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GLOBAL GREENTAG INTERNATIONAL PTY LTD

ENVIRONMENTAL PRODUCT DECLARATION (EPD) PROGRAM

Type III EPDs

PRODUCT CATEGORY RULES

In accordance with ISO 14025

PRODUCT CATEGORY NAME: CLEANING PRODUCTS

VERSION NUMBER:1

Issue date: 16 December 2025

Valid to: 16 December 2030

Product Category Rules – Stakeholder Comments

PCR Title: Cleaning Products
Comment Period Ends: 26 January 2026

The following Product Category Rules (PCR) are now available for public stakeholder comment for a period of 30 days.

This PCR has been developed for Type III Environmental Product Declarations (EPDs) in accordance with ISO 14025, in order of precedence, for Cleaning Products application across international markets in Europe, North America, Australasia, and Africa.

PCRs are designed to ensure consistency, comparability, and completeness in the methods and parameters used in EPDs. They provide harmonised methodological requirements for Life Cycle Assessment (LCA) studies, including calculation rules, additional product environmental information, and detailed instructions on EPD content and format.

The Global GreenTagCert™ EPD Program Operator invites all stakeholders to review and provide feedback on this PCR. Your comments will support the development of transparent and comparable declarations that effectively communicate the environmental performance of construction products worldwide.

Please submit specific comments by 26 January 2026 to **certification@globalgreentag.com,**

including the following details:

- **Stakeholder's Name:**
- **Organisation:**
- **Position:**
- **Email:**
- **Phone:**
- **General Comments:**

PRODUCT CATEGORY RULES

Terms and Definitions

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 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
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

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
- GGTI GPI
- ISO 14020: Environmental labels and declarations — General principles

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

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.
General Program Instructions version	General Program Instructions v2.3
PCR Moderator	Dr. Shadia Moazzem, Global GreenTag International
PCR Committee (Primary Reviewer)	Bambang Riyadi Koproto, Sustainability Analyst & LCA Cosultant

3 Scope of PCR

This document provides the Product Category Rules (PCR) for the environmental impact assessment of cleaning products, which are used to develop Environmental Product Declarations (EPDs). This PCR is applicable to the cleaning products under UN CPC (Central Product Classification) sub classification 35310, 35321, 35322, 35334, 35333 (Central Product Classification (CPC) [1], Version 2.1). These UN CPC subclasses are generally applicable to the cleaning products used in multiple sectors, including industry, households, health care and personal cleaning.

Class	Sub Class	Description
3531	35310	Organic surface-active agents, except soap
3532	35321	Soap; organic surface-active products and preparations for use as soap; paper, wadding, felt and nonwovens, impregnated, coated or covered with soap or detergent
3532	35322	Detergents and washing preparations
3533	35334	Scouring pastes and powders and other scouring preparations
3533	35333	Polishes and creams, for footwear, furniture, floors, coachwork, glass or metal

4 Relevant Studies to Develop PCR:

To support the development of this PCR, a review of relevant literature and existing Product Category Rules (PCRs) was conducted. This included PCR libraries from SCS Global, UL Solutions Product Category Rules (PCRs) | UL Solutions, EPD International, IBU EPD program, PEP Eco passport Program, EPD Norge program, Smart EPD program. The PCR has been developed in accordance with ISO 14025, ISO 14040, ISO 14044, and other applicable standards, ensuring comprehensive coverage of all types of cleaning product categories.

Relevant studies:

Global GreenTag. Global GreenTag. The world's best eco products.

