

PREFABRICATED BUILDINGS INTENDED AS SPECIAL-PURPOSE TRANSPORTABLE UNITS

PRODUCT GROUP CLASSIFICATION: UN CPC 387

C-PCR-013 (TO PCR 2019:14)

VERSION: 2021-11-26

VALID UNTIL: 2024-12-20



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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 declarations¹ 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.

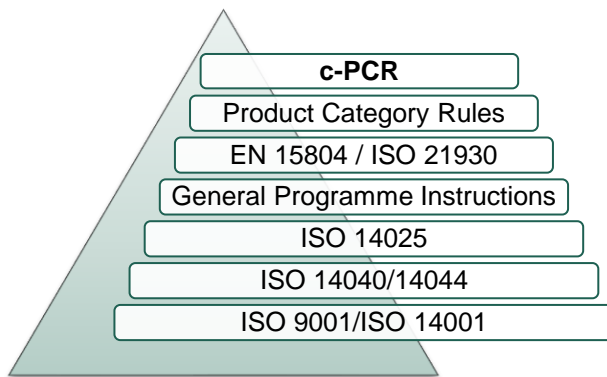


Figure 1 This c-PCR in relation to the hierarchy of standards and other documents.

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.

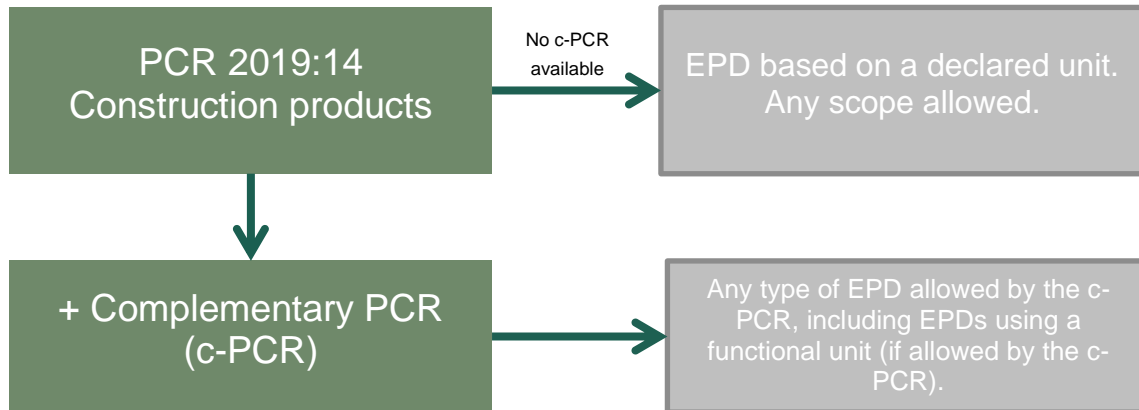


Figure 2 Overview of using PCR 2019:14 directly to develop an EPD, or how to use it together with a c-PCR.

2 GENERAL INFORMATION

2.1 ADMINISTRATIVE INFORMATION

Name:	Prefabricated buildings intended as special-purpose transportable units
Registration number and version:	c-PCR-013, Version 2021-11-26
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:	Caterina De Nardo, Studio Fieschi & soci s.r.l., denardo@studiosfieschi.it
PCR Committee:	Studio Fieschi, “ <i>Bagni Mobili Italia</i> ” working group composed by companies producing, renting, and providing full service for mobile non-sewer-connected toilet cabins.
Date of publication and last revision:	2021-11-26 A version history is available in Section 8.
Valid until:	2022-12-20
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:	<ul style="list-style-type: none"> ▪ 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. <p>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.</p>
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 transportable prefabricated buildings and the declaration of this performance by an EPD. The product category corresponds to a subset of UN CPC 387 Prefabricated buildings and underlying classes and sub-classes:

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- Group: 387 – Prefabricated Buildings
 - Class: 3870 – Prefabricated Buildings
 - Subclass: 38701 - Prefabricated Buildings, of wood
 - Subclass: 38702 - Prefabricated Buildings, of metal
 - Subclass: 38703 - Prefabricated Buildings, of plastics
 - Subclass: 38704 - Prefabricated Buildings, of concrete

The subset of this class covered by this PCR includes transportable prefabricated buildings, either unassembled or fully assembled and ready to use.

The buildings can be designed for use as toilets, showers, changing rooms and other special-purpose transportable units and can be made of different materials.

As an example, products such as mobile non-sewer-connected toilet cabins (as defined by EN 16194:2012) fall within the scope of this PCR.

