

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

INTRODUCTION

This document serves as the verification report template of Environmental Product Declarations (EPDs) of construction products. The template is aligning with the following documents:

- General programme instructions (GPI), available at www.environdec.com
- PCR 2019:14 and applicable complementary PCR (c-PCR), available at <https://portal.environdec.com/>
- Verification Guidelines for ECO EPD Programme Operators, version 7 (December 2023), available at <https://www.eco-platform.org>
- LCA Calculation Rules and Specifications for EPDs, version 01 (December 2023), available at <https://www.eco-platform.org>

This template is mandatory to use for verification of EN15804-compliant EPDs for construction products in the International EPD® System. 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.

Make sure to always check the website (www.environdec.com) for the latest version of this template.

EPD INFORMATION

Registration number of EPD(s):	EPD-IES-0020332:001
Product name(s):	EGA Standard Aluminium Ingot
EPD owner:	<u>EGA Al Taweelah</u> <u>P O Box 111023</u> <u>Abu Dhabi, UAE</u> <u>Telephone: +971 2 509 4444</u> <u>EGA Jebel Ali</u> <u>P O Box 3627</u> <u>Dubai, United Arab Emirates</u> <u>Telephone: +971 4 884 6666</u>
Product Category Rules (PCR): <i>Registration number, name and version</i> Complementary PCR(s) (c-PCR): <i>Registration number, name and version</i>	PCR: Basic Aluminium products and special alloys; 2022:08, version 1.0
EPD valid until: <i>(YYYY-MM-DD) based on the approval date in the verification statement.</i>	2030-04-07
Additional comments from verifier:	This report refers initial EPD verification of EPD-IES-0020332:001 based on 2023 data. The verification has been conducted by Vikas Bankar (DNV Lead Verifier) in accordance with an accreditation process accepted by Accredia. Technical Review has been conducted by Francisco Zamarron.

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

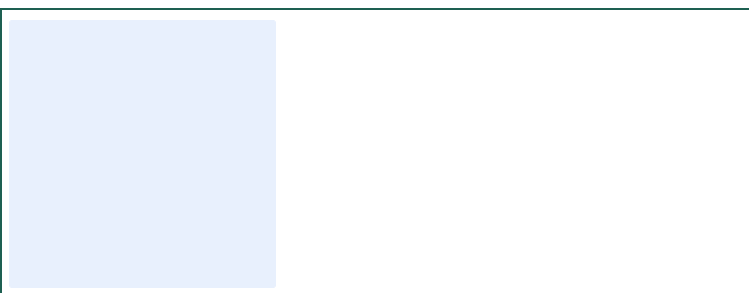
with respect to the procedural and methodological requirements in ISO 14020:2000, ISO 14025:2006, the General Programme Instructions of the International EPD® System, ECO Platform rules, EN 15804:2012+A2:2019/AC:2021, and the PCR and applicable c-PCR(s).

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 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.

Title of the LCA report:	Life Cycle Assessment of EGA's Primary Aluminium Production
Version of the LCA report:	Version 4.0, dated 14/03/2025
Name of the LCA practitioner:	EGA
If applicable, level of assurance:	Reasonable level of assurance
If applicable, revision date of the EPD(s):	2025-04-08
If applicable, pre-verified LCA/EPD tool: <i>Name and version</i>	NA
If applicable, the name of the organization and the outsourced reviewer(s) involved in the verification process:	NA
If applicable, name of the verifier(s) which has been replaced:	NA
Name and organization of verifier:	Vikas Bankar DNV Business Assurance Italy Srl
Approval date:	2025-04-08
Location:	Dubai, United Arab Emirates

<p>Signature:</p> <p><i>Add as image or print and sign this document</i></p>	
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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 are 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.

A1	GENERAL INFORMATION	MANDATORY (M) / OPTIONAL (O)	REFERENCE	CHECKED AND APPROVED	N/A
A1.1	Commissioner of LCA study, LCA practitioner.	M	EN 15804 ch. 8.2	√	<input type="checkbox"/>
A1.2	Date of issue of LCA report.	M	EN 15804 ch. 8.2	√	<input type="checkbox"/>
A1.3	Statement that the Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804 (date and version), applicable PCRs (date and version) and JRC characterization factors (version).	M	EN 15804 ch. 8.2 and applicable PCRs	<input type="checkbox"/>	√
A1.4	Any other independent verification of the data given in the LCI/LCA documentation?	O		√	<input type="checkbox"/>
A1.5	For EEE-construction products: Statement that this EPD follows additional requirements for construction products considered as Electronic or Electric Equipment	M	ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	<input type="checkbox"/>	√
A2	STUDY GOAL	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A
A2.1	Reasons for performing the Life Cycle Assessment.	M	EN 15804 ch. 8.2	√	<input type="checkbox"/>
A2.2	Intended application (e.g. for EPD, databases, publication etc.).	M	EN 15804 ch. 8.2	√	<input type="checkbox"/>
A2.3	Target group (B2B, B2C, ...).	M	EN 15804 ch. 8.2	√	<input type="checkbox"/>
A3	FUNCTIONAL UNIT / DECLARED UNIT	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A

A3.1	Functional unit, declared unit, reference flow and conversion factor to mass: a) Declared or functional unit b) For functional and declared unit (unless mass is used as declared unit): Conversion factor to mass. c) For functional unit: Reference flow representing the number of product(s) needed to fulfil the functional unit. Note: Conversion factor to mass is not applicable for services	M	EN 15804 ch. 6.3.1-6.3.3 and applicable PCRs ECO-Platform: LCA Calculation Rules and Specifications for EPDs	√	<input type="checkbox"/>
A4	PRODUCT DESCRIPTION	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A
A4.1	Composition of the product. The level of detail: the main components necessary to understand what type of product is concerned. In case of multiple products: at minimum qualitative description of averages and qualitative description of ranges.	M	ISO 14025 ECO-Platform: LCA Calculation Rules and Specifications for EPDs	√	<input type="checkbox"/>
A4.2	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.	M	Applicable PCRs	√	<input type="checkbox"/>
A4.3	Flow diagram of main production processes and visualization of system boundaries. Level of detail: see A4.1.	M	ISO 14025	√	<input type="checkbox"/>
A4.4	If EPD of multiple products: 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). b) List of products (name) covered in the EPD. c) If average results, a description of how the average has been calculated. If a representative product, a justification of the choice of representative product. Note: Dependent on the choice of option to declare multiple products and if compliant with ISO 21930, compliant with the requirement on variation in environmental impact results between the included products (typically referred as the “10%-rule”).	M	EN 15804 ch. 8.2, ISO 21930, and applicable PCRs	<input type="checkbox"/>	√
A5	SYSTEM BOUNDARIES IN ACCORDANCE WITH THE MODULAR DESIGN OF EN 15804	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A
A5.1	Description of the life-cycle stages/modules declared. Omissions of life-cycle stages declared and justified. Visualization of system boundaries.	M	Applicable PCRs	√	<input type="checkbox"/>
A5.2	Comprehensive declaration of modules A1-A3 (A1-A5 for services) + C + D as a minimum requirement. Note: There is an exception allowing the inclusion of only modules A1-A3 (A1-A5 for services) if certain conditions are met, as described in PCR 2019:14.	M	EN 15804 ch. 5.2 and applicable PCRs	√	<input type="checkbox"/>

