

38/71 Eagle Street Brisbane City QLD, 4000 Australia



In accordance with ISO 14025 and EN 158042

GLOBAL GREENTAG INTERNATIONAL PTY LTD

ENVIRONMENTAL PRODUCT DECLARATION (EPD) PROGRAM

Type III EPDs

PRODUCT CATEGORY RULES

PRODUCT CATEGORY NAME: Ceramic Tile Sub-PCR

VERSION NUMBER: PCR:CTL:2026:v1

Issue date: 20/07/2026

Valid to: 20/07/2031

PRODUCT CATEGORY RULES

1 INTRODUCTION

Global GreenTag International EPD program establishes a structured approach for creating Environmental Product Declaration (EPDs). It includes comprehensive guidelines and standards to ensure consistency and transparency in EPD development. Product category rules (PCR) aim to guide users developing EPDs according to established standards. The program's General Programme Instructions (GPI) provide the overall administrative rules and fundamental requirements, while Product Category Rules (PCRs) aims at specific, detailed guidance for different product categories. This PCR was developed to comply with provisions of:

- ISO 14040: 2006 standards, Environmental management, Life cycle assessment (LCA)
- ISO 14044: 2006 Environmental management -Life cycle assessment- Requirements and guidelines
- ISO 14025: 2006 Environmental labelling and declarations Type III environmental declarations, Principles and procedures
- ISO 14027: 2017 Environmental labels and declarations; Development of product category rules
- EN 15804:2012+A2:2019 Sustainability of Construction Works; Environmental product category rules; Core rules for the product category of construction products
- ISO 21930: 2007 Building construction: Sustainability in building construction, Environmental declaration of building products
- CEN/TR 15941 Sustainability of construction works – Environmental product declarations – Methodology and Data for Generic Data
- ISO 15686-1:2011 Buildings and constructed assess- service life planning; Part 1: General principles and framework

The purpose of this document is to define clear guidelines for performing the underlying life cycle assessment to ensure comparability between EPDs.

While the European Committee for Standardisation (CEN) standard EN 15804+A2 serves as core PCRs for all product categories, this document contains sub-PCRs that apply to a particular product category. The former is called the master PCR and the latter the sub-PCR document. When new product assessments are needed, a sub-PCR is developed to define new rules for that category. As environmental health legislation is enacted, rules in the master PCR document shall be revised with file name and revisions clearly marked so all such PCRs are identifiable in time.

2 Background Information

Program Operator

Global GreenTag International EPD Program
ABN 44600051554,
Level 38/71 Eagle Street Brisbane City QLD, 4000 Australia
Telephone+ 617 3399 9686,
www.globalgreentag.com, Email: epd@globalgreentag.com.

PRODUCT CATEGORY RULES

General Program Instructions version	General Program Instructions v2.3
PCR Moderator	Delwyn Jones, Principal Scientist, The Evah Institute of Ecquate Pty Ltd.
PCR Committee	Global GreenTag International EPD Program

This sub-PCR, compiled by Delwyn Jones, Principal Scientist, The Evah Institute of Ecquate Pty Ltd. Rules were approved for Global GreenTag^{Cert™} EPD program adoption by Dr Nana Bortsie-Aryee, Program Director, Global GreenTag International Pty Ltd.

3 Scope of PCR

This document provides the Product Category Rules (PCR) for Ceramic Tiles used in the assessment of Environmental Product Declarations (EPDs) and provides additional specifications to the Core Rules for construction products as defined in EN 15804. This document follows the EN15804 requirements. In addition to this specification for preparing an Environmental Product Declaration (EPD), it is also essential to review the general program instructions provided by Global GreenTag International for their EPD program.

This sub-PCR is an EPD developing guide for defined product sets with specified functionality. Users include specifiers, manufacturers and stakeholders. It is valid for all such products and related components according to standards and technical approvals herein.

Product Set Definition

The declared product set includes commercial, residential and or industrial buildings' interior, exterior, dry and or wet area ceramic wall, floor, paving, facade and countertop tile made of:

- Clay, sand, stone, glass, mineral and composites in ceramic forms of
- Fired, glazed, refractory, porcelain, earthenware, stoneware and brick types.

