



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

Part B: Kitchen and Bath Fixture Fittings and Accessory Products EPD Requirements

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Product Category Rule (PCR) Guidance for Building-Related Products and Services Part B: Kitchen and Bath Fixture Fittings and Accessory Products EPD Requirements, UL 10010–28

First Edition, Dated October 8, 2020

Summary of Topics

The First Version of the Part B: Kitchen and Bath Fixture Fittings and Accessory Products EPD Requirements, UL 10010–28 has been issued.

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Publisher:
UL Environment

Tracking of versions

Version	Comments	History
1.0	Creation of PCR Part B for Kitchen and Bath Fixtures, Faucets, and Accessory Products to conform with ISO 21930:2017 and UL Part A.	October 7, 2020

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This PCR is valid for a period of five (5) years, set to expire in October 7, 2025.

I. Background Information and Acknowledgements

These sub-category Product Category Rules (PCR) were developed to address the product specific rules for the creation of Environmental Product Declarations (EPD) for “Kitchen and Bath Fixture Fittings and Accessory Products” and includes all commercially available kitchen and bath fixture fittings (e.g. faucets, valves, showerheads, and flushometers) and accessory products (e.g. towel bars, hooks, etc.) collectively referenced throughout this PCR as “fixture fitting and accessory products”. When used to self-reference this document, “PCR” refers to “sub-category PCR.”

Relevant documents considered in the development of this PCR include:

- Plumbing Manufacturers International. Product Category Rule Guidance for Kitchen and Bath Fixture Fittings. (February 2018, version 1.0)
- Part A: Life Cycle Assessment Calculation Rules and Report Requirements UL Environment December 2018, version 3.2)
- ISO 21930: 2017 - Sustainability in building construction - Environmental declaration of building products
- EN 15804: 2012-04 - Sustainability of construction works - Environmental Product Declarations - Core rules for the product category of construction product.
- PCR Committee Process & Resources: Part B. US Green Building Council/UL Environment. July 2017.
- Product Category Rules Part B: Commercial Flushometer Valves. Sustainable Minds. July 2018.
- Product Category Rules Part B: Commercial Lavatory Faucets. Sustainable Minds. July 2018.

This PCR assumes a 75 year building service life to be consistent with ASHRAE 189.1 (2014, Section 9.5.1).

Interested Parties

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

- Kohler
- Plumbing Manufacturers International

Governance

This Product Category Rule (“PCR”) for Kitchen and Bath Fixture Fittings and Accessory Products leverages the PCR Guidance document published by Plumbing Manufacturers International (PMI). The manufacturers represented by PMI represent a majority of the companies in their particular sector of the fixture fitting and accessory product industry. The very purpose and function of a trade association 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 fixture fitting industry is represented in the effort to publish this PCR.

In the development of this document, Part B, participants are responsible for ensuring alignment with Part A and conformance with the scoped standards: ISO 21930, EN 15804, and ISO 14025.



Involvement of Interested Parties

UL Environment is responsible for producing this PCR document by establishing an open consultation process that includes the involvement of interested parties (ISO 21930 Section 5.2 and 6.2.1). Reasonable efforts were made to achieve a consensus throughout the process (ISO 14020:2000, 4.9.1, Principle 8 and cited in both ISO 14025 and ISO 21930), demonstrated by an open consultation of interested parties.

PMI informed their members of the PCR creation through e-mail messages and similar types of outreach. UL Environment posted an open call for participation in this PCR update in October 2019 via its standards website, social media outlets, and outreach to original committee stakeholders.

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

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.

Public Consultation

Public consultation was utilized during the PCR review process. The public consultation of the completed draft PCR included a minimum 30-calendar-day period for comments to be submitted to UL Environment. After public comments were submitted, the PCR committee reviewed and developed responses for all comments. All comments from the review panel and public consultation were addressed and satisfactorily resolved by the PCR committee prior to the publication of this PCR.

Review

The review process of this Part B PCR included a review through public consultation from April 23 – May 25, 2020 and a panel review, comprised of the following individuals:

Jim Mellentine
Thrive ESG

Angela Fisher
Aspire Sustainability

Christopher Marozzi
Lixil Water Technology Americas

II. Scope

This document contains the Product Category Rule (PCR) requirements for Kitchen and Bath Fixture Fittings and Accessory Product EPDs published in coordination with the ISO 21930 and EN 15804 standards and the referenced PMI Guidance Document. 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 ISO 21930, EN 15804, and ISO 14025 sustainability standards for EPD reporting in addition to the US Green Building Council PCR Guidance.

