Additional requirements on the annex to IBU EPD compliant with NF EN 15804/CN and French legal requirements regarding environmental product declarations

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1.0	First Draft	
2.0	Revision based on comments by INIES	
3.0	Revision based on comments by INIES	

Scope

This document contains the **additional requirements for an annex to Environmental Product Declarations (EPD)** published by Institut Bauen und Umwelt e.V. (IBU) based on the EN 15804 standard to comply with.

- NF EN 15804+A1:2014-04, Contribution des ouvrages de construction au développement durable — Déclarations environnementales sur les produits — Règles régissant les catégories de produits de construction
- NF EN 15804/CN:2016-06, Contribution des ouvrages de construction au développement durable – Déclarations environnementales sur les produits – Règles régissant les catégories de produits de construction – Complément national à la NF EN 15804+A1
- Arrêté du 23 décembre 2013 relatif à la déclaration environnementale des produits de construction et de décoration destinés à un usage dans les ouvrages de bâtiment, Version consolidée au 23 juin 2016.

The general calculation rules for the Life Cycle Assessment and Requirements on the project report are specified in a separate document as Part A of the Product Category Rules.

Complementary methodological requirements

The following requirements complement the methodological requirements on the life cycle assessment and its documentation in a project report for IBU EPDs as defined in the applicable PCR part A.

Some additions to NF EN 15804 as detailed in NF EN 15804/CN are clarifications of EN 15804 in line with current IBU practice. Such clarifications are assumed to be covered in the applicable IBU PCR part A and are not mentioned explicitly below.

Additional requirement must be answered to:

- *Décret n°2013-1264 et de l'arrêté du 23 Décembre 2013* relatif à la déclaration environnementale de certains produits de construction et de décoration destinés à un usage dans les ouvrages du bâtiment ;
- *De l'arrêté du 31 Août 2015* relatif à la vérification par tierce partie indépendante des déclarations environnementales des produits de construction, des produits de décoration et des équipements électriques, électronique et de génie climatique destinés à un usage dans les ouvrages de bâtiment.
- Du règlement du Programme INIES en vigueur

The owner must provide a FDES as well as a complementary project report justifying the assumptions, data and scenarios used to respect the requirements.
The FDES must be representative of products places on the French market (production sites, transport distances, servicing and maintenance in France, end of life).

On 5.1 Declared/Functional unit

The unit of declared functional unit must be in accordance with Annex 1 of the Arrêté du 23/12/2013 (article 6).
In case that the declared/functional unit of the IBU EPD does not conform to the required functional unit as specified in the *Arrêté du 23/12/2013, Article 6,* any additional information to understand the functional unit used in the annex shall be declared in the respective section of the annex.

On 5.2 Specific rules for the declaration of construction product classes

The collective EPDs shall follow the procedures and be in conformity with the requirements as established in the *Arrêté du 23/12/2013, Article 10 and its annex V* and clarified by NF EN 15804/CN standard.

On 5.5.5 C1-C4 End-of-life stage information module

NF EN 15804/CN, clause 6.2.7 and its informative annex H provide the definition of default system boundaries between the product system and module D in the End-of-life stage for several materials.

For instance, for EPDs of products containing wood, it is necessary to use the rules and scenarios "LCA and environmental declarations of products and components of wood construction" published by CODIFAB. Any other methodology or scenario should be justified in the EPD.

However, for the documentation in the project report, these examples do no replace a sound justification of the end-of-waste state for the material flows entering or leaving a product system.

Only one end-of-life scenario need to be declared: this scenario must be representative of the current end-of-life stage of the products.

On 5.6 Criteria for the exclusion of inputs and outputs

NF EN 15805/CN, clause 6.3.5, limits the criteria for the exclusion of inputs and outputs to 1% of primary energy input (renewable plus non renewable) per life cycle stage and lists some processes that can be excluded by default. These cut-off criteria are not in line with EN 15804; the corresponding IBU requirements in line with EN 15804 shall be followed.

On 6.5.3 Allocation procedure for reuse, recycling and recovery

According to the *Arrêté du 23/12/2013, Article 8*, the potential benefits and burdens declared in module D shall be calculated according to the equations in its annex IV (see also NF EN 15804/CN, clause 6.2.7).

