



Product Category Rule (PCR) Guidance for Building-Related Products and Services

Part B: Plumbing Vessel EPD Requirements

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Product Category Rules Part B: Plumbing Vessels, UL 10010–6

Third Edition, Dated June 7, 2018

Summary of Topics

Version 2.0 of the Product Category Rules Part B: Plumbing Vessels, UL 10010–6 has been issued.

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Publisher:

UL Environment

Tracking of versions

Version	Comments	History
1.0	Regionalization and harmonization by UL Environment with input from a coalition	January 16, 2018
1.1	Updated Sections 7.1 and 7.2 to reflect regional testing methods for formaldehyde and antimicrobial properties of acrylic	January 22, 2018
2.0	Updated to be consistent with UL Environment Part A v3.1	June 7, 2018

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Editor's Note:

This PCR is valid for a period of five (5) years, set to expire in January, 2023.

I. Background Information and Acknowledgements

This PCR was developed to address the product group specific rules for the creation of Environmental Product Declarations (EPD) for plumbing vessels manufactured from materials other than vitreous ceramic.

Other PCRs considered in the original development of this PCR include:

- PCR Guidance-Texts for Building-Related Products and Services, From the range of Environmental Product Declarations of Institute of Construction and Environment e.V. (IBU), *Part B: Requirements on the EPD for Bathtubs and showers made of steel enamel or acrylic*, v1.6, July 2014.

The scope of this PCR differs from the previously published IBU Part B for Plumbing vessels PCR in that it expands geographic consideration from the European market to Brazil, China India, North America, and Southeast Asia according to UL Environment's Part A: Life Cycle Assessment Calculation Rules and Report Requirements v3.1. This PCR assumes a 75 year building service life to be consistent with ASTM E2921 (2013, Section 6.1.1), and ASHRAE 189.1 (2014, Section 9.5.1).

Interested Parties

This Part B has been prepared with input from the following stakeholders:

Trade associations

- Plumbing Manufacturers International (PMI)

Manufacturers/Consultants

- Deca
- Guangzhou Seagull Kitchen and Bath Products Co, Ltd.
- Kohler Co.
- Masco Corporation
- Ramboll Environ
- Xiamen Lota International Company, Ltd.



Governance

Kohler Co. sponsored the creation of this PCR and is a member of Plumbing Manufacturers International (PMI), the major industry association representing a majority of the companies in the plumbing vessels industry. PMI's role is to inform its members of important industry developments and to represent their interests in projects such as the update of a PCR affecting their products. This is important because it effectively demonstrates that a large percentage of the plumbing vessels industry is represented in the effort to create the PCR for plumbing vessel products.

Involvement of Interested Parties

PMI informed their members of the plumbing vessels PCR update through their regularly scheduled association and association committee meetings, newsletters, e-mail messages, and similar types of outreach.

Per the USGBC PCR Guidance, 90% of the industry as represented by regional market volume was included in the update to this PCR with a minimum of three companies.

UL Environment posted an open call for participation in this PCR update in August 2017 via its standards website, social media outlets, and outreach to original committee stakeholders and LCA practitioners.

Update Process

The PCR is valid for a duration of five (5) years from the publication date, at which time it may be revised at the request of industry stakeholders. The PCR may be revised before the five year date if the following occurs in the industry:

- The industry desires an update
- Core governing standards ISO 14040, 14044, 14025, 21930, or EN 15804 are updated with substantial material changes

As part of the 2017 update process, UL Environment communicated with PMI.

Note: When the PCR is updated, the Program Operator shall communicate with the original committee, any new EPD participants, and initiate a new public call for interested parties.

Review

This Part B was reviewed by the following panel:

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II. Scope

This document contains the Product Category Rule (PCR) requirements for plumbing vessel Environmental Product Declarations (EPDs) published in coordination with the EN 15804 and ISO 21930 standards. The requirements for the background Life Cycle Assessment (LCA) project report used to inform the EPD are contained in UL Environment's Part A: Life Cycle Assessment Calculation Rules and Report Requirements. This Part B document, coupled with the Part A, conforms to the EN 15804, ISO 21930, ISO 14025, the Plumbing Manufacturers International PCR Guidance, and the US Green Building Council PCR Guidance sustainability standards for EPD reporting.



This PCR does not address requirements for creating an Industry Average EPD given the industry does not anticipate their creation.

General Guidance

The scope of this PCR applies to the product group “plumbing vessels” and includes all residential and commercially available plumbing vessel products according to the standards or technical approvals shown under Section 6, excluding vitreous china (VC) and fire clay (FC) ceramic sanitary ware products.

Plumbing vessels refers to a broad category of bathtub, shower, basin, and other fixtures that serve as a vessel or pass-through device and do not directly control the flowrate of water. Plumbing vessels include products such as, but not limited to, bathtubs, shower receptors, sinks, toilets, urinals, bidets, and washbasins, and bath and shower enclosures.

This PCR covers vessels made from any material except ceramic or vitreous material. These are covered in a separate PCR for Sanitary Ceramics.