This PCR has been created to align with international standards with the intent of allowing manufacturers to create EPDs which are global in scope.



General Guidance

The scope of this PCR applies to the product group “Kitchen and Bath Fixture Fittings and Accessory Products” and includes all residential and commercially available kitchen and bath fixture fittings according to the standards or technical approvals shown under Section 9.

Kitchen and bath fixture fittings refers to a broad category of plumbing ware fixtures and serve as devices to control the flowrate of water through a vessel or pass-through. Kitchen and bath fixture fittings include products such as, but not limited to, faucets, valves, showerheads, and flushometers and those presented in Appendix, Table 15.

Kitchen and bath accessory products refers to a broad category of kitchen and bathroom products including, but not limited to, towel bars, grab bars, and hooks.

This PCR applies to the entirety of a packaged product intended for individual sale, including, but not limited to electronics for automation, accessories, installation hardware and service components (i.e. aerators and filters).

Applicable Products

The Construction Specification Institute (CSI) Masterformat codes that cover the scope of this Part B include:

- 15400 Plumbing Fixtures and Equipment

Corresponding applicable UNSPSC codes include:

- 301817 - Faucets or taps
- 301818 - Faucet and shower heads, jets and parts and accessories
- 311626 - Hooks
- 471317 - Restroom supplies
- 401416 - Valves

Non-Applicable Products

Products excluded from the scope of this PCR are:

- Kitchen and bath accessory products with significant use phase impacts (e.g. soap dispensers)
- Hand dryers (covered by Product Category Rules for Hand Dryers v 1, UL Environment, 2017.)
- Sanitary Ceramics (covered by Product Category Rule (PCR) Guidance for Building-Related Products and Services. Part B: Sanitary Ceramic EPD Requirements, v 2, UL Environment, 2018.)
- Plumbing Vessels - including products of any material except ceramic or vitreous material such as, but not limited to, bathtubs, shower receptors, sinks, toilets, urinals, bidets, and washbasins, and bath and shower enclosures (covered by Product Category Rule (PCR) Guidance for Building-Related Products and Services. Part B: Plumbing Vessel EPD Requirements, v 2, UL Environment, 2018.)

System Boundary

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

The EPD requirements include:

- ISO 21930:2017 standard
- EN 15804 standard (optional)
- ULE General Program Instructions v 2.4, July 2018 (available upon request)
- 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

Industry-Average EPD Scope

The products represented within a single industry-average EPD created using this PCR are limited to the product sub-categories provided in Table 15.

Involvement of Interested Parties

A call for involvement of interested parties in the creation of an industry-average EPD shall be published in at least one industry trade publication. At a minimum, at least three (3) different manufacturing locations from no less than three (3) companies should be involved and represented in an industry-average EPD. The method for determining representativeness shall be justified and described per the requirements listed in Section 2.2.4.1.

Industry-Average EPD Participation

A manufacturer qualifies for participation in an industry-average EPD created using this PCR if the manufacturer provides LCA data used to calculate the EPD average.

Retroactive participation

When determining a manufacturer's participation eligibility, the EPD Program Operator shall follow the rules and recommendations of the primary sponsor(s) of the industry average EPD and participating manufacturers unless the Program Operator has information to the contrary, in which case the Program Operator, LCA practitioner, primary sponsor of the industry average EPD, and manufacturer shall confer in an effort to reach consensus.

Pending all criteria set forth by the primary sponsor of the industry average EPD are met, a manufacturer desiring retroactive inclusion in the industry average EPD shall provide manufacturing and product data information of the same representativeness submitted in the original industry average EPD to the LCA practitioner. The LCA practitioner will then recommend to the Program Operator a determination for inclusion in the industry average on the basis of results falling within a reasonable range for any impact category. The maximum and minimum should be reported in the LCA background report for each impact category based on the highest and lowest impact product or facility within the original industry-wide LCA.

Governance

An industry organization shall inform possible industry participants through association meetings, newsletters, email messages, and similar types of outreach, including public notices in the trade press publications. Confidential business information shall be collected by a third party. Data from the third party shall be provided to the facilitator as aggregated data with no trace to the original source of data.

The development of an industry-average EPD and or update of an EPD should involve a series of meetings and exchanges in which all participants are invited and kept apprised of the developments. Notices of these meetings should be given to all possible participants regardless of their commitment to active involvement. Minutes of meetings, along with meeting notices, should be preserved as documentation of the process and due diligence observed in the creation or renewal of the EPD.