A5.3	<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) No offsetting allowed.</p>	M	EN 15804 ch. 6.3.5.2 and applicable PCRs	√	<input type="checkbox"/>
A5.4	<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 allocated flows leaving the product system (e.g., flows from A1-A3).</p> <p>e) The sum of the allocated inputs and outputs to the products are equal to the total inputs and outputs from the same unit process.</p> <p>f) Consistent allocation procedures are uniformly applied to similar inputs and outputs of the system under consideration.</p>	M	EN 15804 ch. 6.4.3.2 and annex B.1, ISO 21930, and CEN TR 16970 ch. 6.4.3.2 ff	√	<input type="checkbox"/>
A5.5	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"/>	√
A5.6	<p>A4 to A5: Clear description and justification of the declared scenarios.</p> <p>a) Scenarios shall be realistic and representative of one of the most probable alternatives and shall not include processes or procedures that are not in current use, or which have not been demonstrated to be practical.</p>	M	EN 15804 ch. 6.3.5.3, ch. 6.3.9 and applicable PCRs	<input type="checkbox"/>	√
A5.7	A4: If the EPD owner is a trader/wholesaler, module A4 shall be included, at least covering transport to a central warehouse or to the border of the market of the EPD scope.	M	Applicable PCRs	<input type="checkbox"/>	√
A5.8	A5: If the packaging contains more than 5% biogenic carbon, module A5 shall be included at least for balancing out the emission of this carbon (see Annex 2 in PCR 2019:14).	M	Applicable PCRs	<input type="checkbox"/>	√
A5.9	B1 to B5 (optional module: mandatory for EEE-construction products): Description of all processes the modules cover.	M	EN 15804 ch. 6.3.5.4 and applicable PCRs	<input type="checkbox"/>	√

A5.10	B1 to B5: Clear description and justification of the declared scenarios. a) Scenarios shall be realistic and representative of one of the most probable alternatives and shall not include processes or procedures that are not in current use, or which have not been demonstrated to be practical.	M	EN 15804 ch. 6.3.5.4, ch. 6.3.9 and applicable PCRs	<input type="checkbox"/>	√
A5.11	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"/>	√
A5.12	B6-B7: Clear description and justification of the declared scenarios. a) Scenarios shall be realistic and representative of one of the most probable alternatives and shall not include processes or procedures that are not in current use or which have not been demonstrated to be practical.	M	EN 15804 ch. 6.3.5.4, ch. 6.3.9 and applicable PCRs	<input type="checkbox"/>	√
A5.13	Electrical and electronic equipment (EEE): a) include all B modules, b) technical information for the relevant B module(s), and c) have scenarios for module B6 that represent normal (i.e., anticipated) use and is geographically representative and compliant with current regulations in the relevant geographic region. d) If applicable, have specific use scenario specified in c-PCR	M	EN 50693 and applicable PCRs Requirements regarding B6 fulfilled as given in the ECO Platform LCA calculation rules and specifications for EPDs	<input type="checkbox"/>	√
A5.14	C1 to C4: Description of all processes the modules cover.	M	EN 15804 ch. 6.3.5.5 and applicable PCRs	<input type="checkbox"/>	√
A5.15	C3: Clear description and justification of the declared scenarios for processing of waste until end-of-waste state or until incineration/landfilling is included in C3, and for flows leaving the product system (e.g., materials for recycling). a) Scenarios shall be realistic and representative of one of the most probable alternatives and shall not include processes or procedures that are not in current use, or which have not been demonstrated to be practical. If applicable, justification that all the end-of-waste state criteria have been fulfilled: a) Existing purpose b) Existing market or demand c) Compliance with technical requirements and legal guidelines d) Fulfills limit values for Substances of Very High Concern (SVHC).	M	EN 15804 ch. 6.3.5.5, ch. 6.3.9, ch. 7.2.4.4 (Table 8) and annex B.1, and applicable PCRs	<input type="checkbox"/>	√

A5.16	<p>C4: Clear description and justification of the declared scenarios for disposal of waste.</p> <p>a) Scenarios shall be realistic and representative of one of the most probable alternatives and shall not include processes or procedures that are not in current use, or which have not been demonstrated to be practical.</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> <p>C3 to C4: If incineration takes place within the system boundaries:</p> <p>a) Assignment of incineration to either C3 or C4 based on the thermal efficiency of the incineration process.</p> <p>b) No flow of "material for energy recovery" leaving the product system.</p>	M	EN 15804 ch. 6.3.5.5 and ch. 6.3.5.6, ch 6.3.9, and applicable PCRs	<input type="checkbox"/>	√
A5.17	<p>D: Clear description and justification of the declared scenarios.</p> <p>a) Scenarios shall be realistic and representative of one of the most probable alternatives and shall not include processes or procedures that are not in current use, or which have not been demonstrated to be practical.</p> <p>b) Specifically check assumptions with regard to substituted processes, incl. year of reference, substitution of electricity, material and component production, etc., and other rules in applicable PCR(s). Assumptions regarding quality of the recovered material or component are documented and justified.</p>	M	EN 15804 ch. 6.3.5.6, ch. 6.3.9, and applicable PCRs	<input type="checkbox"/>	√
A5.18	<p>D: 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 product system,</p> <p>b) amount of output material to be recovered in a subsequent product system, and</p> <p>c) material losses between the point of end-of-waste and point of substitution.</p> <p>No benefits or loads of allocated co-products, i.e., calculation of net flow shall not consider allocated co-products.</p>	M	EN 15804 ch. 6.3.5.6 and ch. 6.4.3.3, and applicable PCRs	<input type="checkbox"/>	√
A5.19	A to D: The inclusion or exclusion of infrastructure/capital goods is transparently described for upstream, core and downstream processes.	M	Applicable PCRs	√	<input type="checkbox"/>
A5.20	A to D: 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"/>	√
A6	ELECTRICITY MODELLING	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A
A6.1	<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"/>