NOTE 1: On the application of these requirements in the light of current IBU practices: the equations of annex IV are more precise in the sense that they distinguish primary and secondary material production processes at the time of production of the product and at its disposal. In practice, however, current technology is assumed for future processes, which leads to the current IBU practice to first determine the net amount of secondary material and then quantify the benefits and burdens for this net amount. This implies that current IBU procedures and the French requirements – in practice – lead to the same results.

On 7.2 Indicators for impact assessment

According to the *Arrêté du 23/12/2013, Article 3,* the indicator values for the total life cycle A1-C4 as well as for the life cycle stages production, construction, use and end-of-life have to be declared (in addition to the indicator values per information module).

According to the *Arrêté du 23/12/2013, Article 7*, two additional impact categories shall be declared (see also NF EN 15804/CN, clause 6.5)

- Water pollution
- Air pollution

The characterisation factors for these impact categories are listed in its annex III (see also NF EN 15804/CN, annex C).

According to NF EN 15804/CN, clause 6.5, complementary characterisation factors for clay, bentonite, gravel, gypsum, silica and sand shall be used for the quantification of the ADPelements as listed in its annex C.

On 9.2 Documentation for calculating the Reference Service Life (RSL)

According to the *Arrêté du 23/12/2013, Article 6*, the RSL shall be determined and justified based on the parameters listed in its annex II, as applicable:

Parameter	**Value**
Declared product properties (at the gate) and finishes, etc.	Units as appropriate/or descriptions as appropriate
Design application parameters (if instructed by the manufacturer), including references to any appropriate practices	Units as appropriate/or descriptions as appropriate
An assumed quality of work, when installed in accordance with the manufacturer's instructions	Units as appropriate/or descriptions as appropriate
Outdoor environment, (for outdoor applications), e.g. weathering, pollutants, UV and wind exposure, building orientation, shading, temperature	Units as appropriate/or descriptions as appropriate
Indoor environment (for indoor applications), e.g. temperature, moisture, chemical exposure	Units as appropriate/or descriptions as appropriate
Usage conditions, e.g. frequency of use, mechanical exposure	Units as appropriate/or descriptions as appropriate
Maintenance e.g. required frequency, type and quality and replacement of components	Units as appropriate/or descriptions as appropriate

The service life cannot be longer than the service life of the building, which is assumed as 100 years by definition.

Additional: Contribution of the product to health and comfort

According to NF EN 15804/CN, clause 10, the EPD shall contain an assessment of the contribution of the product to health and comfort.
The documents used and assumptions made to derive such information in line with NF EN 15804, clause 10, shall be documented and justified in the project report.

On the use of the template for the annex

When preparing an EPD in conformity with the IBU PCR part A and with this annex, care shall be taken that the LCA is calculated in accordance with these two complementary references and documented within the given structure of the EPD template as defined in the applicable PCR part B, notably in clause 3, 4 and 5.

The following template contains only information that goes beyond the current template for IBU EPDs.

ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804

Additional information compliant with NF EN 15804/CN and French legal requirements regarding environmental product declarations

Note: This additional information must be in French in INIES database, please see the format in the French document.

Number of the corresponding IBU EPD :	[to be completed]
INIES registration number:	[to be completed]
Date of issuance :	[to be completed]
Date end of validity :	[to be completed]

[Name of product]

[Owner of the IBU EPD]

Version of the annex : 2019-01

[insert a picture of the product family (see IBU EPD]

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1. Scope of this annex

This annex to EPD no. [please insert no] for [please insert name of declared product] by [please insert name of owner of the declaration] contains complementary information to achieve compliance with the following French standards and legislative documents:

- NF EN 15804+A1:2014-04, des ouvrages de construction au développement durable — Déclarations environnementales sur les produits — Règles régissant les catégories de produits de construction
- NF EN 15804/CN:2016-06, Contribution des ouvrages de construction au développement durable – Déclarations environnementales sur les produits – Règles régissant les catégories de produits de construction – Complément national à la NF EN 15804+A1
- Décret and Arrêté du 23 décembre 2013 relatif à la déclaration environnementale des produits de construction et de décoration destinés à un usage dans les ouvrages de bâtiment, Version consolidée au 23 juin 2016.