This PCR applies to the entirety of a packaged product intended for individual sale, including but not limited to electronics for automation, accessories, and installation hardware.

Applicable Products

The following UNSPSC code covers the scope of this Part B: 301815xx

Non-Applicable Products

Products that provide the same function but are made from ceramic material are not included. Faucets, flush valves, products that control water flow rate during use, and other non-vessel fittings are not included if they are not included in the product package.

Geography

This PCR applies to products sold and used in the following markets:

- Brazil
- China
- Europe
- India
- Japan
- North America
- Southeast Asia

System Boundary

The system boundary for EPDs created using this PCR is cradle to grave.

The EPD requirements include:

- Requirements of the EN 15804 standard as a core EPD for the purpose of consistency between declarations in covered regions.
- Requirements of the ISO 21930:2017 standard for the purpose of global consistency
- Requirements of the ULE General Program Instructions v 3.0, April 2017
- The 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, available at <http://industries.ul.com/environment/transparency/product-category-rules-pcrs>

III. Industry Average EPD Requirements

The PCR committee acknowledges that given the specificity of the products within the plumbing vessel category, the industry will not pursue the creation of an industry average EPD.



1. General Information

PROGRAM OPERATOR NAME, ADDRESS, LOGO, AND WEBSITE	Program Operator Provided
GENERAL PROGRAM INSTRUCTIONS AND VERSION NUMBER	
LOCATION OF EXPLANATORY MATERIAL	
DECLARATION HOLDER AND ADDRESS	
DECLARATION NUMBER	Program Operator Provided
DECLARED PRODUCT & FUNCTIONAL UNIT	
PRODUCT DEFINITION	
REFERENCE PCR AND VERSION NUMBER	
MARKETS OF APPLICABILITY	
DATE OF ISSUE	Program Operator Provided
PERIOD OF VALIDITY	Program Operator Provided
EPD TYPE	[Company-specific]
EPD SCOPE	[Cradle to gate, cradle to gate with options (specify options), or cradle to grave]
YEAR(S) OF REPORTED MANUFACTURER PRIMARY DATA	
LCA SOFTWARE & VERSION NUMBER	
LCI DATABASE(S) & VERSION NUMBER	
LCIA METHODOLOGY & VERSION NUMBER	
APPLICABLE GREEN BUILDING CERTIFICATION SCHEMA	
The PCR review was conducted by:	Program Operator Provided
	Program Operator Provided
	Program Operator Provided
This declaration was independently verified in accordance with ISO 14025:2006. The UL Environment "Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project Report," v3.1 (March 2018), based on CEN Norm EN 15804 (2012) and ISO 21930:2017, serves as the core PCR, with additional considerations from the USGBC/UL Environment Part A Enhancement (2017) ☐ INTERNAL ☐ EXTERNAL	Program Operator Provided
This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	Program Operator Provided
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	Program Operator Provided
LIMITATIONS Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance of plumbing vessel products using EPD information shall be based on the product's use and impacts at the building level, and therefore EPDs may not be used for comparability purposes when not considering the building use phase as instructed under this PCR. Full conformance with the PCR for plumbing vessels allows EPD comparability only when all stages of a life cycle have been considered, when they comply with all referenced standards, use the same sub-category PCR, and use equivalent scenarios with respect to construction works. However, variations and deviations are possible. Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared.	



2. EPD Content

2.1. DESCRIPTION OF COMPANY/ORGANIZATION

The name of the manufacturing entity(ies) as well as the place(s) of production shall be provided. General information about the manufacturing entity(ies) may be provided, such as the existence of quality systems or environmental management systems, according to ISO 14001 or any other environmental management system in place.

2.2. PRODUCT DESCRIPTION

A narrative description of the product shall be provided that enables clear identification of the product. This description will include:

2.2.1 Product Identification

The declared products shall be identified by brand name(s), by material type(s), by production code(s) (if applicable), and by simple visual representation, which may be by photograph or graphic illustration.

2.2.2 Product Specification

Similar products grouped and reported as an average product in the same EPD satisfying the variation criteria of Part A, Section 5 shall constitute an individual declared product.

The appropriate ASTM or ANSI product specification shall be provided, including additional pertinent physical properties and technical information.

2.2.3 Flow Diagram

A graphical depiction of a flow diagram illustrating main production processes according to the scope of the declaration shall be included

2.2.4 Product Average

The method for creating a company specific individual product/product group EPD shall be described, including the method for determining a weighted average across products based on production volume as described in Part A: Life Cycle Assessment Calculation Rules and Report Requirements, Section 2.5.2.

2.3. APPLICATION

The intended application(s) for the referenced product(s) shall be specified, along with the functional unit and RSL.

2.4. DECLARATION OF METHODOLOGICAL FRAMEWORK

The EPD must be specified as cradle-to-grave with modules A1-C4 included and module D excluded).

For EPDs representing an average of similar products, a description of what the average represents shall be included.

The EPD shall specify whether the product is residential or commercial in use for achieving the declared technical and functional performance and the RSL.

The allocation procedures and cut-off procedure must be described. Include the statement “no known flows are deliberately excluded from this EPD”