System outcomes and results declared reflect product performance at reference conditions of exposure, strength, wear, temperature and humidity defined by 14025:2006, 6.7. Conformance required is performance to meet International and Australian Standards including:

- ASTM C1145: Defines standard terminology for advanced ceramics.
- AS 3700 Masonry Structures
- AS-3958 Installation of ceramic stone and tiles.
- AS 4586: Classifies slip resistance for new pedestrian surfaces
- AS 4773 Masonry for Small Buildings
- AS ISO 13006 Ceramic Tiles Definitions, Classifications, Characteristics and Marking.
- AS ISO 13007 Ceramic Tiles Grouts and Adhesives.
- ISO 10545-5: Ceramic tiles Part 5: Determination of impact resistance by etc
- ISO 10545-7: Ceramic tiles Part 7: Determination of resistance to surface abrasion etc

PRODUCT CATEGORY RULES

- ISO 14704: Measures the flexural strength of advanced ceramics at room temperature.
- ISO 20501: Tests the Weibull statistics for strength data to ensure reliability under stress
- ISO/TR 17870-2 Ceramic tiles Guidelines for installation Part 2. thin ceramic wall & floor tiles etc.

4 Normative References

Normative references applicable to the EPD are listed in Appendix A and related methodology references are listed above in introduction. International Standards for environmental labelling are:

CEN/TR 15942 - 2014: Sustainability of construction works - Environmental Product Declarations- Communication formats: business to business, CEN/CML LCA methodology, Institute of Environmental Sciences (CML), Faculty of Science, University of Leiden, Netherlands

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

Intergovernmental Panel on Climate Change IPCC 2013, Global Warming Potential 100-year, IPCC Fifth Assessment Report Climate Change.

Intergovernmental Panel on Climate Change. 2021. Assessment Report 6 Climate Change 2021: The Physical Science Basis.

ISO 9001:2008 Quality Management Systems Requirements

ISO 14001:2004 Environmental management systems: Requirements with guidance for use

ISO 14004:2004 EMS: General guidelines on principles, systems & support techniques

ISO 14015:2001 EMS: Environmental assessment of sites & organizations (EASO)

ISO 14020:2000 Environmental labels & declarations — General principles

ISO 14024:2009 Environmental labels & declarations -- Type I Principles & procedures

ISO 14025:2010 Environmental labels and declarations – Type III – environmental declarations - Principles and procedures.

ISO 14031:1999 EM: Environmental performance evaluation: Guidelines

ISO 14040:2006 EM: Life cycle assessment (LCA): Principles & framework, London, BSI, 2006.

ISO 14044:2006 EM: LCA: Requirement & guideline LCI; LCIA Interpretation, London, BSI, 2006.

ISO 14064:2006 EM: Greenhouse Gases: Organisation & Project reporting, Validation & verification

ISO 15392:2008 Sustainability in building construction General principles

PRODUCT CATEGORY RULES

ISO 15686-1:2011 Buildings & constructed assets Service life planning Part 1: General principles

ISO 15686-2:2012 Buildings and constructed assets - Service life planning - Part 2: Service life prediction procedures.

ISO 15686-8:2008 Buildings and constructed assets - Service-life planning - Part 8: Reference service life and service-life estimation.

ISO 21929-1:2011 Sustainability in building construction Sustainability indicators Part 1 Framework

ISO 21930:2007 Building construction: Sustainability, Environmental declaration of building products

ISO 21931-1:2010 Sustainability in building construction Framework for methods of assessment for environmental performance of construction works Part 1: Buildings

ISO 21932:2013 Sustainability in buildings and civil engineering works -- A review of terminology

5 Terms and definitions

As per EN15804 section 3

Environmental Product Declaration (EPD)	Environmental declaration providing quantified environmental data using predetermined parameters and, where relevant, additional environmental information.
Life Cycle Assessment (LCA)	Compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle.
Product Category Rules (PCR)	The set of specific rules, requirements and guidelines for developing Type III environmental declarations for one or more product categories.
Declared Unit	The quantity of a construction product for use as a reference unit in an EPD.
Functional Unit	The quantified performance of a product system for use as reference unit.
General Program Instructions (GPI)	A set of rules and procedures Created by a certain Program Operator. They are used to regulate how EPD's are created and maintained as well as related administrative processes

