Global GreenTag CertTM

INTERNATIONAL EPD PROGRAM

Drainage System
Sub-PCR DS01:2024 V1

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ENVIRONMENTAL PRODUCT DECLARATION (EPD) PROGRAM

Type III EPDs

Compliant to

EN 15804 +A2, ISO 14025 and ISO 21930

For construction products

Sub Product Category Rules based on Life Cycle Analysis

Drainage System Sub-PCR DS01:2024 V1

I. Application

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.

II. Authors

This sub-PCR, compiled by Dr Sharmina Begum, The Evah Institute Associate Engineer, Ecquate Pty Ltd. Rules were approved for Global GreenTag^{CertTM} EPD program adoption by Dr Nana Bortsie-Aryee, Program Director, Global GreenTag International Pty Ltd.

III. Terms of Validity

Product Category Drainage System Sub-PCR DS01:2024 V1

PCR issue date	05/08/2024 and
Period of validity to	05/08/2029

IV. Goal

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.

V. Product Set Definition

The declared product set includes for drainage system in dry or wet areas used as:

- straight or irregular shaped metal, concrete, polymer, rubber, ceramic or composites in
- cast, extruded, homogenous, heterogeneous, melded, laminated, fibrous or non-woven forms.

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:

- AS/NZS 1462 Methods of test for plastics pipes and fittings
- AS/NZS 2032:2006 Installation of UPVC pipe systems AS/NZS 3500.1:2021Australian and New Zealand Plumbing and drainage Water services
- AS 5200.458-2008 Plumbing and drainage products, Part 458: Universal plastic-bodied transition couplings
- ASTM D1785-21A Standard for Polyvinyl Chloride (PVC) Plastic Pipe
- BS EN 14654-1:2021 Drain and sewer systems outside buildings. Management and control of activities - General requirements
- BIS 16098:2013 Structured-wall plastics piping systems for non-pressure drainage and sewerage
- ISO 6259-1:2015 Thermoplastics pipes - Determination of tensile properties Part 1: General test method
- ISO 13265:2024 Thermoplastics piping systems for non-pressure underground drainage and sewerage - Joints for buried non-pressure applications - Test method for the long-term sealing performance of joints with elastomeric seals by estimating the sealing pressure
- ISO 4633:2023 Rubber seals — Joint rings for water supply, drainage and sewerage pipelines — Specification for materials

VI. Declared Units

This sub-PCR's declared unit is drainage/kg or m length, internal and or external in any built sector.

VII. Functional Units

The functional unit is 60 years use/declared unit, cradle to grave, and beyond the system boundary.

References

- AS/NZS 3500.1:2021 Australian and New Zealand Plumbing and drainage Water services
- AS1741-1991 Australian Standard Vitrified clay pipes and fittings with flexible joints -Sewer quality
- AS/NZS 1462 Methods of test for plastics pipes and fittings
- ISO 13265:2024 Thermoplastics piping systems for non-pressure underground drainage and sewerage - Joints for buried non-pressure applications - Test method for the long-term sealing performance of joints with elastomeric seals by estimating the sealing pressure
- ISO 6259-1:2015 Thermoplastics pipes - Determination of tensile properties Part 1: General test method

Normative References

CENT/TR 15942 - 2014: Sustainability of construction works - Environmental Product Declarations- Communication formats: business to business, CENCML 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 14001:2015 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 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 14064-1:2018 EM: Greenhouse Gases- Part -1

ISO 15392:2008 Sustainability in building construction General principles

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 21931-1:2022 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

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