2. Warning

The information contained in this annex and in the corresponding EPD has been furnished under the responsibility of [please insert owner of EPD) as per NF EN 15804+A1 and the national supplement NF EN 15804/CN.

Any use, in part or in whole, of the information furnished in this document shall at the minimum be accompanied by the full reference to the original EPD and to the issuer thereof who shall be able to provide a full copy.

CEN standard EN 15804+A1 provides the Product category definition rules (PCR).

NOTE 1 The literal French translation of EPD (Environmental Product Declaration) is DEP (Déclaration Environnementale de Produit). However, in France, the term FDES (Environmental and Health Declaration Form) is commonly used and contains both the Environmental Declaration and Health information for the product covered by the FDES. The FDES is thus an "EPD" supplemented with health information.

3. Functionnal unit

Results of this FDES are valid for the following functional unit: [insert the functional unit]

4. Scope of validity [only for collective FDES]

The scope of validity must be calculated and following NF EN15804/CN, annex L.
Reference shall be made to:

- mode of calculating the average product;
- the indicators selected for this analysis;
- the key variables/processes that determine the results, i.e. the range of the sensible parameters;
- the resulting approach for the declaration of average/"collective" values (homogeneous/non homogeneous product family);
- the limit values (composition, concentration of elements, weight, etc.) for the validity of the values declared in this annex.

5. Scenario description

The hypothesis of the different scenarios representative of a product sold in France (transport, installation, end-of-life, …) for the modules A4-A5, B1-B7, C1-C4 and D must be explained here.
See annex G of the NF EN 15804/CN standard.

⚠ Every information must be written in French in INIES database, please use the format defined in French Document

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6. LCA: Complementary indicators

The two indicators “water pollution” and “air pollution” are calculated based on the “critical volumina” approach according to NF EN 15804/CN. The indicator “exported energy as process gas” is an indicator of the life cycle inventory.

For details on the system boundaries and further methodological aspects of the LCA, please see corresponding clauses of the EPD.

7. LCA: Scenarios and additional technical information [if needed]

[This chapter has to be included in the FDES only if scenarios differing from the scenarios as declared in the IBU EPD are declared to comply with the French requirements on assumptions for scenarios in modules beyond A1-A3.

For each of the modules where scenario assumptions differ from the original IBU EPD, a short description followed by the list of parameters as outlined in NF EN 15804/CN, p. 44ff shall be declared in this chapter.

The complementary calculations shall be documented in an annex to the project report for the IBU EPD to be written in French or English.]

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8. LCA: Results

Environmental impacts	Product stage	Construction process stage			Use stage								End-of-life stage					All life cycle	D Benefits and loads beyond the system boundaries
	Total A1-A3 Product stage	A4 Transport from the gate to the site	A5 Assembly	**Total A4-A5**	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	**Total B1-B7**	C1 De-construction/ demolition	C2 Transport	C3 Waste processing	C4 Disposal	**Total C1-C4**	**Total A1-C4**	
Global warming potential kg CO_2 eq/FU																			
Depletion potential of the stratospheric ozone layer kg CFC 11 eq/FU																			
Acidification potential of land and water kg SO_2 eq/FU																			
Eutrophication potential kg $(PO_4)^{3-}$ eq/FU																			
Formation potential of tropospheric ozone photochemical oxidants kg Ethene eq/FU																			
Abiotic depletion potential for non-fossil resources kg Sb eq/FU																			
Abiotic depletion potential for fossil resources MJ/FU																			
Water pollution m^3/FU																			
Air pollution m^3/FU																			

