

Addendum for Adapting the International EPD® System PCR for use in North America

Construction Products and Construction Services Product Group Classification: Multiple UN CPC Codes

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1.0 Introduction

This PCR Addendum was developed following ISO 14025¹, clause 6.7.1, and provides guidance for EPDs in North America, based on the existing PCR from the International EPD® System for Construction Products and Construction Services, Version 2.2². This PCR Addendum is a ‘living document’, and is subject to periodic updates. Please note, this PCR Addendum may be superseded, once a North American-specific Product Category Rule for Construction Products and Construction Services is developed.

This PCR Addendum provides the requirements to adapt the International EPD® System PCR for Construction Products and Construction Services for use in North America, and includes guidance for:

- conducting the Life Cycle Assessment (LCA), and
- creation of the Environmental Product Declaration (EPD).

The Guidance in this PCR Addendum is not intended to modify the original PCR. Further guidance and requirements are given in the International EPD® System’s for Construction Products and Services Product Category Rules for Construction Products and Services.

This PCR Addendum was reviewed by LCA expert, Tom Gloria, of Industrial Ecology Consultants, prior to initial publication.

Scope of validity of this PCR Addendum

The PCR applies to all construction products and services for buildings and other construction works. The PCR Addendum provides specific reporting requirements for EPDs in the North American market.

For EPDs in the North American market printed in English, US spelling shall be used. In addition, for all EPDs in North America, a comma shall be used in place of a period for decimal numbers.

2.0 Specific Adaptions to the International EPD® System PCR for Construction Products and Construction Services

The following provides North American specific guidance to the International EPD® System PCR for Construction Products and Construction Services. For ease of use, revisions and additions to the original PCR are summarized below following the same section numbering as in the PCR. Revised text is shown in *italics*.

1. Options when using this document

Page 4, paragraph 1 is revised as follows:

¹ ISO 14025: 2006 Environmental labels and declarations – Type III environmental declarations – Principles and Procedures

² Product Category Rule for Construction Products and Construction Services. Product Group Classification: Multiple UN CPC Codes. International EPD® System. 2012:01. Version 2.2. May 2017, or most current version.

‘This document is the main implementation of the European standard EN 15804:2012+A1:2013, Sustainability of construction works — Environmental product declarations, in the International EPD® System. *Specific requirements to adapt the PCR for use in North America are included. Additional requirements for conformance to ISO 21930:2007, Sustainability in building construction —environmental declaration of building products, are also included as relevant.* Other stand-alone PCRs relevant to construction products and services available at www.environdec.com may or may not be aligned with EN 15804 due to their age, scope of product category or geographical area of applicability.’

2. General Information

2.1 Administrative Information

Page 5, Standards conformance:

ISO 21930:2007 is now listed explicitly

2.2 Scope of PCR

Page 6, paragraph 1 is revised as follows:

‘This document provides Product Category Rules (PCR) for the assessment of the environmental performance of the general product category “Construction products and construction services” and the declaration of this performance by an EPD, compliant with ISO 14025, *ISO 21930:2007* and EN 15804. All efforts have been made to include the “shall” requirements from EN 15804 and *ISO 21930:2007* in this PCR. If any such requirements are missing in the PCR, they shall also be met.’

2.3 Geographical Region

Revised as follows (page 7):

‘This PCR is applicable globally. *Specific requirements are provided for use in North America.*’

3. PCR Review and Background Information

3.4 Reasoning for development of PCR

Revised as follows (page 8):

‘This document was developed to function as the main implementation of EN 15804+A1 in the International EPD® System. *Specific requirements for conformance to ISO 21930 and guidance for use in North America are provided in the PCR Addendum.*’

5. Content Declaration

The following text has been added (page 10):

For construction products and services in North America, materials and substances according to government regulations adversely affecting human health and the environment, in all stages of the life

cycle shall be included in the LCA, independent of the cut-off rules. The use of raw materials in manufacture of the construction products based on the criteria below shall be disclosed, regardless of their amounts:

- a Any material or chemical agent that is required to be disclosed on a product safety data sheet (SDS), material safety data sheet (MSDS), or product safety data sheet (PSDS) as required by OSHA Hazardous Communication Standard³, or other applicable national regulation.
- b Any material or chemical agent emitted to the atmosphere subject to the requirements of US EPA regulation⁴ including Criteria Air Pollutants and Hazardous Air Pollutants⁵ emitted at levels requiring an Air Operating Permit.
- c For products manufactured in the US, any material or chemical agent required to be reported by the US EPA toxic release inventory (TRI)⁶.
- d Any material or chemical agent which requires disclosure according to the US EPA including: EPCRA Section 302 Extremely Hazardous Substances (EHSs)⁷, CERCLA Hazardous Substances⁸, EPCRA Section 313 Toxic Chemicals, CAA 112(r) Regulated Chemicals For Accidental Release Prevention⁹.
- e Any waste material or agent meeting the requirements of a RCRA¹⁰ waste (including chemicals listed as a P-listed; K-listed; and U-listed).
- f Any material or chemical agent which requires disclosure according to California State Proposition 65: Safe Drinking Water and Toxic Enforcement Act of 1986¹¹.
- g Any material or chemical agent which has been identified by the Stockholm Convention on Persistent Organic Pollutants¹².
- h For products manufactured in Canada, any material or chemical agent required to be reported by Canada's National Pollutant Release Inventory (NPRI)¹³.
- i For products manufactured in Mexico, any material or chemical agent required to be reported by Mexico's Ministry of Environment and Natural Resources' (SEMARNAT) Pollutant Release and Transfer Register (Registro de Emisiones y Transferencia de Contaminantes)¹⁴.

6. Units and Quantities

First paragraph revised as follows (page 10):

'The International System of Units (SI units) shall be used. *Imperial System units may also be used in addition to, but not in place of, SI units.* For power and energy, the preferred units are kW and kWh or MJ.

³ 29 CFR Part 1910, Occupational Safety and Health Standards, Toxic and Hazardous Substances, 1910: 1200, Hazard Communication. www.gpo.gov

⁴ US EPA Clean Air Act 1990 <http://www.epa.gov/airquality>

⁵ US EPA criteria and hazardous air pollutants, <http://www.epa.gov/airquality>

⁶ US EPA Toxics Release Inventory (TRI) Program <https://www.epa.gov/toxics-release-inventory-tri-program/tri-listed-chemicals>

⁷ US EPA Emergency Planning and Community Right-to-Know Act 1986. <http://www.epa.gov/oem/content/epcra>

⁸ US EPA Comprehensive Environmental Response, Compensation and Liability Act 1980.

<http://www.epa.gov/superfund/policy/cercla.htm>

⁹ US EPA Clean Air Act Section 112(r): Accidental Release Prevention / Risk Management Plan Rule.

<https://www.epa.gov/rmp/fact-sheet-clean-air-act-section-112r-accidental-release-prevention-risk-management-plan-rule>

¹⁰ US EPA Resource Conservation and Recovery Act 1986 <http://www.epa.gov/lawsregs/rcra.html>

¹¹ <https://oehha.ca.gov/proposition-65/proposition-65-list>

¹² Secretariat of the Stockholm Convention, 11-13 Chemin des Anemones—1219 Chatelaine, Switzerland. <http://www.chm.pops.int>

¹³ Environment Canada. National Pollutant release Inventory (NPRI). <https://www.canada.ca/en/services/environment/pollution-waste-management/national-pollutant-release-inventory.html>

¹⁴ SEMARNAT *Registro de Emisiones y Transferencia de Contaminantes*. <http://www.semarnat.gob.mx/temas/gestion-ambiental/calidad-del-aire/registro-de-emisiones-y-transferencia-de-contaminantes-retc>

A maximum of three significant digits shall be used when reporting LCA results, but reported numbers should always be rounded in accordance with their scientific significance.'