A6.2	<p>If applicable: 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	<p>ISO 14067 and applicable PCRs</p> <p>ECO-Platform: Verification Guidelines for ECO EPD Programme Operators</p> <p>ECO Platform: LCA calculation rules and specifications for EPDs</p>	√	<input type="checkbox"/>
A6.3	<p>If applicable:</p> <p>reference to the documentation on Guarantees of Origin (or similar) shall include information on:</p> <ul style="list-style-type: none"> a) the electricity provider, b) the purchaser, c) the electricity mix, d) the amount of electricity (in kWh) covered, and e) the time periods for issue and validity of the contract <p>reference to the documentation on Guarantees of Origin (or similar) should include information on, justification shall be provided if information is not available:</p> <ul style="list-style-type: none"> a) Addresses of power plants b) Tracking numbers c) Information on (direct) coupling yes/no 	M	Applicable PCRs	√	<input type="checkbox"/>

A6.4	<p>If applicable: tracking and traceability of specific electricity (e.g., Guarantees of Origin, GO):</p> <p>Case 1-4:</p> <p>a) Check the amount of electricity in documents for Guarantees of Origin (or similar) correspond to energy consumption in LCA model.</p> <p>Case 1: Manufacturer produces energy on site (is physically linked to plants nearby):</p> <p>a) Check that specific energy from contractual instruments that have been sold are not included in the LCA model.</p> <p>Case 2: Electricity provider chosen from national state with legislation for electricity labelling (e.g., Austria):</p> <p>a) Check contract papers with name and address of contract partners.</p> <p>Case 3: Electricity provider chosen from national state with registry.</p> <p>a) Check for mandatory documentation on Guarantees of Origin (or similar), according to A6.3.</p> <p>Case 4: Energy provider from national states (or federal states) with no registry (outside EU and EEA):</p> <p>a) Check that the residual mix is conservatively estimated by subtracting renewables from the consumption mix.</p>	M	ECO Platform: LCA calculation rules and specifications for EPDs	<input type="checkbox"/>	√
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A6.5	<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 control, as long as the composition of the residual grid mix has been publicly disclosed. <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: If the composition of the residual grid mix on the market has not been publicly disclosed, it may conservatively be estimated by subtracting renewables from the consumption mix on the market.</p> <p>Note 3: "The market" in the above hierarchy may correspond to a national electricity market if this can be justified.</p> <p>Note 4: 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"/>	√
A6.6	<p>If applicable, modelling of residual mix:</p> <ul style="list-style-type: none"> a) Has residual mix been modelled based on below? <ul style="list-style-type: none"> ○ AIB-method (European countries) ○ Other method ○ Conservative estimate by subtracting renewables from the consumption mix on the market. b) In case AIB-method was not used, is the modelling comprehensively documented? <p>Note 1: For European countries that are part of the Association of Issuing Bodies (AIB), modelling of residual electricity mixes on the market shall be based on the latest AIB data (https://www.aib-net.org/facts/european-residual-mix).</p>	M	Applicable PCRs, AIB and ECO-Platform: LCA Calculation Rules and Specifications for EPDs	<input type="checkbox"/>	√
A6.7	<p>Is the LCI data for the generation of electricity used in modules B-D be based on the electricity consumption mix on the market?</p> <p>Note: If the EPD owner has direct 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 A6.5 for module A is applicable for that process.</p>	M	Applicable PCRs	<input type="checkbox"/>	√
A6.8	<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 contractual instruments or residual mix), may be included in the LCA report.</p>	O		√	<input type="checkbox"/>

A6.9	<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"/>	√
A6.10	Is the energy source behind electricity used in the manufacturing process in A3 and its climate impact as kg CO ₂ eq./kWh (using the GWP-GHG indicator) reported in the LCA report?	M	Applicable PCRs	<input type="checkbox"/>	√
A7	CRITERIA FOR EXCLUDING INPUTS AND OUTPUTS	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A
A7.1	<p>Selection of the cut-off criteria, description of application of the criteria and assumptions in line with standard and PCR.</p> <p>Note: Minimum of 95% of total inflows (mass and energy) and environmental impact per module.</p>	M	EN 15804 ch. 6.3.6 and ch. 8.2, ISO 21930, and applicable PCRs	√	<input type="checkbox"/>
A7.2	List of excluded processes.	M	EN 15804 ch. 8.2	√	<input type="checkbox"/>
A8	DATA COLLECTION, SELECTED GENERIC DATA	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A
A8.1	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"/>
A8.2	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"/>
A8.3	<p>Data collection, including handling of data quality issues, according to LCA rules</p> <p>a) Assessment period for each module considered in the LCA (e.g. one-year average, etc.)</p> <p>b) Appropriateness of generic data (temporal, geographical, technological)</p> <p>c) Declaration of other assumptions concerning generic data, e.g. about data gaps</p> <p>d) Omissions of life-cycle stages, processes</p> <p>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 module D.</p> <p>f) Assumptions concerning other relevant background data where relevant for the system boundary.</p>	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"/>
A9	VALIDITY OF DATA	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A

A9.1	<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"/>
A9.2	<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 (time, geographical and technological representativeness) on datasets, highest to lowest impact, that covers at least 80% of the absolute impact of any core environmental indicators. 	M	EN 15804 ch. 6.3.8 and Annex E, CEN/TR 15941 and, applicable PCRs	√	<input type="checkbox"/>
A9.3	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"/>
A10	DEVELOPMENT OF SCENARIOS AT PRODUCT LEVEL IN MODULES A4-A5-B-C-D	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A
A10.1	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"/>	√
A10.2	Documentation of the relevant technical information for each scenario applied according to ch. 7.3 of EN 15804, e.g. regarding transportation details, recycling/reuse rates, etc., with references, e.g. to literature.	M	EN 15804 ch. 7.3	<input type="checkbox"/>	√
A.10.3	Default values in c-PCR shall be checked on applicability for the product. Deviations from these values must be justified.	M	Applicable PCRs	<input type="checkbox"/>	√
A11	ALLOCATION	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A

