M | EN 15804 ch. 6.4.3.2 | <input type="checkbox"/> | √ |
| 12.6 | Documentation of allocation factors used and their (independent) sources | M | | <input type="checkbox"/> | √ |
| 12.7 | Allocation process for reuse, recycling and recovery, check specifically: a) End-of-waste state b) Conventional average technologies and practices c) Specification and justification of end-of-waste state where applicable d) If selected substituted processes in Module D are in accordance with the c-PCR or (if no c-PCR is available) representative actual processes e) Calculation of net flows in Module D f) Conservative approach, i.e. choice of those scenarios and calculation rules that reflect the highest environmental impacts in comparison to other choices. | M | EN 15804 ch. 6.4.3.3 and applicable PCRs | √ | <input type="checkbox"/> |
| 12.8 | Justification if generic data is applied which does not comply with the allocation principles, or where this compliance is not known and there are reasons to doubt it. Expert guess of how this influences the indicator results should be provided. | M | Applicable PCRs | <input type="checkbox"/> | √ |
| 13 | LIFE CYCLE MODELING INFORMATION | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 13.1 | Transparent presentation of LCA modelling (for example by tables, screenshots from LCA software programs etc.). | M | EN 15804 ch. 8.4 | √ | <input type="checkbox"/> |
| 13.2 | Clear description how specific (company) data are used. Is the assignment of company data to the datasets provided by the LCA software, described transparently and is it plausible? | M | EN 15804 ch. 8.4 | √ | <input type="checkbox"/> |
| 13.3 | For several locations/products: Presentation of modelling of all locations and products, including how weighting of data from different locations and products have been done. | M | | √ | <input type="checkbox"/> |

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| 13.4 | <p>Plausibility and consistency of data (mass balance, energy balance). This can only be fulfilled with random checks if the effort for a verification shall be reasonable, e.g.</p> <p>a) 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)</p> <p>b) CO and CO2 emissions coherent with the mass input of fossil energy resources</p> <p>c) Are the energy indicators coherent with the energy resources used?</p> | M | EN 15804 ch. 8.4 | √ | <input type="checkbox"/> |
| 13.5 | Overview of biogenic carbon flows in the different modules (see Annex 2 in PCR 2019:14). | O | EN 15804 ch. 6.4.4 and ch. 8.2, and applicable PCRs | √ | <input type="checkbox"/> |
| 14 | CALCULATION AND PRESENTATION OF ENVIRONMENTAL PERFORMANCE RESULTS | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 14.1 | Presentation of the environmental performance results (describing environmental impact, use of resources, waste categories and output material flows) in tabular form for all modules A1 to D. | M | EN 15804 ch. 6.5 and 7.2.2-7.2.5, EN 15978 ch. 12.5, and applicable PCRs | √ | <input type="checkbox"/> |
| 14.2 | Is the supplementary indicator for climate impact (GWP-GHG) included? | M | Applicable PCRs | | |
| 14.3 | Disclaimers to the relevant core and additional environmental impact indicators. | M | EN 15804 ch. 7.2.3.3 | √ | <input type="checkbox"/> |
| 14.4 | Has the packaging been included in the declaration of the LCI-related indicators, e.g. in the quantification of the content of primary energy? | M | | √ | <input type="checkbox"/> |
| 14.5 | Selection of correct characterisation factors and elimination of long-term emissions (>100 years). | M | EN 15804 ch. 8.2 and Annex C, and applicable PCRs | √ | <input type="checkbox"/> |
| 14.6 | Justification of characterisation factors applied in case of input/output flows that are not on the list of characterisation factors of the EN 15804 and applicable PCR. | M | | <input type="checkbox"/> | √ |
| 14.7 | <p>Information on the environmental impacts declared in the LCA report:</p> <p>a) Reference to characterisation models and factors</p> <p>b) Statement that the estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.</p> | M | EN 15804 ch. 8.2 | √ | <input type="checkbox"/> |
| 15 | INTERPRETATION | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 15.1 | Interpretation of the results based on a dominance/contribution analysis of selected indicators. | O | | √ | <input type="checkbox"/> |
| 15.2 | Relationship between the results of the LCI and the results of the LCIA. | M | EN 15804 ch. 8.2 | √ | <input type="checkbox"/> |