7. General System Boundaries

7.1 Upstream Processes

Page 13, paragraph 2 is revised as follows:

'Generation of electricity, steam and heat from primary energy resources, also including their extraction, refining and transport. This also includes energy needed for raw material supply and energy for manufacturing in core process. *Alternatively, energy for manufacturing in core process may be included in the Manufacturing life cycle phase (A3).'*

7.3 Downstream Processes

Page 13, third list item is revised as follows:

'end-of-life processes related to these products or services processes including transportation following the "polluter pays principle". *The possible disposal channels must be indicated, and the assumptions used for the LCA modeling of end-of-life, must be stated. For disposal of products in the U.S., the US EPA Waste disposal statistics should be used to inform the scenario. For regions outside the US, comparable country-specific data should be used. Any deviations from this guidance shall be justified'*

7.8 Data Quality Rules

The following text has been added (page 21):

'For modeling the electricity use at a manufacturing facility in the United States, the U.S. EPA eGRID electricity supply mixes should be used, with accounting for losses due to transmission and distribution. For regions outside the US, comparable sub-national electricity supply mixes should be used. If this information is not available at a sub-national basis, then an electricity supply mix representative of the country should be used. Any deviations from this guidance shall be justified.'

9. Content of the EPD®

9.1 Declaration of General Information

Page 24, item (k) is revised as follows:

'(k) the declaration of material content of the product shall list as a minimum substances contained in the product that are listed in the "Candidate List of Substances of Very High Concern for authorisation" when their content exceeds the limits for registration with the European Chemicals Agency. *For construction products and services in North America, materials and substances according to government regulations adversely affecting human health and the environment, in all stages of the life cycle shall be included in the LCA, independent of the cut-off rules (see Section 5 of this PCR Addendum).'*

9.1.3 Content Declaration

Page 24, text is revised as follows:

'A content declaration shall be included, see section 4. The content declaration shall at minimum include the identification of substances of very high concern (SVHC) in a publicly available "Candidate List of Substances of Very High Concern for Authorisation of the European Chemicals Agency". This list is the result of a continuous assessment and evaluation scheme, which is part of the REACH regulation. For construction products and services in North America, content declaration shall also include materials and substances according to government regulations adversely affecting human health and the environment, in all stages of the life cycle in the LCA, independent of the cut-off rules (see Section 5 of this PCR Addendum).'

9.1.4 Flow Diagram

Page 25, paragraph 1 is revised as follows:

'The Table 4 below or likewise shall be included in the EPD to describe the scope of the inventory performed in the LCA (see 7.2.1 in EN15804 and 5.5 in ISO 21930). This flow diagram may be complemented or combined with a more detailed process chart or figure typically covering A1 to A3.'

9.2 Environmental Performance-related Information

9.2.3 Potential Environmental Impact

Paragraph 3 (page 34) is revised as follows:

'To insure a North American context, impacts categories calculated using TRACI methodology, as recommended by the US Environment Protection Agency (EPA), shall be reported. However, the impact categories reported in the EPD are not limited to this list and other impact categories may be used as supplements or parallel to the impact categories listed above. In this cases the impact assessment method shall be public available and the reference shall reported in the EPD. In addition, to achieve conformance with EN 15804, CML impacts must also be reported.'

9.2.4 Use of Resources

For conformance to ISO 21930, the following required environmental parameters are amended to the Table (page25):

Parameter	Parameter unit expressed per functional/declared unit
<i>Use of renewable material resources</i>	<i>kg</i>

9.2.6 Release of Dangerous Substances During the Use Stage

Page 35, text is revised as follows:

'Information shall be provided for products release of dangerous substances to indoor air, soil and water during the use stage according to standards on measurement of release of regulated dangerous substances from construction products using harmonised testing methods (e.g. according to the provisions of the respective Technical Committees for European product standards *or North American product standards*, when available). If such standards on measurement of release of regulated dangerous substances are not available, the EPD can lack this information. In the case that the product is subject for classification of emission realise this information and classification result should also be given see B1 under section 7.3.'

9.4 Programme Related Information and Mandatory Statements

Page 36, text is revised as follows:

'A content declaration of the product covering relevant materials and substances. The gross weight of material shall be declared in the EPD at a minimum of 99%. The declaration of material content of the product shall list as a minimum substances contained in the product that are listed in the "Candidate List of Substances of Very High Concern (SVHC) for authorisation" when their content exceeds 0.1 weight-% of the product. SVHC are listed by European Chemicals Agency and includes the Candidate List of SVHC (see http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp). *For construction products and services in North America, the requirements of Section 5 shall also apply independent of the cut-off rules.* An optional detailed list of the 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).'

Page 36, sub bullet (e) is revised as follows:

The EPD shall include a reference to the Program Operator which is registering the EPD, including information for contacting the Program Operator. A logo for the Program Operator registering the EPD may be included.