Data Responsibility/Ownership

Trade associations that lead the development of industry-average EPDs may need to collect confidential business information from individual members. This data can include proprietary chemical formulations and processes or other confidential information. In this case, a designated third-party entity such as an LCA practitioner shall be identified as the "industry agent". The industry agent shall be responsible for activities including collection, secure storage and analysis of such data needed for the EPD development, and will preserve the privacy of individual company information while executing these duties.

Per ISO 21930 Section 5.4, the manufacturer, or group of manufacturers, of the construction product is the sole owner of the EPD and is responsible for developing the EPD of the construction product according to the PCR. Only the manufacturer or group of manufacturers is authorized to declare the environmental performance of the construction product using an EPD.



The group of manufacturers responsible for developing an industry-average EPD shall be responsible for, including but not limited to, ensuring industry-average EPD updates are made based on the most recent LCA modeling software version and impact assessment version available.

EPD Updates

EPDs created using this PCR shall expire five (5) years after publication. An update to the existing EPD, or new EPD, may need to be developed prior to the five years or at the scheduled five year review if any of the following have occurred:

- 1) Significant¹ changes in the manufacturing process;
- 2) New manufacturers wish to participate but are disqualified for retroactive participation on the basis of provided data;
- 3) Significant² changes or alterations in raw materials;
- 4) Major regulatory changes that mandate or trigger changes to operational procedures;
- 5) Major technological changes; or
- 6) Major or significant³ supply changes

¹ Here, significant is defined as causing a >10% change in any LCA result

² Ibid

³ Ibid.



1. Content of the EPD

EPD PROGRAM AND PROGRAM OPERATOR NAME, ADDRESS, LOGO, AND WEBSITE	Program Operator Provided
GENERAL PROGRAM INSTRUCTIONS AND VERSION NUMBER	Program Operator Provided
MANUFACTURER NAME AND ADDRESS	
DECLARATION NUMBER	Program Operator Provided
DECLARED PRODUCT & FUNCTIONAL UNIT OR DECLARED UNIT	
REFERENCE PCR AND VERSION NUMBER	
DESCRIPTION OF PRODUCT'S INTENDED APPLICATION AND USE (AS IDENTIFIED WHEN DETERMINING PRODUCT RSL)	
PRODUCT RSL DESCRIPTION (IF APPL.)	
MARKETS OF APPLICABILITY	
DATE OF ISSUE	Program Operator Provided
PERIOD OF VALIDITY	Program Operator Provided
EPD TYPE	[Industry-average or product-specific]
DATASET VARIABILITY	[Industry-average only; mean, median, standard deviation]
EPD SCOPE	[Cradle to gate]
YEAR(S) OF REPORTED MANUFACTURER PRIMARY DATA	
LCA SOFTWARE & VERSION NUMBER	
LCI DATABASE(S) & VERSION NUMBER	
LCIA METHODOLOGY & VERSION NUMBER	
The sub-category 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," v3.2 (December 2018), in conformance with ISO 21930:2017, serves as the core PCR ☐ 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 Kitchen and Bath Fixture Fitting and Accessory 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 energy use phase as instructed under this PCR. Full conformance with this PCR allows EPD comparability only when all stages of a life cycle have been considered. 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. General Information

The comprehensive requirements for EPD content are specified in Part A, Section 7 and ISO 21930:2017, Section 9 (Clause 9).

2.1. DESCRIPTION OF ORGANIZATION

2.1.1. Industry Average EPD

The name of the sponsoring organization as well as participating manufacturers and locations shall be provided.

2.2.1 Product Specific EPD

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:

2.2.2 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.

2.2.3 Product Specification

For fixture fittings, specify the product sub-category according to Table 15. Further differentiation should be provided on the basis of flow rate, special characteristics such as enhanced durability dictated by end-use requirements and conformance to a specific code, regulation or standard (e.g. ADA, EPA WaterSense).

The appropriate product specification shall be provided for all products, including additional pertinent physical properties and technical information.

Related products grouped and reported as an average product in the same EPD satisfying the variation criteria of Part A, Section 2.5.2 shall constitute an individual declared product. For each declared product, list the physical characteristics required in Section 2.6 – in the form that the product would be installed– along with the reference to the test standard for each. When pertinent, provide a description of the fixture fitting or accessory product. Other relevant product specification values may be provided here.

2.2.4 Flow Diagram

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



FIGURE 1.

FIGURE 1. EXAMPLE PRODUCT FLOW DIAGRAM⁴

⁴ This flow diagram is an example and other product types covered in this PCR will differ.