Principles of environmental cleaning: product selection, 2023. Australian Commission on Safety and Quality in Health Care, Principles of environmental cleaning product selection - Fact sheet | Australian Commission on Safety and Quality in Health Care

[1] UNCPC code, unstats.un.org/unsd/classifications/unsdclassifications/cpcv21.pdf

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EU Ecolabel – Cleaning product, https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel/product-groups-and-criteria/cleaning_en

Standard for Cleaning Products for Household Use, 2022. Library - Green Seal
Standard for Cleaning Products for Industrial and Institutional Use, 2022. Library - Green Seal
Cleaning products, Nordic Swan, 2018.
A compilation of life cycle studies for six household detergent product categories in Europe: the basis for product-specific A.I.S.E. Charter Advanced Sustainability Profiles. 2015. https://enveurope.springeropen.com/articles/10.1186/s12302-015-0055-4

Leveraging Life Cycle Assessment to Evaluate Environmental Impacts of Green Cleaning Products. 2015. https://www.sciencedirect.com/science/article/pii/S2212827115001067

Product Category Rules, COSMETICS (SOAP, PERFUME AND TOILET PREPARATIONS), 2025. https://api.environdec.com/api/v1/EPDLibrary/Files/623d9358-6a8a-4262-774c-08dd3ab81816/Data

Product Category Rules, DETERGENTS AND WASHING PREPARATIONS, 2023. https://api.environdec.com/api/v1/EPDLibrary/Files/a0788d74-d2c6-4b76-278d-08db259f9365/Data

Product Category Rules, BASIC CHEMICALS, 2021. https://api.environdec.com/api/v1/EPDLibrary/Files/3ea19b98-f165-4f64-9310-08dd9e2f65fb/Data

5 General Aspects

5.1 Objectives of Core PCR

An Environmental Product Declaration (EPD) as per ISO 14025 standard provides quantified, harmonized environmental data for 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 products based on their application.
- Effective communication of environmental information between businesses.
- A foundation for communicating environmental data to consumers, subject to additional requirements.

5.2 Comparability of EPD

We can compare products environmental impact results from EPDs. The following things needs to be considered during comparison.

Key Points for Comparison from ISO 14025:

- Identical product category definition and description; identical functional unit; identical cut-off rules
- Equivalence of system boundaries, data descriptions and data quality requirements (coverage, precision, completeness, representativeness) [the achieved data quality is also very significant]
- Equivalence of methods for both data collection and allocation of material and energy flows and releases
- Identical selection and calculation rules for environmental impact categories, with identical inventory data categories and impact category indicators
- Equivalence of instructions for producing the data required to create the EPD and on its content and format
- Equivalence of requirements regarding non-LCA information such as product content or additional environmental information
- equivalence of validity period
- If any life cycle stages are left out, they must either have **no significant impact,** or the missing data must be the same within an acceptable range of uncertainty.

5.3 EPD Validity

The validity period of an EPD shall not exceed five years, following which the declaration must be updated and reissued. The EPDs have been certified by Global GreenTag in alignment with their renewal timelines. An expired EPD will be withdrawn and removed from the GreenTag website and any other listing provided by the scheme. Similarly, EPDs may also be withdrawn when yearly administration fees are not paid.

During the period of validity, a change in the underlying data that is sufficient to generate a change of ±10% for any one of the declared parameters of the EPD shall be considered significant and in such an instance the EPD shall be recalculated and verified.

The organization can choose to let EPDs pass the date of validity and yet continue to publish them on the EPD website. This may be because for example products are discontinued but still available on the market or are still in use. However, in such instances, the organization shall not use the out-of-date EPDs in any promotional or marketing context. Exceptions, however, may be granted by the Program Operator, e.g. if the reference PCR is in the process of being updated.

5.4 Geographical Area

This PCR applies to all geographical areas.

5.5 Materials and Substances Declaration

The content declaration in the EPD shall provide transparent and comprehensive information about the composition of the cleaning product and the packaging materials. The content declaration shall include:

- The gross weight of one unit of the product.
- A list of materials and chemical substances contained in the product, declared by weight, covering at least 99% of the product content including information on their environmental and hazardous properties.
- Any substances listed on the 'Candidate List of Substances of Very High Concern for Authorisation' published by the European Chemicals Agency (ECHA) shall be declared when present in concentrations exceeding the relevant regulatory thresholds."
- The weight of the packaging per unit of product, along with the type and function of each packaging component, must be reported in the EPD. If the packaging contains recycled materials, the source of the recycled content—whether pre-consumer or post-consumer—must also be specified in the EPD.