PRODUCT CATEGORY RULES

Program Operator

An organization that regulates EPDs to ensure they are produced using the relevant rules and standards and publishes them. See ISO 14025 for further information

6 General Aspects

6.1 Objectives of Sub PCR

An Environmental Product Declaration (EPD) as per EN15804 standard provides quantified, harmonized environmental data for construction products or services, including information on health-related emissions during building use. The EPD aims to support the assessment of buildings by identifying those with lower environmental impact. The core PCR ensures:

- Consistent, verifiable data for EPDs based on Life Cycle Assessment (LCA).
- Reliable technical data for evaluating the environmental performance of buildings.
- Accurate data related to health impacts for assessing building performance.
- Contextual comparisons of construction products based on their application.
- Effective communication of environmental information between businesses.
- A foundation for communicating environmental data to consumers, subject to additional requirements.

6.2 Comparability of EPD for construction products

As per EN15804, ISO14025

6.3 Additional Information

Product Category Rules Stakeholder Comments

Ceramic Tile Sub-PCR PCR:CTL:2026:v1

Comments End: Thursday 20th August 2026 (30 days)

The following Product Category Rules (PCR) are made available for a public stakeholder comment for a period of 30 days. This PCR has been developed for Type III Environmental Product Declarations (EPD), according to ISO 14025, EN 15804+A2, and ISO 21930 in order of precedence for Ceramic Tiles Sub-PCR PCR:CTL:2026:v1 in international markets throughout Europe, North America, Australasia and Africa.

PCRs are to ensure consistency, comparability and completeness of methods and parameters in EPDs. They should provide harmonised method requirements for LCA studies, calculation rules, additional product environmental information and instructions on EPD content and format.

PRODUCT CATEGORY RULES

The Global GreenTag^{Cert™} EPD program operator welcomes all stakeholder comments on this PCR to ensure presentation of comparable declarations that best communicate construction product environmental life cycle issues worldwide to serve all key stakeholders and industries.

Specific comments should be emailed to certification16@globalgreentag.com before Thursday 20th August 2026 along with the following information:

Stakeholder's Name:

Organisation:

Position:

Email:

Phone:

General Comments:

7 LCA Calculation Rules

This section provides rules for the LCA methodology used to develop an EPD for product category based on EN15804. The General Program Instruction annex contains the general life cycle methodology rules. This section provides supplementary information beyond the GPI rules.

7.1 Declared/Functional Unit

The Product Category Rules (PCR) will specify the functional/declared unit(s) to be used in the Environmental Product Declaration (EPD), as given in EN15804 section 6.3

Declared Units

The declared product brand kg/m² for in/external floor , wall and countertop tiling applications

Functional Units

The declared unit 60 years use from cradle to grave scope and to beyond the system Boundary.

7.2 System boundary

Life Cycle Assessment (LCA) involves defining product systems as models that outline the key elements of physical systems. The system boundary determines which unit processes are to be included in the system model.

7.2.1 Life cycle stages and information module

A1-A3: Product stage, information modules

The product stage includes:

- A1: raw material extraction and processing, processing of secondary material input (e.g. recycling processes)
- A2: transports to the manufacturer of the product

PRODUCT CATEGORY RULES

- A3: manufacturing of the product

A4-A5: Construction process stage, information modules

The construction process stage includes:

- A4: transport of the product to the building site/ storage/user
- A5: installation of the product

B1-B5: Use stage, information modules related to the building fabric

The use stage, related to the building fabric includes:

- B1: use or application of the installed product
- B2: maintenance
- B3: repair
- B4: replacement
- B5: refurbishment

B6-B7: use stage, information modules related to the operation of the building

The use stage related to the operation of the building includes:

- B6: operational energy use (e.g. operation of heating system and other building related installed services)
- B7: operational water use

C1-C4 End-of-life stage, information modules

The end-of-life stage includes:

- C1: de-construction, demolition
- C2: transport to waste processing
- C3: waste processing for reuse, recovery and/or recycling
- C4: disposal

D: Benefits and loads beyond the system boundary, information module

Module D includes:

D: reuse, recovery and/or recycling potentials, expressed as net impacts and benefits.

