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CHECKLIST FOR THE VERIFICATION

Versie 1.1

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INSIDE/INSIDE is een initiatief van
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1 checklist for the verification

This checklist presents the items that have to be verified as a minimum. It is presented as a 'tick-box' and can be used as such, but it should be clear from the verification report that discussions have taken place and (if applicable) improvements have been made following the verifier's comments and recommendations. Program Operators can also integrate the items into their own verification procedures.

The core checklist is limited to data presented in EPD. Some EPD programs offer the possibility to verify LCA tools that create EPD, but this is for the time being not part of this checklist.

Report on verification of the INSIDEINSIDE

Environmental Product Declaration [Declaration number]

for [Product] by [Company]

Verification statement:

The verifier shall give a statement about his work and the result, clarifying at minimum:

- the EPD concerned
- that the work concerned a verification (not a certification)
- that the verification has been done 3rd party independent
- that the EPD was verified according to IIPCR
- the program rules / PCR that was used.

Examples:

I hereby confirm that, following detailed examination as independent 3rd party verifier, I have not been able to trace any relevant deviations by the Environmental Product Declaration [*declaration number*], issued for [*product name(s)*] by [*company name*] and by its project report from the requirements outlined in the corresponding product category regulations based on the horizontal PCR of INSIDEINSIDE and the corresponding product group PCR

Name of the relevant product group PCR

The company-specific data have been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity.

The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at [*name of LCA Practitioner*].

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Name and signature of	
Independent verifier	Place and date
>>>	>>>

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Part A: Calculation rules for the Life Cycle Assessment and requirements on the LCA project report:

Verification checklist LCA project report

In principle there is one type of EPD the client can choose:

- INSIDEINSIDE®-EPD

The issues in the checklist below must be checked in the verification. The check consists of checking if the issue is described in the LCA project report and if it is line with the requirements and guidelines in the applicable reference (INSIDEINSIDE horizontal PCR (IIPCR) and product group PCR). Most issues are mandatory to check, some can be optional. If the issue is in line with the requirements and/or accepted by the verifier, the box "checked and approved" can be ticked

If the LCA is already critically reviewed according to ISO 14044 before the verification, no duplications are necessary.

Any deviations from the requirements should be reported by the verifier, and the dialogue between verifier and LCA practitioner should be made transparent as well improvements made following the verification process. This can be done separately from the checklist (an example is provided after the checklist).

1	General information - availability	Mandatory / optional	Reference	Checked and approved
1.1	Commissioner of LCA study, LCA practitioner	M	IIPCR ch.8.2	
1.2	Date of issue of LCA report	M	IIPCR ch.8.2	
1.3	Statement that the Life Cycle Assessment study has been performed in accordance with the requirements of IIPCR and applicable PCRs	M	IIPCR ch.8.2 + applicable PCR	
1.4	Any other independent verification of the data given in the LCI/LCA documentation?	O		
2	General information - availability	Mandatory / optional	Reference	Checked and approved
2.1	Reasons for performing the Life Cycle Assessment	M	IIPCR ch.8.2	

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2.2	Intended application – (e.g. for EPD, databases, publication etc.) Is the LCA designed in such a way that it allows B2B communication for environmental assessments of buildings?	M	IIPCR ch.8.2	
2.3	Target group (B2B, B2C, ...)	M	IIPCR ch.8.2	
3	General information - availability	Mandatory / optional	Reference	Checked and approved
3.1	Functional / Declared unit, including relevant technical specification	M	IIPCR ch.6.3.1/6.3.2 and/or applicable PCR or additional specific requirements for certain product groups	
3.2	If product groups (similar products from one manufacturer and/or from different production plants) are formed as averages: a. Calculation rules for the formation of averages b. Representativeness of averages	M	IIPCR ch.8.2	
4	General information - availability	Mandatory / optional	Reference	Checked and approved
4.1	Composition of the product The level of detail: the main components necessary to understand what type of product is concerned Note: It should be settled before the verification how confidential information is dealt with (acc. to provisions ISO 14025)	M	ISO 14025	
4.2	Description of technical and functional characteristics and area of intended application	M	Applicable PCR	

