ACOUSTICAL CEILING AND WALL SOLUTIONS

C-PCR-XXX (TO PCR 2019:14)
VERSION: 20XX-YY-ZZ. DRAFT FOR OPEN CONSULTATION. DO NOT USE OR CITE.

VALID UNTIL: 20XX-YY-ZZ

INTRODUCTION TO OPEN CONSULTATION

This draft c-PCR document is available for open consultation until 2021-11-05. Feel free to forward the draft to any other stakeholder you might think is relevant, including colleagues and other organisations.

This is the first version of this document to be developed. We are therefore interested in comments from stakeholders on:

- General
  - Alignment with PCRs available in other programmes for type III environmental declarations, industry-specific LCA guides or similar.
- Scope of PCR
  - Product category definition and description
  - Classification of product category using CPC codes
- Goal and scope, life cycle inventory and life cycle impact assessment
  - Functional unit/declared unit
  - System boundary
  - Allocation rules
  - Data quality requirements
  - Recommended databases for generic data
  - Impact categories and impact assessment methodology
- Additional information

Comments may be sent directly to the PCR Moderator (contact details available in Section 1). There is a template for comments on www.environdec.com that may be used.

For questions about the PCR, please contact the PCR Moderator. For general questions about the International EPD® System, EPD or PCR development, please contact the Secretariat via pcr@environdec.com.

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1 INTRODUCTION

1.1 GENERAL

This document constitutes complementary Product Category Rules (c-PCR) developed in the framework of the International EPD® System: a programme for type III environmental declarations[1] according to ISO 14025:2006, ISO 14040:2006, ISO 14044:2006, and product-specific standards such as EN 15804 and ISO 21930 for construction products. Environmental Product Declarations (EPD) are voluntary documents for a company or organisation to present transparent, consistent and verifiable information about environmental performance of their product (goods or services).

The rules for the overall administration and operation of the programme are the General Programme Instructions (GPI), publicly available at www.environdec.com. PCRs and c-PCRs complement the GPI and the normative standards by providing specific rules, requirements and guidelines for developing an EPD for one or more specific product categories (see Figure 1). A PCR/c-PCR should enable different practitioners using the PCR/c-PCR to generate consistent results when assessing products of the same product category.

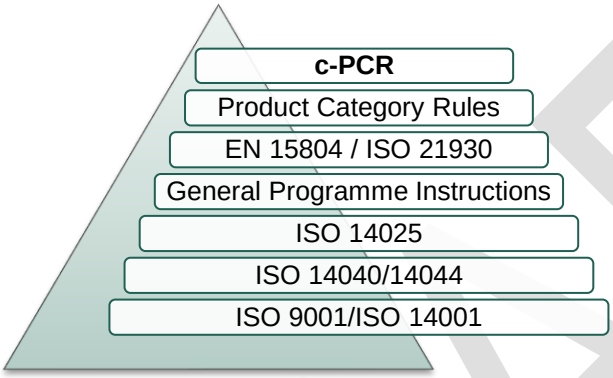

Figure 1 This c-PCR in relation to the hierarchy of standards and other documents.

Within the present c-PCR, the following terminology is adopted:

- The term “shall” is used to indicate what is obligatory, i.e. a requirement.
- The term “should” is used to indicate a recommendation, rather than a requirement. Any deviation from a “should” requirement shall be justified in the PCR development process.
- The terms “may” or “can” is used to indicate an option that is permissible.

For definitions of further terms used in the document, see the normative standards.

A PCR and its c-PCRs are valid for a pre-determined period of time to ensure that it is updated at regular intervals. The latest version of the PCR and its c-PCRs are available at www.environdec.com. Stakeholder feedback on PCRs and c-PCRs is very much encouraged. Any comments on this c-PCR may be sent directly to the PCR Moderator and/or the Secretariat during its development or during its period of validity.

Any references to this document shall include the PCR registration number, name and version.