PCR shall describe processes of each information module in each life stage

7.2.2 Criteria for exclusion inputs and outputs

As per EN 15804 section 6.3.6

7.3 Cut-off Criteria

Specifications or deviations from the cut-off rules of the General Program Instruction (GPI) may be established here. Any deviations must be clearly justified during the PCR development process.

PRODUCT CATEGORY RULES

7.4 Allocation Rule

The PCR should specify the allocation method for each key process within the product category. Refer GPI for requirements.

7.5 Data Quality requirements

In this section the PCR may specify, supplements, or deviations from the general data and data quality rules as in EN15804 and the GPI.

7.6 Life Cycle Scenarios Development

In this section and the following subsections, the PCR should provide specifications and additions relevant to the general rules in the GPI for the product category. The PCR may also include deviations from the GPI rules, which must be justified during its development. (See section 6.3.9 EN15804)

8 Inventory Analysis

8.1 Data Collection and Calculation Procedures

Follow the guidance from EN ISO 14044:2006, section 6.4 for collecting data and calculation procedures. Consistency in these methods throughout the study is crucial. (Refer GPI for more information).

8.2 Allocation of Input flows and output emissions

The rules for allocation are based on the guidance given in EN ISO 14044:2006. See GPI for more information.

9 Impact Assessment

Environmental impacts are reported using Life Cycle Impact Assessment (LCIA) categories and indicators, applying characterisation factors as specified in ISO 14044.

Environmental Product Declarations (EPDs) must include a core set of predefined impact indicators, but they can also include additional indicators as needed.

Refer GPI for more information.

10 EPD Content

The content of the EPD shall follow the instructions given in EN 15804 section 7. It should meet the requirements of Global GreenTag EPD Program EPD template. Refer General program instructions for more details.

PRODUCT CATEGORY RULES

11 Project Report

The project report provides a detailed and organized summary of the project documentation needed for verifying an Environmental Product Declaration (EPD). It must demonstrate that both the Life Cycle Assessment (LCA) data and any additional information specified in the EPD comply with the standards defined in EN 15804. This report should be provided to the verifier with the requirements on confidentiality stated in EN ISO 14025.

Appendix: A

References

ISO 9001:2015 Quality Management Systems Requirements

ISO 14001:2018 Environmental management systems: Requirements with guidance for use

ISO 14004:2016 EMS: General guidelines on principles, systems & support techniques

ISO 14015:2022 EMS: Environmental assessment of sites & organizations (EASO)

ISO 14020:2022 Environmental labels & declarations — General principles

ISO 14024:2018 Environmental labels & declarations -- Type I Principles & procedures

ISO 14025:2006 Environmental labelling & declarations Type III EPDs Principles & procedures

ISO 14040:2006 EM: Life cycle assessment (LCA): Principles & framework

ISO 14044:2006 EM: LCA: Requirement & guideline for data review: LCI; LCIA, Interpretation results

ISO 21930:2017 Sustainability in building construction: Environmental declaration of building products

ISO 21931-1:2017 Sustainability in building construction Framework for methods of assessment for environmental performance of construction works Part 1: Buildings

ISO 21932:2013 Sustainability in buildings and civil engineering works -- A review of terminology

ISO 15686-1:2011 Buildings and constructed assess- service life planning; Part 1: General principles and framework

ISO 15686-2:2012 Buildings and constructed assess- service life planning; Part 2: prediction

PRODUCT CATEGORY RULES

ISO 15686-8:2008 Buildings and constructed assess- service life planning; Part 8: Reference and estimation

EN 15804: 2012: Sustainability of construction works, Environmental product declarations, European Committee for Standardisation (CEN)

EN 15643-1: 2021: Sustainability of construction works - Sustainability assessment of buildings – Part 1 general framework, CEN

CEN/TR 15941 - 2024: Sustainability of construction works – Environmental Product Declarations- Methodology for the selection of generic data, CEN

CEN/TR 15942 - 2021: Sustainability of construction works - Environmental Product Declarations- Communication formats: business to business, CEN