A11.1	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"/>
A11.2	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"/>
A11.3	Presentation and justification of allocations in the plant (allocation between different products/production lines in a plant)	M		√	<input type="checkbox"/>
A11.4	If applicable: Presentation and justification of allocation of multi-input processes (e.g. landfilling or incineration)	M		√	<input type="checkbox"/>
A11.5	<p>Co-product allocation correctly applied. Check specifically:</p> <p>a) Selection and documentation of the allocation factors (and their sources) for co-product allocation and justification of allocation method in line with applicable PCRs and EN 15804; conservative assumptions are made in case specific data is missing, i.e., assumptions that reflect the highest environmental impacts in comparison to other assumptions; and</p> <p>b) no declaration of loads and benefits in Module D of flows undergone co-product allocation.</p> <p>Note: Economic allocation shall be used for processes producing low-value co-products (low value in comparison with main product) used in cement, concrete or other products, e.g., blast furnace slag, crystallised basic oxygen furnace slag, fly ash, artificial gypsum, silica fume, aluminium-oxide-containing co-products.</p>	M	EN 15804 ch. 6.4.3.2, ISO 21930, and applicable PCRs	√	<input type="checkbox"/>

A11.6	<p>Waste allocation correctly applied, check specifically:</p> <ul style="list-style-type: none"> a) the criteria for end-of-waste state are correctly applied so that the boundary between the products system generating and using the waste is correctly set, and b) conservative assumptions are made in case specific data is missing, i.e., assumptions that reflect the highest environmental impacts in comparison to other assumptions. <p>Allocation process for reuse, recycling and recovery, check specifically:</p> <ul style="list-style-type: none"> •End-of-waste state, Consistency with other scenarios of waste management •technology representativeness for the region / country •Specification and justification of end-of-waste state where applicable •If applicable (module D): Selecting substituted processes in accordance with the PCR or (if no PCR is available) representative actual processes <p>NOTE: Application of the “polluter pays” principle to the use of waste as substitute for primary fuels or materials is left to the programme operator.</p> <ul style="list-style-type: none"> •If applicable (substitution in Module D): Calculation of net flows •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"/>
A11.7	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. If the allocation principles are not followed, or it is unknown whether they are followed, conservative assumptions shall be done, for example by modifying the generic data.	M	Applicable PCRs	<input type="checkbox"/>	√
A11.8	If applicable: transparent documentation of the calculations of biogenic carbon content of product and packaging in CO ₂ -eq. The conversion factor from kg carbon to kg CO ₂ shall be stated.	M	EN 15804+A2: ch.7.2.5 (table 9)	<input type="checkbox"/>	√
A11.9	Mass balance approaches (MBAs), to claim, for example, biobased, renewable, and/or recycled product content, are not applied.	M	Applicable PCRs	√	<input type="checkbox"/>
A12	LIFE CYCLE MODELING INFORMATION	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A
A12.1	Transparent presentation of LCA modelling (for example by tables, screenshots from LCA software programs etc.).	M	EN 15804 ch. 8.4	√	<input type="checkbox"/>
A12.2	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"/>

A12.3	<p>For several sites/products:</p> <p>a) Presentation of modelling of all production sites and products, including how weighting of data from different locations and products have been done.</p> <p>b) Name and location of the production site(s), including, as a minimum, the city (or municipality, if not located in a city).</p>	M		<input type="checkbox"/>	√
A12.4	<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, CO₂ and other fossil and biogenic carbon emissions, as well as the biogenic carbon content of product and packaging, are coherent with the input of fossil and biogenic energy/mass resources</p> <p>c) Mass balance of biogenic CO₂ is coherent with the GWP-biogenic results (e.g., the contribution from uptake and emissions of biogenic CO₂ to GWP-biogenic results shall be zero over modules A to C). See Annex 2 in PCR 2019:14.</p>	M	EN 15804 ch. 6.4.4 and 8.4 and applicable PCRs	√	<input type="checkbox"/>
A12.5	The results of the energy resource use indicators are coherent with the guidance and requirements in Annex 3 of PCR 2019:14).	M	Applicable PCRs	<input type="checkbox"/>	√
A12.6	<p>No assignment of contractual instruments for electricity to subset of products within an entity (e.g., a manufacturing site) unless a separate energy supply and contract is in place.</p> <p>For example, if GOs are purchased for 50% of electricity use at an entity, products produced at the entity shall the 50% covered by GOs</p>	M	ECO-Platform: LCA Calculation Rules and Specifications for EPDs	√	<input type="checkbox"/>
A13	CALCULATION AND PRESENTATION OF ENVIRONMENTAL PERFORMANCE RESULTS	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A
A13.1	Presentation of the environmental performance results (describing environmental impact, use of resources, waste categories and output material flows) in tabular form for all included 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"/>
A13.2	Inclusion of the supplementary indicator for climate impact (GWP-GHG)	M	Applicable PCRs	<input type="checkbox"/>	√
A13.3	Has the packaging been considered when calculating the LCI-related indicators, e.g. in the quantification of the primary energy used as raw materials?	M		√	<input type="checkbox"/>

A13.4	Selection of correct characterisation factors (including version) and elimination of long-term emissions (>100 years).	M	EN 15804 ch. 8.2 and Annex C, and applicable PCRs	√	<input type="checkbox"/>
A13.5	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 PCRs.	M		<input type="checkbox"/>	√
A13.6	Information on the environmental impacts declared in the LCA report: a) Reference to characterisation models and factors 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.	M	EN 15804 ch. 8.2	√	<input type="checkbox"/>
A14	INTERPRETATION	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A
A14.1	Interpretation of the results based on a dominance/contribution analysis of selected indicators.	O		√	<input type="checkbox"/>
A14.2	Relationship between the results of the LCI and the results of the LCIA. Examples: Check orders of scale/magnitude, especially for indicators that are often modelled/modified manually (e.g., GWP-biogenic), coherence of the results of primary energy (n.e.) and ADP fossil resources, and allocations are consistent with physical flows.	M	EN 15804 ch. 8.2	√	<input type="checkbox"/>
A14.3	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"/>
A14.4	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"/>
A14.5	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"/>
A14.6	For multiple products: description of the range/variability of the LCIA results (quantitatively or qualitatively), if significant.	M	EN15804+A2 ch. 7.1 and 8.2, and CEN TR 16970 ch. 7.1.	<input type="checkbox"/>	√
A15	ADDITIONAL INFORMATION	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A
A15.1	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"/>	√
A16	DOCUMENTATION FOR CALCULATING THE REFERENCE SERVICE LIFE (RSL)	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A

A16.1	The RSL shall be declared if it is defined as part of the FU according to a c-PCR, unless the PCR says otherwise (in some c-PCRs, the term RSL is defined differently). 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"/>	√
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A17	ADDITIONAL REQUIREMENTS	MANDATORY / OPTIONAL	REFERENCE	CHECKED AND APPROVED	N/A
A17.1				<input type="checkbox"/>	<input type="checkbox"/>
A17.2				<input type="checkbox"/>	<input type="checkbox"/>
A17.3				<input type="checkbox"/>	<input type="checkbox"/>
A17.4				<input type="checkbox"/>	<input type="checkbox"/>

Rows may be added/deleted, as needed.