The programme operator maintains the copyright of the document to ensure that it is possible to publish, update, and make it available to all organisations to develop and register EPDs. Stakeholders participating in c-PCR development should be acknowledged in the final document and on the website.

[1] Type III environmental declarations in the International EPD® System are referred to as EPD, Environmental Product Declarations.

1.2 ROLE OF THIS DOCUMENT

This document provides complementary product category rules (c-PCR) to PCR 2019:14 Construction products available at www.environdec.com. This document cannot be used by itself but shall be used together with PCR 2019:14 and the European standard EN 15804:2012+A2:2019 (called EN 15804 in short). If a c-PCR is available for a product category, it shall be used.

See Figure 2 for an illustration on how PCR 2019:14 and this c-PCR relate to each other and the EPDs that may be based on them.

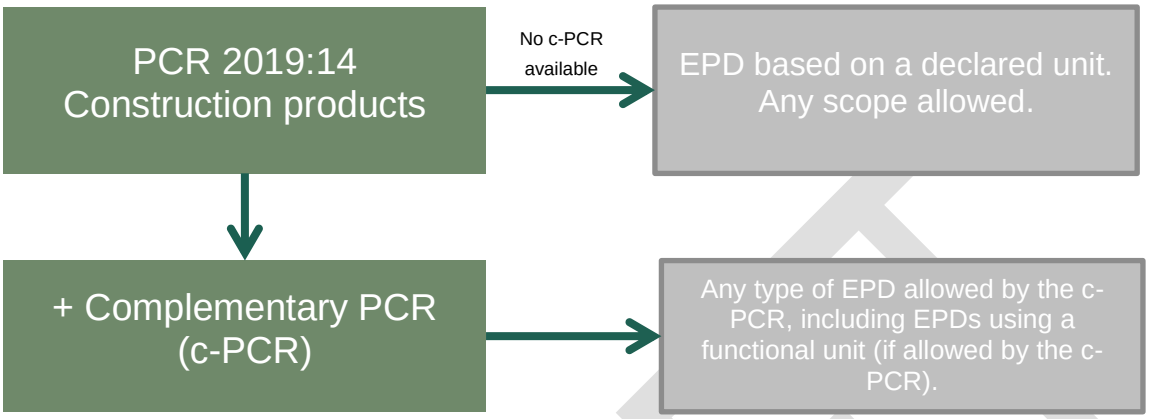

Figure 2 Overview of using PCR 2019:14 directly to develop an EPD, or how to use it together with a c-PCR.

2 GENERAL INFORMATION

2.1 ADMINISTRATIVE INFORMATION

Name:	Acoustical ceiling and wall solutions
Registration number and version:	c-PCR-XXX
Programme:	The International EPD System
Programme operator:	EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden. Website: www.environdec.com E-mail: info@environdec.com
PCR Moderator:	Markus Beckman, Saint-Gobain Ecophon AB, markus.beckman@ecophon.se
PCR Committee:	Saint-Gobain Ecophon AB, IVL Swedish Environmental Research Institute
Date of publication and last revision:	*Added by the Secretariat*
Valid until:	*Added by the Secretariat*
Schedule for renewal:	This document will be revised together with the PCR for Construction products. In case a c-PCR is developed by a CEN Product TC, the standard will replace this c-PCR, with a transition period of at least 90 days under which both are valid.
Standards conformance:	▪ General Programme Instructions (GPI) of the International EPD System, version 4.0, based on ISO 14025:2006, ISO 14040:2006 and ISO 14044:2006 ▪ EN 15804:2012+A2:2019 ▪ ISO 21930:2017. This standard is used in selected sections, such as allocation, when it provides additional but not contradictory rules to EN 15804. All EPDs based on this PCR shall be compliant with EN 15804:2012+A2:2019. If additional rules are followed, e.g. additional indicators, this PCR may also be used to develop an EPD compliant with ISO 21930:2017.
PCR language(s):	This PCR was developed and is available in English. In case of translated versions, the English version takes precedence in case of any discrepancies.