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4.3	Flow diagram of main production processes and visualization of system boundaries. Level of detail: see 4.1 Note: It should be settled before the verification how confidential information is dealt with (acc. to provisions ISO 14025)	M	ISO 14025	
5	General information - availability	Mandatory / optional	Reference	Checked and approved
5.1	Comprehensive declaration of modules A1 to A3 as a minimum requirement, if necessary as an aggregated module A1-A3	M	IIPCR ch. 6.3.4	
5.2	A1 to A3: System boundary a. Clear description of what the modules cover b. System boundary to nature (e.g. forest in wood production) c. Use of secondary materials and secondary fuels and waste produced (check end-of-waste state) d. If applicable: Reference to the certificate of the offsetting of CO ₂	M CO ₂ certificates optional	IIPCR ch. 6.3.4.2 and applicable PCR	
5.3	A1 to A3: Allocation of co-products: a. Specification of the “end-of-waste state” b. Selection of the allocation factors for co-product allocation c. Justification of specific allocation processes (e.g. if data are not available to allocate according to the IIPCR rules) d. Presentation of the energy and material flows as a result of deviating allocation processes e. No declaration of loads and benefits in Module D from allocation in A1-A3	M	IIPCR ch. 6.4.3.2 + annex B.1	
5.4	A4 to A5 (mandatory module): Clear description and content of modules	M	IIPCR ch. 6.3.4.3 and applicable PCR	
5.5	Accounting losses in the modules in which they arise (e.g. A4, transport to construction site)	M	IIPCR ch. 6.3.4.1	
5.6	B1 to B5 (optional module): Delineation and content of modules	M	IIPCR ch. 6.3.4.4 and applicable PCR	

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5.7	B6 and B7 (optional module): Delineation and content of modules	M	IIPCR ch. 6.3.4.4 and applicable PCR	
5.8	C1 to C4 (mandatory module): Delineation and content of modules	M	IIPCR ch. 6.3.4.5 and applicable PCR	
5.9	C3 (mandatory module): Justification of the "end-of-waste state" <ul style="list-style-type: none"> a. Existing purpose b. Existing market or demand c. Compliance with technical requirements and legal guidelines d. Fulfils limit values for Substances of Very High Concern (SVHC) 	M	IIPCR ch. 6.3.4.5 + annex B.1 and applicable PCR	
5.10	C4 (mandatory module): Carefully check the correct allocation	M	IIPCR ch. 6.3.4.5 and ch.6.3.4.6	
5.11	D (mandatory module): System boundary and contents of Module justified	M	IIPCR ch. 6.3.4.6	
5.12	D (mandatory module): Check if the net flow calculation is done correctly taking into consideration relevant factors, e.g.: <ul style="list-style-type: none"> a. Processing losses b. Inputs in Modules A1 to A3 (and A4 to B5 if necessary) 	M	IIPCR ch. 6.3.4.6 and 6.4.3.3	
5.13	D (mandatory module): No benefits or loads of allocated co-products	M	IIPCR ch.6.4.3.3	
6	General information - availability	Mandatory / optional	Reference	Checked and approved
6.1	Selection of the power mix in accordance with the location of the production site(s)	M	CEN TR15941 and applicable PCR	
6.2	If applicable: Validity of the certificates for green power	O	Applicable PCR	
7	General information - availability	Mandatory / optional	Reference	Checked and approved

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7.1	If applicable: Selecting allowable certificates in accordance with the PCR	O	Applicable PCR	
8	General information - availability	Mandatory / optional	Reference	Checked and approved
8.1	Transparent description of the system boundaries: <ul style="list-style-type: none"> a. Representativeness (temporal, geographical, technological) b. Assessment period for each module considered in the Life Cycle Assessment (eg one year average, etc) c. Omissions of life cycle stages, processes and data requests d. Assumptions with regard to 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. e. Assumptions concerning other relevant background data where relevant for the system boundary 	M	ISO 14040 IIPCR ch. 8.2	
9	General information - availability	Mandatory / optional	Reference	Checked and approved
9.1	Selection of the cut-off criteria, description of application of the criteria and assumptions	M	IIPCR ch.6.3.5 and ch. 8.2 and applicable PCR	
9.2	List of excluded processes available		IIPCR ch. 8.2	
10	General information - availability	Mandatory / optional	Reference	Checked and approved
10.1	Data collection, including data quality issues, according to LCA rules	M	ISO 14044:2006, section 4.3.2; Documentation ISO 14040 IIPCR 6.3.6	