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.

B1	DECLARATION OF GENERAL INFORMATION (COVER/FRONT PAGE)	REFERENCE	CHECKED AND APPROVED	N/A
B1.1	EPD includes required information on cover/front page: 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) Where applicable: a statement of conformity with other standards and methodological guides	EN 15804 ch. 7.1, applicable PCRs, and ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B1.2	EPD includes required information on cover/front page: a) Name of declared product(s) and image b) Name and logotype of EPD owner	EN 15804 ch. 7.1, applicable PCRs, and ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B1.3	EPD includes required information on cover/front page: a) Programme: The International EPD® System, www.environdec.com b) Programme operator: EPD International AB c) Logotype of the International EPD® System d) Logotype of ECO Platform e) EPD registration number as issued by the programme operator (S-P-XXXXX)	EN 15804 ch. 7.1, applicable PCRs, and ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B1.4	EPD includes required information on cover/front page: a) Date of publication (issue): YYYY-MM-DD b) Date of revision: YYYY-MM-DD, applicable for updated EPDs c) Date of validity; YYYY-MM-DD	EN 15804 ch. 7.1, applicable PCRs, and ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>

B1.5	<p>EPD includes required information on cover/front page:</p> <p>a) For EPDs covering multiple products:</p> <p>a) a statement that the EPD covers multiple products and a list of all products covered by the EPD (if the EPD covers more than 10 products, the list of products may instead be included on a later page in the EPD; then this page shall be referred to on the cover page), and</p> <p>b) 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 worst-case results”.</p>	EN 15804 ch. 7.1, applicable PCRs, and ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B1.6	<p>EPD includes required information on cover/front page:</p> <p>a) For Sector EPDs: a statement that the EPD is a Sector EPD.</p>	Applicable PCRs	<input type="checkbox"/>	√
B1.7	<p>EPD includes required information on cover/front page:</p> <p>a) In the case of EPDs registered through a Licensee (a regional or national programme based on and fully aligned with the International EPD® System through an agreement with the programme operator), “Programme”, “Programme operator”, and “Logotype” shall be expanded to include a reference to the regional programme and the organisation responsible for it.</p>	Applicable PCRs	<input type="checkbox"/>	√
B1.8	<p>EPD includes required information on cover/front page:</p> <p>a) Information about dual registration of EPD in another programme.</p>	Applicable PCRs	<input type="checkbox"/>	√
B2	PROGRAMME INFORMATION	REFERENCE	CHECKED AND APPROVED	N/A
B2.1	The address of the programme operator: EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden, Email: info@environdec.com,	EN 15804 ch. 7.1, applicable PCRs and ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B2.2	Includes the following statement: “The EPD owner has the sole ownership, liability, and responsibility for the EPD”	EN 15804 ch. 5.5, and Applicable PCRs	√	<input type="checkbox"/>

B2.3	<p>Includes the following statement on the requirements for comparability of EPDs, adapted from ISO 14025:</p> <p><i>“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.”</i></p>	EN 15804 ch. 7.1, applicable PCRs, and ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B2.4	<p>Information on Product Category Rules (PCR) declared in the EPD:</p> <p>a) Text “CEN standard EN 15804 serve as the core Product Category Rules (PCR)”</p> <p>Note 1: If the EPD complies with ISO 21930, “ISO standard ISO 21930” shall be added to the above text.</p> <p>b) Product category rules (PCR): <name and version of PCR(s)></p> <p>c) If applicable, Complementary product category rules (c-PCR): <name and version of c-PCR(s)></p> <p>d) Text “PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact.”</p> <p>Note 2: see table in section on EPD reporting format in PCR 2019:14</p>	EN 15804 ch. 7.1, applicable PCRs, and ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B2.5	<p>Information on LCA practitioner(s): LCA accountability: <name, organization></p> <p>Note: see table in section on EPD reporting format in PCR 2019:14</p>	EN 15804 ch. 7.1, applicable PCRs, and ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>

B2.6	<p>Information on third-party verification:</p> <p>Case 1: EPD is verified by individual verifier</p> <p>Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:</p> <p><input type="checkbox"/> EPD verification by individual verifier</p> <p>Third-party verifier: <name, organisation, and signature of the third-party verifier></p> <p>Approved by: The International EPD System</p> <p>Case 2: EPD is verified by accredited certification body</p> <p>Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:</p> <p><input type="checkbox"/> EPD verification by accredited certification body</p> <p>Third-party verification: <name, organisation> is an approved certification body accountable for the third-party verification.</p> <p>The certification body is accredited by: <name of accreditation body & accreditation number, where applicable></p> <p>Case 3: EPD is verified by EPD Process Certification</p> <p>Independent third-party verification of the declaration and data, according to ISO 14025:2006 via:</p> <p><input type="checkbox"/> EPD verification by EPD Process Certification*</p> <p>Third-party verification: <name, organisation> is an approved certification body accountable for third-party verification.</p> <p>Third-party verifier is accredited by: <name of accreditation body & accreditation number, where applicable></p> <p>*For EPD Process Certification, an accredited certification body certifies and reviews the management process and verifies EPDs published on a regular basis. For details about third-party verification procedure of the EPDs, see the GPI.</p> <p>Note: see table in section on EPD reporting format in PCR 2019:14</p>	EN 15804 ch. 7.1, applicable PCRs, and ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B3	PRODUCT	REFERENCE	CHECKED AND APPROVED	N/A
B3.1	The address and contact information of the EPD owner,	EN 15804 ch. 7.1, applicable PCRs, and ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>