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| 15.3 | Assumptions and restrictions as regard the interpretation of results in the EPD, in terms of both methods and data. | M | EN 15804 ch. 8.2 | √ | <input type="checkbox"/> |
| 15.4 | If the EPD is on multiple products, a statement to that effect shall be included in the EPD together with a description of the range/variability of the environmental performance results if significant; the description of the range can be qualitative or quantitative. | M | EN 15804 ch. 8.2 and applicable PCRs | <input type="checkbox"/> | √ |
| 15.5 | Interpretation of the influence of data quality. An assessment of data quality should be provided if the data quality differs for significant data. | M | EN 15804 ch. 6.3.8 and ch. 8.2, ISO 14040, CEN/TR15941 and applicable PCRs | √ | <input type="checkbox"/> |
| 15.6 | Comprehensive transparency as regards value decisions, justifications and expert opinions, i.e. transparency to avoid misinterpretation. | M | EN 15804 ch. 8.2 | √ | <input type="checkbox"/> |
| 16 | ADDITIONAL INFORMATION | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 16.1 | If additional environmental, economic or social information is declared, check that it has been substantiated and derived using appropriate methods (e.g. by reference to standards, other publicly accepted test requirements, or similar), and that it is specific, accurate, not misleading, and relevant to the specific product. | M | EN 15804 ch. 8.3 and applicable PCRs | <input type="checkbox"/> | √ |
| 17 | DOCUMENTATION FOR CALCULATING THE REFERENCE SERVICE LIFE (RSL) | MANDATORY / OPTIONAL | REFERENCE | CHECKED AND APPROVED | N/A |
| 17.1 | The RSL shall be declared if the full life cycle A1-C4, or the B modules, are declared. Documentation for calculating the reference service life (RSL) shall be representative for the declared product | M | EN 15804 ch. 6.3.4 and Annex A | √ | <input type="checkbox"/> |

VERIFICATION CHECKLIST PART B: REQUIREMENTS ON THE EPD

This whole section is mandatory to verify. The rules for the EPD format can be found in EN 15804 ch. 7 and in EN 15942.

| 1 | DECLARATION OF GENERAL INFORMATION | REFERENCE | CHECKED AND APPROVED | N/A |
|-----|---|---|----------------------|----------|
| 1.1 | <p>EPD includes required information on cover/front page:</p> <ul style="list-style-type: none"> a) Text “Environmental Product Declaration in accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021”, prominently visible in the EPD b) If applicable: a statement of conformity with ISO 21930:2017 c) Name of declared product(s) and image d) Name and logotype of EPD owner e) Programme: The International EPD® System, www.environdec.com f) Programme operator: EPD International AB g) Logotype of the International EPD® System h) Logotype of ECO Platform i) EPD registration number as issued by the programme operator (S-P-XXXXX) j) Date of publication (issue): YYYY-MM-DD k) Date of revision: YYYY-MM-DD, “applicable for updated EPDs” l) Date of validity; YYYY-MM-DD m) For EPDs covering multiple products: a statement that the EPD covers multiple products n) For Sector EPDs: a statement that the EPD is a Sector EPD. <p>Where applicable:</p> <ul style="list-style-type: none"> a) Information about dual registration of EPD in another programme, b) A statement of conformity with other standards and methodological guides. <p>Note: These items shall be declared on the front page of the EPD.</p> | <p>EN 15804 ch. 7.1, GPI, applicable PCRs and ECO Platform List of content to declare in an ECO EPD</p> | <p>√</p> | <p>□</p> |

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| 1.2 | <p>Programme Information in EPD includes the following:</p> <p>a) The address of the programme operator: EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden, Email: info@environdec.com,</p> <p>b) The following statement on the requirements for comparability of EPDs, adapted from ISO 14025: “EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same 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 equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.”</p> <p>c) A statement that: “The EPD owner has the sole ownership, liability, and responsibility for the EPD”,</p> <p>d) Accountabilities for PCR, LCA and independent, third-party verification, see table in section 5.4.2 in PCR 2019:14</p> | EN 15804 ch. 7.1, GPI, applicable PCRs and ECO Platform List of content to declare in an ECO EPD | √ | <input type="checkbox"/> |
| 1.3 | EPD does not include rating, judgments, or direct comparison with other products. | GPI Section 9 | √ | <input type="checkbox"/> |
| 1.4 | A statement whether the EPD is for a specific product or for multiple products. If for multiple products, a description of the kind of EPD of multiple products (based on average results, a representative product, highest results, or a sector EPD). | ECO Platform List of content to declare in an ECO EPD | √ | <input type="checkbox"/> |
| 1.5 | Appropriateness of logos of the company, programme operator and ECO Platform. Appropriateness of pictures. | GPI section 9.4 and ECO Platform List of content to declare in an ECO EPD | √ | <input type="checkbox"/> |
| 1.6 | Address and contact information of the EPD owner. | EN 15804 ch. 7.1, GPI, applicable PCRs and ECO Platform List of content to declare in an ECO EPD | √ | <input type="checkbox"/> |
| 1.7 | A description of the EPD owner. This may include information on product-related or management system-related certifications (e.g. ISO 14024 Type I environmental labels, ISO 9001- and 14001-certificates and EMAS registrations) and other relevant work the organisation wants to communicate (e.g. SA 8000, supply chain management and social responsibility) | GPI and applicable PCRs | √ | <input type="checkbox"/> |
| 2. | PRODUCT | REFERENCE | CHECKED AND APPROVED | N/A |
| 2.1 | The product description is in line with the LCA report, and clear enough described to identify the declared product ambiguously. | ECO Platform List of content to declare in an ECO EPD | √ | <input type="checkbox"/> |