2.2 SCOPE

2.2.1 PRODUCT CATEGORY DEFINITION AND DESCRIPTION

This c-PCR is to be used for the assessment of the environmental performance of acoustic ceiling and wall solutions and the declaration of this performance by an EPD.

Typical solutions covered by this PCR are:

- Suspended or direct fixed ceilings covering the whole structural ceiling or parts of it.
- Suspended or direct fixed baffles.

- Vertically (wall) mounted elements/panels.

Common for all solutions are that they can be tested and classified with respect to sound absorption and the intended use is inside buildings. Most products are considered to be covered by EN 13964, EN 14195, EN 13986 or any relevant ETAG. However also products not covered by any standard or ETAG like vertically mounted elements are included by this c-PCR.

For those products not covered by the standards forenamed EN 13964 is applicable with respect to specification of dimensions, tolerances and, if relevant, performance requirements in the context of this c-PCR.

In the case where the acoustic performance classes in relevant European standards are not valid for the intended use, it is possible to use a similar standard recognized on the market where the EPD is supposed to be used.

The product group, acoustic wall and ceiling solutions, comprises the following types of products:

- Acoustic panels
- Acoustic systems

Acoustic panels are made of different materials such as organic material (wood, cork etc), mineral wool (i.e. glass wool and stone wool), or other mineral materials (gypsum) and combination of materials like wet felt panels, glass wool combined with gypsum etc.

Acoustic systems consist of panels, mounted in a profile system or with other required materials to fix the panels to a floor structure or a wall. Acoustic systems cover all type of systems contributing to improve the acoustic performance for the indoor environment.

2.2.2 TYPE OF EPD AND INFORMATION MODULES INCLUDED

Following the requirements in Section 2.2.2 of PCR 2019:14, an EPD based on this c-PCR is a type b EPD, including modules A1-A3, A4-A5, C1-C4 and D. Section 0 below provide more information on each life-cycle stage concerning the product category in scope.

2.2.3 GEOGRAPHICAL SCOPE

This c-PCR may be used globally.

2.2.4 EPD VALIDITY

See PCR 2019:14.

3 PCR REVIEW AND BACKGROUND INFORMATION

This c-PCR was developed in accordance with the PCR development process described in the GPI of the International EPD® System, including open consultation and review.

3.1 OPEN CONSULTATION

3.1.1 VERSION 20XX-YY-ZZ

This c-PCR was available for open consultation from 2021-07-05 until 2021-09-05, during which any stakeholder was able to provide comments by contacting the PCR Moderator and/or the Secretariat.

Add information about any physical or web-based meetings held during the open consultation phase, if applicable.

Stakeholders were invited via e-mail or other means to take part in the open consultation and were encouraged to forward the invitation to other relevant stakeholders. The following stakeholders provided comments during the open consultation and agreed to be listed as contributors in the c-PCR and at www.environdec.com.

- *List of stakeholder names and affiliation to be added after the open consultation.*

3.2 PCR REVIEW

3.2.1 VERSION 20XX-YY-ZZ

PCR review panel:	The Technical Committee of the International EPD® System. A full list of members is available at www.environdec.com. The review panel may be contacted via info@environdec.com. Members of the Technical Committee were requested to state any potential conflict of interest with the PCR Committee, and if there were conflicts of interest they were excused from the review.
Chair of the PCR review:	*Added by the Secretariat*
Review dates:	*Added by the Secretariat*

3.3 EXISTING PCRS FOR THE PRODUCT CATEGORY

As part of the development of this c-PCR, existing PCRs/c-PCRs and other internationally standardised methods that could potentially act as c-PCRs were considered to avoid unnecessary overlaps in scope and to ensure harmonisation with established methods of relevance for the product category. The existence of such documents was checked among the following EPD programmes and international standardisation bodies:

- International EPD® System. www.environdec.com.

Table 1 lists the identified PCRs and other standardised methods.