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Resource use	Product stage	Construction process stage			Use stage								End-of-life stage					All life cycle	**D** Benefits and loads beyond the system boundaries
	Total A1-A3 Product stage	A4 Transport from the gate to the site	A5 Assembly	**Total A4-A5**	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	**Total B1-B7**	C1 De-construction/ demolition	C2 Transport	C3 Waste processing	C4 Disposal	**Total C1-C4**	**Total A1-C4**	
Use of renewable primary energy excluding renewable primary energy resources used as raw materials MJ/FU																			
Use of renewable primary energy resources used as raw materials MJ/FU																			
Total use of renewable primary energy resources MJ/FU																			
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials MJ/FU																			
Use of non-renewable primary energy resources used as raw materials MJ/FU																			
Total use of non-renewable primary energy resources MJ/FU																			
Use of secondary material kg/FU																			

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Use of renewable secondary fuels MJ/FU																		
Use of non-renewable secondary fuels MJ/FU																		
Use of net fresh water m3/FU																		

Waste categories	**Product stage**	**Construction process stage**			**Use stage**								**End-of-life stage**					**All life cycle**	**D** Benefits and loads beyond the system boundaries
	Total A1-A3 Product stage	A4 Transport from the gate to the site	A5 Assembly	**Total A4-A5**	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	**Total B1-B7**	C1 De-construction/ demolition	C2 Transport	C3 Waste processing	C4 Disposal	**Total C1-C4**	**Total A1-C4**	
Hazardous waste disposed kg/FU																			
Non-hazardous waste disposed kg/FU																			
Radioactive waste disposed kg/FU																			

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Output flows		Product stage	Construction process stage			Use stage								End-of-life stage					All life cycle	**D** Benefits and loads beyond the system boundaries
		Total A1-A3 Product stage	A4 Transport from the gate to the site	A5 Assembly	**Total A4-A5**	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	**Total B1-B7**	C1 De-construction/ demolition	C2 Transport	C3 Waste processing	C4 Disposal	**Total C1-C4**	**Total A1-C4**	
Components for re-use kg/FU																				
Materials for recycling kg/FU																				
Materials for energy recovery kg/FU																				
Exported energy MJ/FU	**Electricity**																			
	Thermal																			
	Proccess gaz																			

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9. Additional information on release of dangerous substances to indoor air, soil and water during the use stage

[Standard text blocks for the following clauses can be found in the document « CTIB N94 - Guide de rédaction des résumés sanitaires et confort - octobre 2009.pdf »].

8.1 Indoor air

[To assess the effects on health, during the "use" phase of the products and in the indoor environment of the construction work, five emission flows should be taken into consideration: Volatile Organic Compounds (VOC), viable particles, non-viable particles (including fibers), radon and other gases, radiation; in addition microorganism growth data should be considered.
Guidance on the possible content of this clause can be found in NF EN 15804/CN, annex D and annex E.]

8.2 Soil and water

[Guidance on the possible content of this clause can be found in NF EN 15804/CN, annex D.]

10. Contribution of the product to the quality of life inside buildings

[The various characteristics listed in this section shall be selected and chosen according to the relevance of the comfort criterion to be assessed for the product in question.
Guidance on the possible content of these clauses can be found in NF EN 15804/CN, annex E and annex F.]
Standard text blocks for the following clauses can be found in the document « CTIB N94 - Guide de rédaction des résumés sanitaires et confort - octobre 2009.pdf »].

Please mention the “etiquette sanitaire” of the product if subject of the corresponding legislation].

9.1 Hygrothermal comfort

[to be complete]

9.2 Acoustic comfort

[to be complete]

9.3 Visual comfort

[to be complete]

9.4 Olfactory comfort

[to be complete]

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11. References

NF EN 15804+A1
NF EN 15804+A1:2014-04, Contribution des ouvrages de construction au développement durable — Déclarations environnementales sur les produits — Règles régissant les catégories de produits de construction

NF EN 15804/CN
NF EN 15804/CN:2016-06, Contribution des ouvrages de construction au développement durable – Déclarations environnementales sur les produits – Règles régissant les catégories de produits de construction – Complément national à la NF EN 15804+A1

Décret / Arrêté du 23 décembre 2013
Arrêté du 23 décembre 2013 relatif à la déclaration environnementale des produits de construction et de décoration destinés à un usage dans les ouvrages de bâtiment, Version consolidée au 23 juin 2016.

[to be completed]

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