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| 2.2 | Geographical scope: Name and location of production site(s), and the assumed market(s) for the product's/products' use and end-of-life (i.e. the geography that the EPD represents). | EN 15804 ch. 7.1, applicable PCRs and ECO Platform List of content to declare in an ECO EPD | √ | <input type="checkbox"/> |
| 2.3 | Specification / identification (picture, name, model). | EN 15804 ch. 7.1 and ECO Platform List of content to declare in an ECO EPD | √ | <input type="checkbox"/> |
| 2.4 | Identification of the product according to the UN CPC scheme system. | GPI and applicable PCRs | √ | <input type="checkbox"/> |
| 2.5 | Indication of the intended use. Application and technical functions of the product. | EN 15804 ch. 7.1 and ECO Platform List of content to declare in an ECO EPD | √ | <input type="checkbox"/> |
| 2.6 | If applicable: reference service life (RSL) and or technical/actual lifespan (average values or range in case of product groups). | EN 15804 ch. 6.3.2.1, ch. 6.3.4.1-6.3.4.2 and Annex A, GPI, and applicable PCRs | √ | <input type="checkbox"/> |
| 2.7 | Relevant technical data (additional information is possible). | | √ | <input type="checkbox"/> |
| 2.8 | The test standards to which the technical data refers. | | √ | <input type="checkbox"/> |

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| 2.9 | <p>Content declaration includes the following on the product and its packaging (see example in Section 5.4.4 in PCR 2019:14 and applicable c-PCR):</p> <p>a) List of components/materials and chemicals on product(s)</p> <ul style="list-style-type: none"> - Gross weight - If applicable: biogenic content - If applicable: post-consumer recycled material <p>b) List of components/materials and chemicals on packaging</p> <ul style="list-style-type: none"> - Gross weight - If applicable: biogenic content <p>c) A description of the main product components and/or materials is provided in accordance with the specifications of the PCRs (if available) and the LCA report. As a minimum, the description shall include substances listed in the latest “Candidate List of Substances of Very High Concern for authorisation” if their content exceeds the limits for registration.</p> <p>Note 1: To avoid misunderstanding: only post-consumer materials (scraps) shall be considered as recovered material in the content declaration and in contrast to pre-consumer recycling will the environmental upstream impact from previous processes be set to zero for post-consumer recycled material, while pre-consumer recycling will be subject for co-product allocation</p> <p>Note 2: The declared share of biobased or recycled materials shall be based on the actual share of biobased/recycled material in the product (in average over the studied time period, normally 1 year of production). In other words, the share of biobased/recycled materials of, for example, global average production of the constituent materials, for example as stated in generic LCI datasets, shall not be used as the basis for the declaration of biobased/recycled content</p> | EN 15804 ch. 7.1 and applicable PCRs | √ | <input type="checkbox"/> |
| 2.10 | Description of the manufacturing process / all manufacturing processes if several locations are involved | EN 15804 ch. 7.1 | √ | <input type="checkbox"/> |
| 2.11 | Declaration of the year(s) representative for the inventory for the manufacturing (module A3). | GPI and applicable PCRs | √ | <input type="checkbox"/> |
| 2.12 | Reference to the main database(s) for generic data and LCA software used, if relevant. If a pre-verified EPD tool is used, refer to the tool version and verifier. | GPI and applicable PCRs | √ | <input type="checkbox"/> |