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11	General information - availability	Mandatory / optional	Reference	Checked and approved
11.1	Statement that the scenarios included are currently in use and are representative for one of the most likely scenario alternatives. Check the PCR / program rules if average scenarios are allowed. (preferably no average scenarios for various alternatives)	M	IIPCR ch. 6.3.8 Applicable PCR	
11.2	Documentation of the relevant technical information, e.g. recycling or reuse rates, with reference to the literature source	M		
12	General information - availability	Mandatory / optional	Reference	Checked and approved
12.1	Selection and use of generic data and background data justified and validity demonstrated (Commonly used and publicly available databases in Europe are: GaBi database, Ecolnvent, ILCD, EF compliant databases made available by JRC)	M	IIPCR ch.6.3.6 EN 15941 and applicable PCR	
12.2	Data as follows: a. < 10 years for background data b. < 5 years for manufacturer's data c. Data manufacturer based on 1 year average d. Time period of 100 years in case of a landfill scenario, longer if relevant e. Technical background complies with physical reality f. Integrity of generic data records, system limit and cut-off criteria for generic data records validity demonstrated	M	IIPCR ch. 6.3.7 EN15941 and applicable PCR	
12.3	Documentation on data / background data: a. Name of the (background) data record, its source (data base, literary source etc.), year of data collection and its representativeness b. Handling missing data c. Assessing data quality	M	EN15941 and applicable PCR	

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12.4	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.	○		
13	General information - availability	Mandatory / optional	Reference	Checked and approved
13.1	General allocation principles applied (avoidance of allocation, no double counting / omissions, uniform application of the allocation rules etc.)	M	ISO14044:2006 4.3.4	
13.2	Presentation and justification of allocations in the use of secondary materials or secondary fuels as raw materials	M	IIPCR ch.6.4.3 and 8.2 and applicable PCR	
13.3	Presentation and justification of allocations in the plant (delineation from other products in a plant)	M		
13.4	If applicable: Presentation and justification of allocation of multi-input processes (e.g. landfilling or incineration)	M		
13.5	Co-product allocation correctly applied, see also 5.3	M	IIPCR ch. 6.4.3.2	
13.6	Documentation of allocation factors used and their (independent) sources	M		
13.7	Allocation process for reuse, recycling and recovery, check specifically: <ul style="list-style-type: none"> a. Consistency with other scenarios of waste management b. Conventional average technologies and practices c. Specification and justification of end-of-waste state where applicable d. If applicable (module D): Selecting substituted processes in accordance with the PCR or (if no PCR is available) representative actual processes e. If applicable (substitution in Module D): Calculation of net flows 	M	IIPCR ch.6.4.3.3 and applicable PCR	

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	f. Conservative approach, i.e. choice of those scenarios and calculation rules that reflect the highest environmental impacts in comparison to other choices			
13.8	Is there any presentation or expert guess of data sets which do not comply with the allocation principles and description of consequences for the LCA results?	M	Applicable PCR	
14	General information - availability	Mandatory / optional	Reference	Checked and approved
14.1	Transparent presentation of Life Cycle Assessment modeling (for example by tables, screenshots from Life Cycle Assessment software programs etc.)	M	EN 15804 ch.8.4	
14.2	Clear description how company data are used in which data records in Life Cycle Assessment software programs	M	IIPCR ch.8.4	
14.3	Assignment of process data to the Life Cycle Assessment modules	M	IIPCR ch.8.4	
14.4	For several locations/products: Presentation of modeling of all locations and products as well as weighting thereof	M		
14.5	Plausibility and consistency of data (mass balance, energy balance) Balances on company level and in the life cycle. e.g. Mass balance between reference flow and wastes for cradle to grave data / Mass of non-energetic resources used coherent with the reference flow / CO and CO2 emissions coherent with the mass of fossil energetic resources / check of the sum of non-renewable and renewable parts or between feedstock and fuel parts / Is the energy indicators coherent with the energetic resources used?	M	IIPCR ch.8.4	