B3.2	A description of the organisation. 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).	Applicable PCRs	√	<input type="checkbox"/>
B3.3	Name and location of the production site(s), including, as a minimum, the city (or municipality, if not located in a city).	EN 15804 ch. 7.1, and applicable PCRs	√	<input type="checkbox"/>
B3.4	Product identification by name, image, and an unambiguous identification of the product by standards, concessions, or other means.	EN 15804 ch. 7.1, ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B3.5	Identification of the product according to the UN CPC scheme system, if possible.	Applicable PCRs	√	<input type="checkbox"/>
B3.6	Description of the product (in line with the LCA report, and clear enough to enable unambiguous identification of the declared product), the technical purpose of the product, including its application/intended use.	EN 15804 ch. 7.1, ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B3.7	Geographical scope of the EPD, per module (see Table 3), i.e., which countries or regions have the processes in modules A1-A5 been modelled to represent, and which countries or regions have the use (module B) and end-of-life (module C) of the product been modelled to represent.	EN 15804 ch. 7.1, applicable PCRs, ECO- Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B3.8	Functional unit, declared unit, reference flow and conversion factor to mass: a) Declared or functional unit b) For functional and declared unit (unless mass is used as declared unit): Conversion factor to mass. c) For functional unit: Reference flow representing the number of product(s) needed to fulfil the functional unit. Note: Conversion factor to mass is not applicable for services	EN 15804 ch. 6.3.2-6.3.3 and applicable PCRs	√	<input type="checkbox"/>
B3.9	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, and applicable PCRs	<input type="checkbox"/>	√
B3.10	System/flow diagram of the processes included in the LCA, divided into the life cycle stages and information modules defined according to EN 15804 and applicable PCRs.	EN 15804 ch. 7.2.1, and applicable PCRs	√	<input type="checkbox"/>
B3.11	Relevant technical data (additional information is possible).	ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	<input type="checkbox"/>	√
B3.12	The test standards to which the technical data refers.	ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	<input type="checkbox"/>	√

B3.13	<p>Content declaration includes the following on the product and its packaging (see example in PCR 2019:14 and applicable c-PCRs):</p> <p>a) List of components/materials and chemicals in product(s)</p> <ul style="list-style-type: none"> - Gross weight Unit: kg/product or declared unit. - If applicable: post-consumer recycled material Unit: weight-%/product or declared unit. - If applicable: biogenic content Unit 1: weight-%/product or declared unit, Unit 2: kg C/product or declared unit, and Unit 3 (if compliance with ISO 21930): kg CO₂ eq. per product or declared unit. <p>b) List of components/materials and chemicals in packaging(s)</p> <ul style="list-style-type: none"> - Gross weight Unit: kg/product or declared unit. - If applicable: biogenic content Unit 1: kg C/product or declared unit, and Unit 2 (if compliance with ISO 21930): kg CO₂ eq. per product or declared unit. <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: Only post-consumer materials shall be declared in the content declaration.</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"/>
B3.14	Description of the manufacturing processes	ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B3.15	Declaration of the year(s) representative for the inventory for the manufacturing (module A3).	Applicable PCRs	√	<input type="checkbox"/>

B3.16	<p>Database, LCA software and pre-verified LCA/EPD tool:</p> <p>a) Reference to the main database(s) for generic data (name and version)</p> <p>b) If applicable: Reference to the LCA software (name and version)</p> <p>c) If applicable: Reference to the pre-verified LCA/EPD tool (name and version).</p>	Applicable PCRs	√	<input type="checkbox"/>
B3.17	<p>For EPDs of multiple products (incl. sector EPDs)</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). See B1.5</p> <p>b) List of products (name) covered in the EPD. See B1.5</p> <p>c) If EPD declares average results, a description of how the average has been calculated.</p> <p>d) If EPD declare a representative product, a justification of the choice of representative product.</p> <p>e) If Sector EPD,</p> <ul style="list-style-type: none"> - a list of the contributing companies and brands (names) that the Sector EPD covers, - a description of how the selection of the sites/products has been done and how the average has been determined, and - a statement that the document covers average values for an entire or partial product category (specifying the percentage of representativeness) and, hence, the declared product is an average that is not available for purchase on the market and that the results are not representative for any specific manufacturer or its product. <p>Note: Dependent on the choice of option to declare multiple products and if compliant with ISO 21930, compliant with the requirement on variation in environmental impact results between the included products (typically referred as the “10%-rule”).</p>	EN 15804 ch. 8.2, ISO 21930, and applicable PCRs	<input type="checkbox"/>	√
B3.18	<p>For EPDs of multiple products and/or sites (incl. sector EPDs): explanations on calculations within the product group, and representativeness:</p> <p>a) Information on restrictions to the use of the EPD.</p> <p>b) A technical description of the product group (such as density or a property like U-value).</p> <p>c) List of names and locations of the manufacturing plants.</p> <p>d) Sampling process if the EPD is based on representative product/companies/site(s).</p> <p>e) Geographical coverage.</p> <p>f) 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.</p>	EN 15804 ch. 7.1, applicable PCRs and ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	<input type="checkbox"/>	√

B4	LCA RULES	REFERENCE	CHECKED AND APPROVED	N/A
B4.1	Description of the EPD system boundary as one of the following options: 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. The choice of type is aligned with the requirements in applicable PCR(s).	EN 15804 ch. 7.2.2 and applicable PCRs	√	<input type="checkbox"/>
B4.2	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	√	<input type="checkbox"/>
B4.3	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. Note: If the results are for one product/site, "0%" variation shall be declared.	Applicable PCRs	√	<input type="checkbox"/>
B4.4	Check that the declared share of specific data, derived from the results of the GWP-GHG indicator, is calculated exclusively based on specific data and not generic data (typically used in module A1).	Applicable PCRs	√	<input type="checkbox"/>
B4.5	For EPDs of multiple products and/or sites (including sector EPDs): Declaration of the variations in GWP-GHG results for modules A1-A3 (A1-A5 for services) between included products and/or sites (see B4.3). 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.	Applicable PCRs	<input type="checkbox"/>	√
B4.6	If the EPD owner is a trader (e.g., retailers, wholesalers) and the declared product is produced by several suppliers, the variation in GWP-GHG results between suppliers (A1-A3) shall be declared (see B4.3). 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.	Applicable PCRs	<input type="checkbox"/>	√
B4.7	If applicable: Description of key assumptions which are not depicted elsewhere in the EPD	Applicable PCRs	<input type="checkbox"/>	<input type="checkbox"/>
B4.8	If applicable: Presentation of the application of cut-off criteria in accordance with the LCA report	Applicable PCRs	√	<input type="checkbox"/>
B4.9	Presentation of the allocation procedure of relevance for calculation in accordance with the minimum requirements of the PCR(s).	Applicable PCRs	√	<input type="checkbox"/>
B4.10	The inclusion or exclusion of infrastructure/capital goods is transparently described for upstream, core and downstream processes and is in line with the LCA report.	Applicable PCRs	<input type="checkbox"/>	<input type="checkbox"/>