Table 1 Existing PCRs/c-PCRs and other internationally standardized methods that were considered to avoid overlap in scope and to ensure harmonisation with established methods.

NAME OF PCR/c-PCR/STANDARD	PROGRAMME/ STANDARDISATION BODY	REGISTRATION NUMBER, VERSION NUMBER/DATE OF PUBLICATION	SCOPE
sub-PCR-A Acoustical systems solutions	International EPD® System	Version 2020-09-18	Same as the present PCR

3.4 REASONING FOR DEVELOPMENT OF C-PCR

This c-PCR was developed to provide requirements and guidelines additional to those in PCR 2019:14 and EN 15804, for developing EPDs for the product category. The c-PCR thereby enables different practitioners to generate consistent results when assessing the environmental impact of products of the same product category, and thereby it supports comparability of products within a product category. The c-PCR is an upgrade of the sub-PCR listed in Table 1, complementing PCR 2019:14 and complying with EN 15804:A2 ((instead of complementing PCR 2012:01 and complying with EN 15804:A1).

3.5 UNDERLYING STUDIES USED FOR C-PCR DEVELOPMENT

The methodological choices made during the development of this c-PCR (declared/functional unit, system boundary, allocation methods, impact categories, data quality rules, etc.) were primarily based on the following underlying study:

- Beckman M (2021) Project report on Ecophon LCA Plant (not public).

4 GOAL AND SCOPE, LIFE CYCLE INVENTORY AND LIFE CYCLE IMPACT ASSESSMENT

This section provides specific rules, requirements and guidelines for developing an EPD for the product category as defined in Section 2.2.1.

4.1 FUNCTIONAL UNIT

The functional unit shall be 1 m^2 of installed acoustic panels (or acoustic systems) including the service life and a declared acoustic performance class, i.e. sound absorption class A, B, C, D or E. For products and systems where these classes only are party relevant for the acoustic performance of the installation configuration, as for example in case with free hanging units and baffles, the absorption classes should be supplemented by information about the equivalent absorption area.

The specific acoustic panel or system service life is as default set to correspond to the building design life that commonly is set to 50 or 60 years. The functional unit shall include a specification of the intended use such as acoustic panels, acoustic systems for walls or ceilings or both.

To make relevant comparison the functional unit should have as a limit to include a sound absorption performance class. Sound absorption shall be based on is measurements according to EN ISO 354 and classification according to EN ISO 11654.

If other requirement or test methods or classifications are used for product that are sold to markets outside Europe, these alternative test results and classifications shall be is reported in the EPD as complementary information to the standards given above. An alternative approach is that the EPD is published in different versions; e.g. one for the European market and one for the North American market. It is noticed that in North America is the sound insulation measured on the same standard as given above but, reported according to the single value ratings for NRC and SAA according to ASTM C 423.

It shall be noticed that the acoustic system in a comparison may have other properties and functional demands that varies between the alternatives such as fire resistance, demountability/accessibility, cleanability, visual appearance and different physical properties. These properties can be reported in the EPD or in a technical data sheet referred to in the EPD.

4.2 SYSTEM BOUNDARIES

EPDs that are developed based on this c-PCR shall cover product stage (A1-A3), construction process stage (A4-A5), usage (B1-B7), as well as end of life stage (C1-C4). The following subsections describe some of the covered information modules and the respective processes. The information stated is a further specification of information in EN 15804 and PCR 2019:14. For other modules and processes, see EN 15804 and PCR 2019:14.

4.2.1 TRANSPORTATION (A4)

If A4 is included, note that it is possible to give more than one scenario for the transportation to a construction site or as asked for in some EPD-systems “to a central warehouse” in a specific country. It is also possible to give a global average on how the manufactured products in the EPD are, as an average, transported to the construction site. The EPD shall include a text that describes what the transportation scenario(s) represents.

4.2.2 INSTALLATION (A5)

If A5 is included, note that the resource need such as energy use for assembly and mounting shall be given. Such information may be an estimate or measured. The EPD shall describe how these figures were calculated or measured.