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15	General information - availability	Mandatory / optional	Reference	Checked and approved
15.1	<p>Presentation of the parameters in tabular form for all modules A1 to D</p> <p>Marking unassessed modules as "MNA" (= module not assessed)</p>	M	<p>IIPCR ch..7.2.2</p> <p>EN15978 ch.12.5</p>	
15.2	<p>Presentation of the parameters describing environmental impact (7 parameters), the parameters for describing the use of resources (10 parameters), parameters for describing the waste categories (3 parameters) and parameters concerning output material flows (4 parameters)</p>	M	<p>IIPCR ch. 6.5, 7.2.3 - 7.2.5</p>	
15.3	<p>Selection of correct characterisation factors and elimination of long-term emissions (> 100 years)</p>	M	<p>IIPCR ch.8.2 and annex (amendment) and applicable PCR</p>	
15.4	<p>Justification of characterisation factors applied in case of input/output flows that are not on the list of characterisation factors of the IIPCR and applicable PCR</p>	M		
15.5	<p>Information on the environmental impacts in the project 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	<p>IIPCR ch.8.2</p>	
16	General information - availability	Mandatory / optional	Reference	Checked and approved
16.1	<p>Interpretation of the results based on a dominance/contribution analysis of selected indicators</p>	O		
16.2	<p>Relationship between the results of the Life Cycle Inventory Assessment and the results of the Life Cycle Impact Assessment (LCIA)</p>	M	<p>IIPCR ch.8.2</p>	

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16.3	Assumptions and restrictions as regards the interpretation of results in the EPD, in terms of both methods and data	M	IIPCR ch.8.2	
16.4	Variance from the means of LCIA results must be presented if generic data is provided from several sources or [the results] refer to a number of similar products.	M	IIPCR ch.8.2	
16.5	Data quality assessment	M	IIPCR ch.8.2 ISO 14040 CEN TR15941 Applicable PCR	
16.6	Comprehensive transparency as regards value decisions, justifications and expert opinions	M	IIPCR ch.8.2	
17	General information - availability	Mandatory / optional	Reference	Checked and approved
17.1	Where relevant to check the documentation: a. Laboratory results/measurements listed in the content declaration b. Laboratory results/measurements listed in the functional/technical performance c. Documentation on the declared technical information on individual life cycle stages not taken into consideration in the construction product's Life Cycle Assessment and applied for evaluation of the building (e.g. transport routes, energy consumption during the usage stage, cleaning cycles etc.) d. Laboratory results/measurements pertaining to the declared emissions in indoor air, soil or water during the use stage	M	IIPCR ch.8.3	
17.2	Where relevant: ensure that information additional to IIPCR is verified			
18	General information - availability	Mandatory / optional	Reference	Checked and approved
18.1	Necessary if the entire life cycle A1-C4,D is declared: Documentation for calculating the	M	IIPCR ch.6.3.3	

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	reference service life (RSL), should be representative for the declared product			
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Example of dialogue between verifier/Program Operator and EPD owner / practitioner during the verification process

Any deviations from the requirements should be reported by the verifier, and the dialogue between verifier and LCA practitioner should be made transparent as well improvements made following the verification process. This can be done separate from the checklist. The format to do so is free to choose. Examples are given below:

Example:

Issue number	Question / comment	response

Example (partly based on XP TS14071)

Comment N°	Chapter Article Paragraph	Alinea Table	Type of comment (Ed, Te, Ge)	Ref. to a Eco check list (or program rules) section	Verifier comment and recommendation	EPD owner / LCA practitioner answer	Final verifier statement

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Part B: Requirements on the INSIDEINSIDE®/EPD certificate

In principle there is one type of EPD the client can choose:

- INSIDEINSIDE®-EPD

This whole section is mandatory to verify. The rules for the EPD format can be found in the IIPCR ch.7 and the EN15942: everything that is included in the master ITM (information transfer matrix), should somewhere be documented in the EPD. Additional information in the EPD shall be verified too.