B4.11	<p>If post-industrial and/or post-consumer scrap is a main input to, or output from, the product system, the allocation procedure applied shall be clearly described in the EPD.</p> <p>Note: This includes information on whether the allocation has been based on real data and/or estimates, and whether it is a conservative estimate.</p>	Applicable PCRs	<input type="checkbox"/>	✓
B4.12	<p>EPDs of electrical and electronic equipment (EEE):</p> <p>a) Statement that this EPD follows additional requirements for construction products considered as Electronic or Electric Equipment</p> <p>b) Include key assumptions regarding the applied scenario in module B6.</p>	Applicable PCRs	<input type="checkbox"/>	✓
B4.13	<p>The EPD shall report whether the “EN 15804 reference package” based on EF 3.0, EF 3.1 or a later version has been used.</p> <p>Note: The “EN 15804 reference package” is available at the JRC webpage</p>	Applicable PCRs	<input type="checkbox"/>	✓
B4.14	Mass balance approaches (MBAs), to claim, for example, biobased, renewable, and/or recycled product content, are not applied.	Applicable PCRs	<input type="checkbox"/>	✓
B5	LCA: SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION	REFERENCE	CHECKED AND APPROVED	N/A
B5.1	Mandatory for all declared modules A4-A5, B and C4: 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"/>	✓
B5.2	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"/>	✓
B6	LCA: RESULTS	REFERENCE	CHECKED AND APPROVED	N/A

B6.1	<p>a) Declaration of results for all mandatory environmental performance indicators per module (except for modules A1-A3 that shall be declared in aggregated form). Indicators includes both those based on the LCIA and the LCI.</p> <p>b) If the EPD claim compliance with ISO 21930: The environmental performance results shall only be presented in an aggregated form for modules A1-A3 and not in any alternative way in the EPD as additional information.</p> <p>c) If the EPD does not claim compliance with ISO 21930, the environmental performance results of modules A1-A3 may in addition to being presented in aggregated form (see b) above), also be presented separately for A1, A2, and A3</p> <p>d) The environmental performance results of individual modules are not added up into any combination into a total or sub-total of the lifecycle stages A, B, C or D (except for module A1-A3). This rule applies also for additional information in the EPD.</p> <p>e) Additional indicators (based on LCI and LCIA) shall be identified as “additional”.</p> <p>f) 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.</p> <p>g) Footnotes shall be used to explain and limitation to the result value.</p>	<p>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: Verification Guidelines for ECO EPD Programme Operators</p>	√	<input type="checkbox"/>
B6.2	The declared results are identical with the respective values in the LCA report.	ECO-platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B6.3	The units for each indicator are identical to those specified in the LCA report and comply with EN 15804. (e.g., CO ₂ -eq. for GWP).	EN 15804 ch 7.2	<input type="checkbox"/>	√
B6.4	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"/>	√
B6.5	<p>For EPDs of multiple products (incl. sector EPDs):</p> <p>EPD declares the variation of each environmental impact indicator results for which the variation, aggregated over all included modules (from A to C), is above 10% between any of the included products.</p> <p>Note: If the EPD does not claim compliance with ISO 21930, variations above 10% are allowed, if justified in the LCA report and the EPD declares the variation of each environmental impact indicator results for which the variation is above 10%.</p>	Applicable PCRs	<input type="checkbox"/>	√
B6.6	Deletion of module columns that are not declared (only allowed for the results part).	ECO-platform: Verification Guidelines for ECO EPD Programme Operators	√	<input type="checkbox"/>
B6.7	Formatting the table framework and parameter addressed in accordance with the specifications of the PCR(s) and the GPI.	Applicable PCRs and GPI	√	<input type="checkbox"/>

B6.8	<p>Transparency on electricity in A3:</p> <p>a) declare type of LCI data for the generation of electricity used in A3:</p> <p>a. Specific electricity mix by contractual instrument (Guarantee of Origin or similar), or</p> <p>b. Residual electricity mix (optional: name of the modelled dataset)</p> <p>b) declare the energy source behind electricity used in the manufacturing process in A3 and its climate impact as kg CO2 eq./kWh (using the GWP-GHG indicator).</p>	Applicable PCRs	<input type="checkbox"/>	√
B6.9	<p>Disclaimers to the relevant core and additional environmental impact indicators.</p> <p>Note: If infrastructure/capital goods are included, an additional disclaimer shall be declared (see PCR 2019:14).</p>	EN 15804 ch. 7.2.3.3 and applicable PCRs	<input type="checkbox"/>	√
B6.10	If the scrap inputs contribute more than 10% to the GWP-GHG results of modules A1-A3, the GWP-GHG intensity of that scrap (in kg CO2 eq./tonne) shall be declared in the EPD, as well as the percentage of scrap that was assumed to come with, and without, an environmental burden.	Applicable PCRs	<input type="checkbox"/>	√
B6.11	If module C is included in the EPD; a disclaimer discouraging the use of the results of modules A1-A3 (A1-A5 for services) without considering the results of module C.	Applicable PCRs	<input type="checkbox"/>	√
B6.12	In connection to the results for the environmental impact indicators, the EPD shall include the following statement: "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."	Applicable PCRs	√	<input type="checkbox"/>
B6.13	The environmental performance section of the EPD shall only include one set of results (except for results that can be declared in a separate subsection, see Section 5.4.5 of PCR 2019:14).	Applicable PCRs	√	<input type="checkbox"/>
B7	EVIDENCE FOR TESTS OR CERTIFICATES	REFERENCE	CHECKED AND APPROVED	N/A
B7.1	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"/>	√
B7.2	If applicable: Other additional environmental information if relevant for a country.	ECO-platform: Verification Guidelines for ECO EPD Programme Operators	<input type="checkbox"/>	√
B7.3	If applicable: Declaration of the relevant evidence, or information where to find this evidence.	Applicable PCRs	<input type="checkbox"/>	√
B8	REFERENCES	REFERENCE	CHECKED AND APPROVED	N/A
B8.1	List of references.	Applicable PCRs	√	<input type="checkbox"/>
B9	ANNEX	REFERENCE	CHECKED AND APPROVED	

B9.1	An Annex may contain all additional information required for specific national use in different countries.	ECO-Platform: Verification Guidelines for ECO EPD Programme Operators	<input type="checkbox"/>	√
B10	OTHER	REFERENCE	CHECKED AND APPROVED	N/A
B10.1	EPD does not include rating, judgments, or direct comparison with other products.	Applicable PCRs	√	<input type="checkbox"/>
B11	PRESENTATION IN DIFFERENT FORMATS	REFERENCE	CHECKED AND APPROVED	N/A
B11.1	EPD content in different presentation formats, for example EPDs in pdf and xml (i.e., machine-readable format), correspond with each other.		<input type="checkbox"/>	√

B12	ADDITIONAL REQUIRMENTS	REFERENCE	CHECKED AND APPROVED	N/A
B12.1			<input type="checkbox"/>	<input type="checkbox"/>
B12.2			<input type="checkbox"/>	<input type="checkbox"/>
B12.3			<input type="checkbox"/>	<input type="checkbox"/>
B12.4			<input type="checkbox"/>	<input type="checkbox"/>

Rows may be added/deleted, as needed.