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 may be a type a EPD, including modules A1-A3, C, D or a type c EPD, including modules A, B, C, D. Section 4.2 below provides more information on each life-cycle stage concerning the product category in scope.

2.2.3 GEOGRAPHICAL SCOPE

To be carried out as in PCR 2019:14, Section 2.2.3.

2.2.4 EPD VALIDITY

To be carried out as in PCR 2019:14, Section 2.2.4.

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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 2021-11-26

This c-PCR was available for open consultation from 2021-07-01 until 2021-09-01, during which any stakeholder was able to provide comments by contacting the PCR Moderator and/or the Secretariat.

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. No stakeholders provided comments during the open consultation and agreed to be listed as contributors in the c-PCR and at www.environdec.com.

3.2 PCR REVIEW

3.2.1 VERSION 2021-11-26

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:	Claudia A. Peña
Review dates:	2021-09-10 until 2021-10-28

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.
- Institut Bauen und Umwelt e.V. www.ibu-epd.com.
- EPDItaly. www.epditaly.it.
- Bau EPD GmbH. www.bau-epd.at.
- DAPconstrucción® Program. www.csostenible.net/dapcons.

No existing PCRs/c-PCRs or other relevant internationally standardised methods with overlapping scope were identified.

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.

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 documents and standards:

- EPD International (2021): PCR 2019:14 Construction products, version 1.11.
- EPD International (2021): General Programme Instructions for the International EPD System. Version 4.0.
- EN 15804:2012+A2:2019.
- ISO 21930:2017.
- LCA (Life Cycle Assessment) of Sebach portable toilets TopSan ® and TopSan ® HN. EPD update, Reference year 2019. Version 02 of 2019-07-05.

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 EPD shall follow a “cradle to grave” approach. The functional unit that shall be used in the EPD is defined in the following table. The approach shall be declared in the EPD.

Type of EPD	Life cycle stages	Unit	
c) Cradle to grave and module D	A, B, C, D	Functional unit	One day of effective usage* of a prefabricated building

* Effective usage is the number of days when the prefabricated building is accessible for use.

4.2 SYSTEM BOUNDARIES

EPDs based on this c-PCR shall be type c EPDs, thereby covering product stage (A1-A3), construction process stage (A4-A5), use stage (B1-B7), end-of-life stage (C1-C4) as well as benefits and loads beyond the system boundary (D). See Table 1 for details.

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Table 1 Life cycle stages, information modules, and the requirements for inclusion depending on type of EPD (only type c EPDs allowed under this c-PCR).

Life cycle stages	Information module		Type of EPD
			c) Cradle to grave and module D
A1-A3 Product stage	A1	Raw material supply	Mandatory
	A2	Transport	
	A3	Manufacturing	
A4-A5 Construction process stage	A4	Transport	Mandatory
	A5	Construction installation	
B1-B7 Use stage	B1	Use	Mandatory
	B2	Maintenance	
	B3	Repair	
	B4	Replacement	
	B5	Refurbishment	
	B6	Operational energy use	
	B7	Operational water use	
C1-C4 End-of-life stage	C1	Deconstruction, demolition	Mandatory
	C2	Transport	
	C3	Waste processing	
	C4	Disposal	
D Benefits and loads beyond the system boundary	D	Reuse, recovery, recycling, potential	Mandatory

The following subsections describe the covered information modules and the respective processes. For detailed information on each module, see EN 15804 (Section 6.3.5). Here only specific descriptions related to this c-PCR are provided.

4.2.1 PRODUCT STAGE: MODULES A1-A3

See PCR 2019:14 and Section 6.3.5.2 of EN 15804 and the following specific descriptions related to this c-PCR.

A3) Manufacturing:

- Manufacturing and assembly of single components ready for the transportation to the installation site shall be included in A3. Such components may be walls, door, top, platform, and other structural main components.
- The final product can be transported to the site either as a stand-alone unit or as separate single components to be assembled in situ.

4.2.2 CONSTRUCTION PROCESS STAGE: MODULES A4-A5

See PCR 2019:14 and Section 6.3.5.3 of EN 15804 and the following specific descriptions related to this c-PCR.

A4) Transport:

- Transportation from the production gate to the construction or installation site includes also the transportation from the production gate to an intermediary, such as concessionaires that provide rental services.

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A5) Installation process: assembly of single components at the site and activation of related ancillary services may include temporary connection to electricity grid and/or water supply network.