4.2.3 END-OF-LIFE (C1-C4)

It is possible to give more than one scenario for the end-of-life. These scenarios shall be relevant for the markets where the EPD will be used. The end-of-life fate of each component in the content declaration in the EPD shall be handled.

If detailed information on end-of-life fate is missing or hard to grasp it is possible to give a realistic general assumption of the current end-of-life fate. The EPD shall include a text that describes how the end-of-life scenario was set.

4.2.4 OTHER BOUNDARY SETTING

See PCR 2019:14 and EN 15804.

4.3 CUT-OFF RULES

See PCR 2019:14 and EN 15804.

4.4 ALLOCATION RULES

See PCR 2019:14 and EN 15804.

No double counting or omission of inputs or outputs through allocation is permitted.

4.5 DATA QUALITY REQUIREMENTS

See PCR 2019:14 and EN 15804.

4.6 ENVIRONMENTAL PERFORMANCE INDICATORS

See PCR 2019:14 and EN 15804.

4.7 INCLUDING MULTIPLE PRODUCTS IN THE SAME EPD

See PCR 2019:14.

5 CONTENT AND FORMAT OF EPD

See PCR 2019:14.

5.1 EPD LANGUAGE

See PCR 2019:14.

5.2 UNIT AND QUANTITIES

See PCR 2019:14.

5.3 USE OF IMAGES IN EPD

See PCR 2019:14.

5.4 EPD REPORTING FORMAT

See PCR 2019:14.

In addition, the EPD shall contain the following statement:

“Comparability between EPDs is only achievable if the following performance characteristics are equivalent: declared unit, containment level, level of working width, assumed service life, geographic region and fulfilment of the same requirements of the applicable standard (EN 13964:2014).”

5.5 CONTENT DECLARATION

See PCR 2019:14.

In addition, the content declaration shall include a table in the EPD where the composition of the panel is included for the acoustic panel or the acoustic system. The different components shall be reported in weight-% and the total mass of the functional unit shall be given.

The EPD shall include a statement that “the product doesn’t contain any substance from the candidate list to authorization of the REACH legislation with a concentration above 0,1% (w/w)”. If this is statement is not fulfilled the component(s) that include the regulated substance(s) shall be highlighted in the table with an * and further information given in a note after the table.

The EPD may also include other statements concerning chemical content (e.g. specific requirement given in EPD Norway concerning substances listed in the Norwegian priority list): http://www.environment.no/Topics/Hazardous-chemicals/Hazardous-chemical-lists/List-of-Priority-Substances/).

If emission to surrounding media (through VOC, leaking or other) is regulated according to harmonised European standard, i.e. CE labelling, in any European country this result will be mandatory information in the EPD. These emission values or classes for the regulated substances shall then be included in the EPD.

6 LIST OF ABBREVIATIONS

See PCR 2019:14, Section 6.

7 REFERENCES

Beckman M (2021) Project report on Ecophon LCA Plant (not public).

CEN (2014): EN 13964:2014, Suspended ceilings – Requirements and test methods

CEN (2019) EN 15804:2012+A2:2019, Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products.

EPD International (2019a) PCR 2019:14 Construction products, version 1.11. www.environdec.com.

EPD International (2019b) General Programme Instructions of the International EPD® System. Version 3.01, dated 2019-08-19. www.environdec.com.

EPD International (2020) sub-PCR-A Acoustical systems solutions, version 2020-09-18. www.environdec.com.

ISO (2006a) ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures.

ISO (2006b) ISO 14040:2006, Environmental management – Life cycle assessment – Principles and framework.

ISO (2006c) ISO 14044: 2006, Environmental management – Life cycle assessment – Requirements and guidelines.

ISO (2017) ISO 21930:2017, Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services.

8 VERSION HISTORY OF C-PCR

VERSION 20XX-YY-ZZ

Original version.

ACOUSTIC CEILING AND WALL SOLUTIONS