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.

C1	OTHER STANDARDS AND REFERENCES	REFERENCE	CHECKED AND APPROVED	N/A
C1.1	Compliance with other requirements in ISO 14020	ISO 14020	√	<input type="checkbox"/>
C1.2	Compliance with other requirements in ISO 14025	ISO 14025	√	<input type="checkbox"/>
C1.3	Compliance with other requirements in EN 15804:2012+A2:2019/AC:2021	EN 15804:2012+A2:2019/AC:2021	<input type="checkbox"/>	√
C1.4	Compliance with other requirements in ISO 21930:2017, if applicable	ISO 21930:2017	<input type="checkbox"/>	√
C1.5	Compliance with other requirements in General Programme Instructions in the International EPD® System and complementary requirements at www.environdec.com	GPI	√	<input type="checkbox"/>
C1.6	Compliance with other requirements in referenced Product Category Rules (PCR) and complementary PCRs (c-PCRs) 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 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.

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		Ge	§5.4.1 PCR	Please check if the PCR requirement is met with respect to the cover page of the EPD document.	The cover page has been amended to comply with the PCR requirements (PCR: Basic Aluminium products and special alloys; 2022:08, version 1.0, UN CPC 4153), except for the registration number which will be updated once EGA commence the EPD registration process	The revised version of the EPD provided by EGA now includes the necessary information required as per PCR requirements.
2		Ge	§5.4.3 PCR	The address and contact information of the EPD owner is not included as per PCR requirement in section for product information. Please clarify.	The contact information and address of the EPD owner has been added to the product information section	The revised version of the EPD provided by EGA now includes the contact information and address of EPD owner as per PCR requirements.
3		Te	§5.4.4.1 PCR	Please clarify if the pre-consumer scrap declared in the content declaration is scrap generated within the EGA process. If it is so please clarify the appropriateness of the same inline with PCR requirement. Also sources of scrap (pre and post) is not clear in LCA report.	For purchased pre-consumer scrap, the model considers different allocation approaches based on the unpublished "Reference document on how to treat pre-consumer scrap flows in carbon footprint calculations for aluminium products" prepared for IAI in 2022, treating pre-consumer scrap either as a co-product of the semis production or as a secondary material recovered from another product system. Post-consumer scrap is considered as burden-free (zero burden allocation), following the recommendations of the IAI. Internal scrap is recycled in a closed loop	The response provided is found appropriate and it is accepted.

					<p>during the ingot casting process and does not require the definition of allocation approaches for the standard products.</p> <p>In addition to the preconsumer scrap generated within EGA processes, EGA purchases external pre-consumer scrap. Which is in line with the PCR requirements 4.3.1.1 (PCR: Basic Aluminium products and special alloys; 2022:08, version 1.0, UN CPC 4153).</p> <p>Further details on pre consumer scrap sources can be found in section 3.2.7.3 of the LCA</p> <p>Details on post consumer scrap can be found in section 3.2.7 and sections 2.2.4 of the LCA.</p>	
4		Te	§5.4.5.3 PCR	Please clarify why Waste and output flows are not presented as per the PCR requirement.	<p>As per GPI4 "The indicators for waste and other output flows listed below are mandatory if Version 1.0 of the default list of indicators are used, and optional if Version 2.0 is used."</p> <p>The EPD have reported in line with version 2.0</p>	The response provided is found appropriate and it is accepted.
5		Te	§5.4.5.6 PCR	Please confirm of red mud is dangerous substance and/or any other dangerous waste to be included in Additional Environment Information. If not, please provide justification.	<p>Red mud is not considered a hazardous substance, and given its is considered as waste, and as per GPI4 "The indicators for waste and other output flows listed below are mandatory if Version 1.0 of the default list of indicators are used, and optional if Version 2.0 is used."</p>	The clarification provided is found acceptable as verified from https://www.environdec.com/pcr/env-perf-indic/gpi4 .
6		Ge	§5.4.5.1 PCR	The declared enviromental impact indicators doesn't match with the provided LCA study report. Please clarify the inconsistency observed.	The declared environmental impact indicators have been revised to match the LCA study report	The revised version of the EPD provided by EGA now includes declared enviromental impact indicators consistent with the provided LCA study report.

7		Te	§4.1 PCR	Please clarify the appropriateness of functional unit as 1000 kg of Aluminium products considered in LCA.	The declared unit of the EPD is 1 kg of Aluminium products. However, in the LCA, a functional unit of 1000 kg was used to align with production data reported in tonnes. This approach facilitates the quantification of inputs and outputs more efficiently, ensuring greater accuracy in the LCA calculations while maintaining consistency with large-scale production figures.	The revised LCA report now mentions the declared unit correctly. This is found appropriate and it is accepted.
8		Te	§4.5 PCR	It is not clear of PCR cut-off criteria is applied as per PCR requirements. Also, list of excluded processes along with justification are not included.	<p>No specific cut-off criteria have been applied and a cradle to gate impact quantification has been conducted as per the PCR requirements. All inputs and outputs (primary data collection) are considered according to the best knowledge. However, spare parts are not considered. Background data from LCA databases (GaBi and Ecoinvent) implicitly take into account the cut-off criteria used there, which is described accordingly in their public documentations.</p> <p>Similar approach has been adopted in EPDs previously, such as EPD: S-P-08703</p>	The response provided is found appropriate and it is accepted.
9		Ge		It is observed that the tables, LCA screenshots and results graphs included in the LCA report are found inconsistent with the Gabi. Please resolve these inconsistencies.	All tables within the LCA report have been revised to ensure consistency with the Gabi data	The revised LCA report now mentions the declared unit correctly. This is found appropriate and it is accepted.
10		Ge	§5.4.5.3 PCR	Energy source indicators are not included in the LCA report as per PCR requirements.	<p>Resource use indicators table page 9 of the EPD is inline with the Gabi data</p> <p>17/03: Resource use indicators table is included in section 7.2 in LCA Report.</p>	<p>Pending. Please clarify why is it not included in section 7.2 of the LCA report.</p> <p>17/03/2025: Revised LCA report now mentioned resource use indicators in section 7.2 of the LCA report.</p>

Rows may be added/deleted, as needed.

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

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