If not relevant, module **A5 (Installation process)** can be excluded (e.g. for a transportable prefabricated building that is manually installed, using small utensils with negligible energy consumption, e.g. portable toilet).

4.2.3 USE STAGE: MODULES B1-B7

See PCR 2019:14 and Section 6.3.5.4 of EN 15804 and the following specific descriptions related to this c-PCR.

If not relevant, module **B1 (Use)** can be excluded (e.g. for a transportable prefabricated building with negligible emissions of its structure during its use).

B2) Maintenance:

- Transport of the prefabricated building to the installation site and its transport back from the installation site to another site (storage or new installation site)

If not relevant, module **B4 (Replacement)** can be excluded (e.g. for a transportable prefabricated building for which replacement is not applicable, since the product is disassembled and the broken components sent to recovery or disposal).

If not relevant, module **B5 (Refurbishment)** can be excluded (e.g. for a transportable prefabricated building for which refurbishment is not expected during its use).

If not relevant, module **B6 (Energy use to operate building integrated technical systems)** can be excluded (e.g. for a transportable prefabricated building that is not connected to the power grid).

If not relevant, module **B7 (Operational water use by building integrated technical systems)** can be excluded (e.g. for a transportable prefabricated building that is not connected to the water supply network).

4.2.4 END-OF-LIFE (EOL) STAGE: MODULES C1-C4

See PCR 2019:14 and Section 6.3.5.5 of EN 15804 and the following specific descriptions related to this c-PCR.

If not relevant, module **C1 (Deconstruction, demolition)** can be excluded (e.g. for a transportable prefabricated building that is manually disassembled, using small utensils with negligible energy consumption, e.g. portable toilet).

4.2.5 BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY: MODULE D

See PCR 2019:14 and Section 6.4.3.3 of EN 15804.

4.2.6 OTHER BOUNDARY SETTING

See PCR 2019:14 and EN 15804.