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| 2.13 | <p>For EPDs of multiple products (incl. sector EPDs): explanations on calculations within the product group, and representativeness:</p> <ul style="list-style-type: none"> a) Information on restrictions to the use of the EPD. b) A technical description of the product group (such as density or a property like U-value). c) List of names and locations of the manufacturing plants. d) If sector EPD, names of companies and brands. e) Sampling process if the EPD is based on representative product/companies/site(s). f) Geographical coverage. g) The range of products for which the EPD is relevant, even if data from some products have not been used directly in producing the EPD. | EN 15804 ch. 7.1, applicable PCRs and ECO Platform List of content to declare in an ECO EPD | □ | √ |
| 3 | LCA RULES | REFERENCE | CHECKED AND APPROVED | N/A |
| 3.1 | Information on the declared / functional unit corresponds with the specifications of the PCR, c-PCR (if available) and LCA report. | Applicable PCRs | √ | □ |
| 3.2 | EPD type a) cradle-to-gate with modules C1–C4 and module D; b) cradle-to-gate with modules C1–C4, module D and optional modules; c) cradle-to-grave and module D; d) cradle to gate; e) cradle to gate with options; f) construction service EPD: cradle to gate with modules A1-A5 and optional modules. | EN 15804 ch. 7.2.2 and applicable PCRs | √ | □ |
| 3.3 | For EPD type d) and e): justification of the omission of modules with regard to the three conditions in Section 2.2.2 in PCR 2019:14. | Applicable PCRs | √ | □ |
| 3.4 | <p>Reporting modules declared (X) and not declared (ND), geography, share of specific data (in GWP-GHG indicator) and variation in GWP-GHG results between products and sites. See table 3 in PCR 2019:14.</p> <p>Note: If the variation is above 10%, the actual variation shall be reported. If the variation is below 10%, the actual variation or “<10%” shall be reported. If the results are for one product/site, “0%” shall be declared.</p> | Applicable PCRs | √ | □ |
| 3.5 | A (simple) flow diagram in accordance with the modular approach | EN 15804 ch. 7.2.1 | √ | □ |
| 3.6 | Description of the system boundary (can be simplified, as a picture or in wording), including the assignment of the analysed processes to the modules | Applicable PCRs | √ | □ |
| 3.7 | If applicable: Description of key assumptions which are not depicted elsewhere in the EPD | Applicable PCRs | √ | □ |
| 3.8 | If applicable: Presentation of the application of cut-off criteria in accordance with the LCA report | Applicable PCRs | √ | □ |

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| 3.9 | Source of generic data used, name and dated version. Description of what upstream and/or downstream data has been applied is optional. | ECO Platform List of content to declare in an ECO EPD | √ | <input type="checkbox"/> |
| 3.10 | Presentation of the allocation procedure of relevance for calculation in accordance with the minimum requirements of the PCR. | Applicable PCRs | √ | <input type="checkbox"/> |
| 4 | LCA: SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION | REFERENCE | CHECKED AND APPROVED | N/A |
| 4.1 | Mandatory for all declared modules beyond A3: declaration of assumptions pertaining to the scenarios of the declared modules in accordance with the project report. Information on undeclared modules is optional. | EN 15804 ch. 7.3 | √ | <input type="checkbox"/> |
| 4.2 | If a technical/actual lifespan is used to model the use stage in the EPD, presentation of the data and/or scenario on which the technical/actual lifespan is based, in accordance with the LCA report. Also, presentation of how the technical/actual lifespan relates to the RSL of the product category and how this has influenced the modelling. For example, if the lifespan of the product < RSL, that replacement, repair or similar are needed to fulfil the function during the RSL, or if the lifespan of the product > RSL, that part of the environmental burden of the initial manufacturing has been allocated to a function provided beyond the RSL. | EN 15804 ch. 7.3.3.2 and applicable PCRs | √ | <input type="checkbox"/> |
| 5 | LCA: RESULTS | REFERENCE | CHECKED AND APPROVED | N/A |
| 5.1 | Description of the declared / functional unit | | √ | <input type="checkbox"/> |
| 5.2 | Declaration of results for all required environmental performance indicators per module (except for modules A1-A3 that have to be declared in aggregated form). Indicators include those based on the LCIA and those based on the LCI (e.g. including biogenic carbon content in product and in any accompanying packaging, if applicable). Result table contains: Only values or the letters “ND” (not declared). No blank cells, hyphens or other symbols. The value 0 only for parameters that have been calculated to be 0. “ND” is only for parameters that are not quantified because of no data available. Footnotes shall be used to explain and limitation to the result value. | EN 15804 ch. 6.4.4, 7.2.3, 7.2.4, 7.2.5 7.5 and 8.2, applicable PCRs and ECO Platform List of content to declare in an ECO EPD | √ | <input type="checkbox"/> |
| 5.3 | The declared results shall be identical with the respective values in the LCA report | | √ | <input type="checkbox"/> |
| 5.4 | For EPDs of multiple products (incl. sector EPDs): description of the range/variability of the LCIA results (quantitatively or qualitatively), if significant. | EN 15804 ch. 7.1 | <input type="checkbox"/> | √ |
| 5.5 | Deletion of module columns which are not declared (permissible for the results part). | ECO Platform List of content to declare in an ECO | <input type="checkbox"/> | √ |
| 5.6 | Formatting the table framework and parameter addressed in accordance with the specifications of the PCR and the GPI. | Applicable PCRs and GPI | √ | <input type="checkbox"/> |