1	Formal requirements	Reference	Checked and approved
1.1	<p>General, EPD includes:</p> <ul style="list-style-type: none"> a. text "Environmental Product Declaration in accordance with ISO 14025 and EN 15804" b. Statement that "EPD of interior design products may not be comparable if they do not comply with the INSIDEINSIDE horizontal PCR" c. Publisher / Program Operator, name, address d. Name of declared product e. Declaration owner / Name and address of manufacturer/association f. Representativeness of geographical area g. Representativeness with regard to which manufacturer(s) h. Program logo and website i. Date of issue + validity (5 years) j. Variability for average declaration k. Product composition l. Stages omitted, if not full LCA m. Declaration of material content of SVHC that are listed on the "Candidate List of Substances of Very High Concern for authorisation" when their content exceeds the limits for registration with the European chemicals Agency. 	IIPCR ch. 7.1	
1.2	<p>PCR name</p> <p>PCR version (MM YYYY)</p>	Applicable PCR	
1.3	Demonstration of verification: external ¹ independent verification, name of third party verifier	IIPCR ch.7.1 Table 2	

¹ EN15804 ch.7.2 Table 2 mentions the possibility of internal or external verification. In INSIDEINSIDE external verification is mandatory

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1.4	Information on the validity corresponds with the specifications in the project report		
2.	Product	Reference	Checked and approved
2.1	The product description is in line with the project report and the product studied, and clear enough described in the EPD to understand what product is declared		
2.2	If applicable: Explanations on calculations of averages within a product group	IIPCR ch. 7.1	
2.3	Specification / identification (picture, name, model)	IIPCR ch.7.1	
2.4	Indication of the intended use	IIPCR ch.7.1	
2.5	Relevant technical data (additional information is possible) including RSL if applicable		
2.6	The test standards to which the technical data are referred to.		
2.7	A description of the main product components and or materials is provided in accordance with the specifications of the PCR (if available) and LCA project report. As a minimum substances that are listed in the latest "Candidate List of Substances of Very High Concern for authorisation" if their content exceeds the limits for registration.	IIPCR ch.7.1	
2.8	Description of the manufacturing process / all manufacturing processes if several locations are involved	IIPCR ch. 7.1	
3	LCA rules	Reference	Checked and approved
3.1	Information on the declared / functional unit corresponds with the specifications of the PCR (if available)	Applicable PCR	

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3.2	Indication of the EPD type (cradle-to-gate, cradle-to-gate with options, cradle-to-grave)	IIPCR ch. 7.2.2	
3.3	EPD contains a (simple) flow diagram in accordance with the modular approach	IIPCR ch. 7.2.1	
3.4	Description of the system boundary (can be simplified, as a picture or in wording) Presentation of assignment of the analysed processes to the life cycle modules		
3.5	Indication of the key assumptions and estimates for interpretation which are not depicted elsewhere in the EPD		
3.6	Presentation of the application of cut-off criteria in accordance with the project report		
3.7	Source of background data used		
3.8	Indication of the age of background data used		
3.9	Information on the data collection period and resulting averages		
3.10	Presentation of the allocations of relevance for calculation in accordance with the minimum requirements of the PCR		
4	LCA: Scenarios and additional technical information	Reference	Checked and approved
4.1	Mandatory for all declared modules > A3: Presentation of the assumptions pertaining to the scenarios of the declared modules in accordance with the project report. Information on undeclared modules is optional.	IIPCR ch. 7.3	
4.2	If a reference service life is declared in the EPD, presentation of the scenario on which the RSL is based, in accordance with the project report	IIPCR ch.7.3.3.2	
5	LCA: Results	Reference	Checked and approved

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5.1	Description of the declared / functional unit		
5.2	Identification of the declared/undeclared modules MNA = module not assessed		
5.3	Full declaration of all indicators required according to the modular approach INA = indicator not assessed	IIPCR ch.7.2.3, 7.2.4, 7.2.5 and ch.7.5	
5.4	Compliance of the declared values with the information in the project report		
5.5	In case of product averages: description of the range / variability of the LCIA results	IIPCR ch.7	
6	Evidence for tests or certificates	Reference	Checked and approved
6.1	Additional information is provided to indoor air or soil/water, if applicable	IIPCR ch.7.4	
6.2	Declaration of the relevant evidence. Information where to find this evidence	IIPCR ch.7.2 and PCR	
7	References	Reference	Checked and approved
7.1	Full indication of all referenced sources (excluding standards already quoted in full and standards concerning evidence)		

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