4.3 SYSTEM DIAGRAM

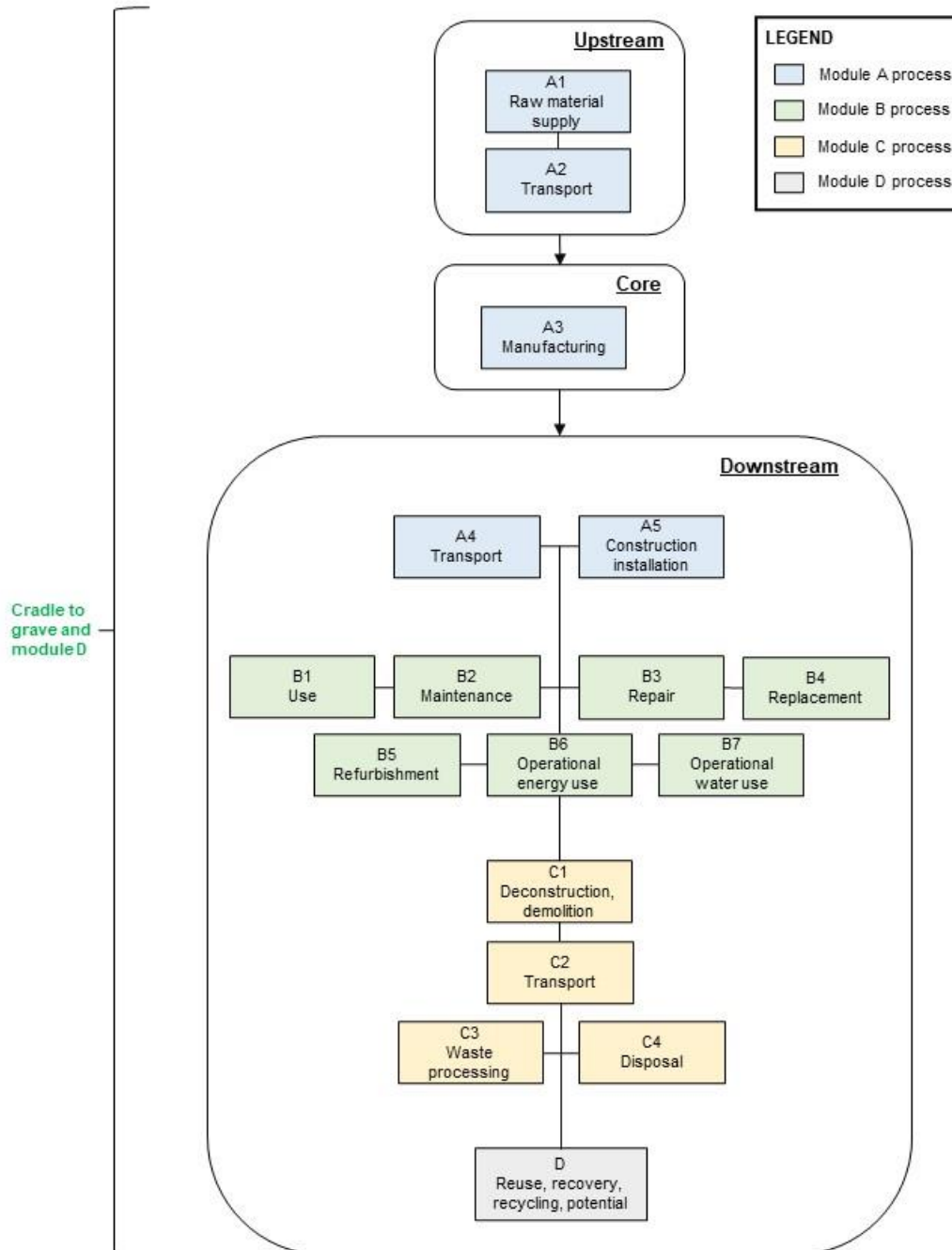


Figure 3 System diagram illustrating the processes that are included in the product system, divided into life-cycle stages and information modules.

4.4 CUT-OFF RULES

To be carried out as in PCR 2019:14, Section 4.4 and EN 15804.

4.5 ALLOCATION RULES

To be carried out as in PCR 2019:14, Section 4.5 and EN 15804.

4.6 DATA QUALITY REQUIREMENTS

To be carried out as in PCR 2019:14, Section 4.6 and EN 15804.

4.7 ENVIRONMENTAL PERFORMANCE INDICATORS

To be carried out as in PCR 2019:14, Section 4.7 and EN 15804.

4.8 OTHER CALCULATION RULES AND SCENARIOS

To be carried out as in PCR 2019:14, Section 4.8 and EN 15804.

4.9 INCLUDING MULTIPLE PRODUCTS IN THE SAME EPD

See PCR 2019:14.

5 CONTENT AND FORMAT OF EPD

To be carried out as in PCR 2019:14, Section 5.

5.1 EPD LANGUAGE

To be carried out as in PCR 2019:14, Section 5.1.

5.2 UNIT AND QUANTITIES

To be carried out as in PCR 2019:14, Section 5.2.

5.3 EPD REPORTING FORMAT

To be carried out as in PCR 2019:14, Section 5.3. Additional requirements for Section 5.3.1 are reported below.

5.3.1 CONTENT DECLARATION

Only if the EPD follows a cradle to grave approach, the composition of the chemical products needed for the use phase (e.g. cleaning agents) of the prefabricated building shall be declared.

An optional detailed list of the chemical product's substances, including CAS number, environmental class and health class, may be included in the product content declaration. It is also recommended to include substances' functions in the product (e.g., pigment, preservative, etc.). An optional detailed content declaration is illustrated in Table 2.

Table 2 An example of an illustrative detailed chemical product content declaration, (example written in italic).

All materials/ components, ^{a)}	Substances	Weight % ^{b)}	CAS number	Environ- mental class	Health class
<i>Surfactant</i>	<i>____(C)</i>	<i>5-10%</i>			
<i>Etc.</i>					
<i>...</i>					
<i>Other, non-allergenic, health-sensitive or environmentally-sensitive substances</i>		<i><1%</i>	<i>—</i>	<i>No</i>	<i>No</i>
Total		100			

a) Substance(s) do not need to be included if they may affect patent or company secrets.

b) Figures can alternative be given in e.g. g/kg.

The product content declaration shall report if the substance is confidential.

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6 LIST OF ABBREVIATIONS

See PCR 2019:14, Section 6.

7 REFERENCES

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 (2019) PCR 2019:14 Construction products, version 1.11.

EPD International (2021) General Programme Instructions of the International EPD® System. Version 4.0, dated 2021-03-29.
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.

Sebach (2019). LCA (Life Cycle Assessment) of Sebach portable toilets TopSan® and TopSan® HN. EPD update, Reference year 2019. Version 02 of 2019-07-05.

8 VERSION HISTORY OF C-PCR

VERSION 2021-11-26

Original version. Upgrade of PCR 2013:01 into a c-PCR to PCR 2019:14.

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