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| 5.7 | If the purchased electricity used in the manufacturing process of module A3 accounts for more than 30% of the GWP-GHG results of modules A1-A3, the energy sources of this electricity use and its climate impact (in kg CO2 eq./kWh using the GWP GHG indicator) shall be declared in the EPD. | Applicable PCRs | √ | <input type="checkbox"/> |
| 6 | EVIDENCE FOR TESTS OR CERTIFICATES | REFERENCE | CHECKED AND APPROVED | N/A |
| 6.1 | If applicable: Additional information on release of dangerous substances to indoor air, soil and water during the use stage. | EN 15804 ch. 7.4 | <input type="checkbox"/> | √ |
| 6.2 | If applicable: Declaration of the relevant evidence for 6.1, or information where to find this evidence. | Applicable PCRs | <input type="checkbox"/> | √ |
| 7 | REFERENCES | REFERENCE | CHECKED AND APPROVED | N/A |
| 7.1 | List of references. | Applicable PCRs | √ | <input type="checkbox"/> |
| 8 | ANNEX | REFERENCE | CHECKED AND APPROVED | |
| 8.1 | An Annex may contain all additional information required for specific national use in different countries. | ECO Platform List of content to declare in an ECO EPD | <input type="checkbox"/> | √ |
| 9 | MACHINE-READABLE EPD INFORMATION | REFERENCE | CHECKED AND APPROVED | N/A |
| 9.1 | If applicable: Information in the machine-readable EPD format correspond with the verified information of the EPD. | | <input type="checkbox"/> | √ |

VERIFICATION CHECKLIST PART C: REQUIREMENTS FROM OTHER STANDARDS AND REFERENCES

This whole section is mandatory to verify. It has been added to ensure that e.g. any programme-specific requirements that are not included in Parts A and B are part of the verification.

| 1 | OTHER STANDARDS AND REFERENCES | REFERENCE | CHECKED AND APPROVED | N/A |
|-----|--|-------------------------------|----------------------|--------------------------|
| 1.1 | Compliance with other requirements in ISO 14020 | ISO 14020 | √ | <input type="checkbox"/> |
| 1.2 | Compliance with other requirements in ISO 14025 | ISO 14025 | √ | <input type="checkbox"/> |
| 1.3 | Compliance with other requirements in EN 15804:2012+A2:2019/AC:2021 | EN 15804:2012+A2:2019/AC:2021 | √ | <input type="checkbox"/> |
| 1.4 | Compliance with other requirements in ISO 21930:2017, if applicable | ISO 21930:2017 | √ | <input type="checkbox"/> |
| 1.5 | Compliance with other requirements in General Programme Instructions in the International EPD [®] System and complementary requirements at www.environdec.com | GPI | √ | <input type="checkbox"/> |
| 1.6 | Compliance with other requirements in referenced Product Category Rules (PCR) available at www.environdec.com | Applicable PCRs | √ | <input type="checkbox"/> |

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 LCA practitioner, 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.

| N° | CHAPTER, ARTICLE, PARAGRAPH, TABLE | TYPE OF COMMENT* | REFERENCE TO CHECKLIST OR PROGRAMME INSTRUCTIONS | VERIFIER COMMENT AND RECOMMENDATION | EPD OWNER ANSWER | FINAL VERIFIER STATEMENT |
|-----|------------------------------------|------------------|--|---|------------------|--------------------------|
| 1 | | | | Verification dialogue is provided as separate document according to request from EPD Turkey | | |
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Rows may be added/deleted, as needed.

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

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