6 Goal and Scope Definition for the LCA of the Product

This section provides rules for the LCA methodology used to develop an EPD for product category based on ISO 14025 and ISO 14040 series. The General Program Instruction annex contains the general life cycle methodology rules. This section provides supplementary information beyond the GPI rules.

6.1 Declared / Functional Unit

The environmental performance results can be declared based on the functional unit or declared unit. But it is recommended and preferable to perform the LCA and declare result based on functional unit where performance-based comparison is relevant or intended which enables more meaningful comparisons between products.

Example of declared unit for cleaning product is 1 kg/Litre/Unit of floor cleaner in standard package'.

Example of functional unit is '1 m² of floor area cleaned by floor cleaner under standard conditions'.

6.2 System Boundary

System boundary for life cycle assessment of cleaning product is divided into three stages covering full life cycle cradle to grave.

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Raw material acquisition (cradle to gate):

- Extraction/production of raw materials, chemicals or auxiliaries used to produce the cleaning product
- Packaging production (used for raw materials/ chemicals/auxiliaries)
- Packaging production (used for finished product)

Production (gate to gate):

- Transport of raw material to the manufacturing site from supplier
- Transport of finished product packaging to the manufacturing site from supplier
- Energy, water and other resources used for manufacturing
- Internal transportation of raw materials in the manufacturing site
- Waste treatment of packaging and the waste generated during manufacturing

Use and end of life (gate to grave):

- Transport of product to the consumer/retailer/distributor
- Energy/ water necessary for the application/ use of the product (e.g. use of water with cleaning product during application, use of electricity if the cleaning product is used via electronic machine, washing machine/ dishwasher/ electronic floor cleaner)
- End of life treatment of packaging
- Waste water treatment

6.3 Criteria for Inclusion / Exclusion and Cut-Off Rules

a. Include all available data
   - All inputs (materials, energy, chemicals) and outputs (waste, emissions) must be included if data is available. If specific data is missing, use conservative assumptions based on average or generic values and clearly explain how you chose them.

b. Exclusion limits (cut-off criteria)
   - If some inputs or outputs need to be excluded due to missing data, the following rules shall be followed:
     - No more than 1% of the total energy use (renewable + non-renewable) is excluded for any individual process.
     - No more than 1% of the total mass input is excluded for any individual process.
     - Across the entire life cycle (cradle to grave), the total of all excluded inputs and outputs should be no more than 5% of the total energy use and mass.

c. Don’t exclude harmful or high-impact flows
   - Include any flows (chemicals, emissions, etc.) that could have a significant environmental impact, such as air, water, or soil pollution.

d. If exact data isn’t available, use cautious assumptions and document your reasoning based on expert judgment.

6.4 Allocation Rule

Cleaning product manufacturing and life cycle stages often involve co-production (e.g., shared chemical synthesis lines), as well as reuse and recycling of materials and packaging. In such cases, allocation of environmental inputs and outputs can become complex. Allocation shall be avoided wherever possible, for example by dividing processes into sub-processes or expanding the system boundary.

Where allocation is unavoidable, it shall be done in a transparent, consistent, and justifiable manner. The inputs and outputs shall be allocated to different products based on clearly stated procedures, which must be fully documented and explained in the LCA report.

The sum of the allocated inputs and outputs of a unit process shall be equal to the total inputs and outputs prior to allocation. If more than one allocation method is technically applicable, a sensitivity analysis shall be conducted to show how different methods might affect the results.

Allocation procedure shall follow the procedure defined as in ISO 14044 section 4.3.4.

7 Life Cycle Inventory

7.1 Data Quality Requirements

The quality of data (generic and specific data used to develop the EPD) used in the Life Cycle Assessment (LCA) shall be clearly addressed in the project report. Data quality shall comply with the requirements outlined in:

- ISO 14025
- ISO 14040/14044
- EN 15941
- Global GreenTag's General Programme Instructions (GPI)

Data quality assessment shall consider the following aspects including the specific requirement stated on GPI:

a) **Time-related coverage:**
The age of the data and the minimum period over which data is collected must be appropriate for the intended use and reflect current or recent conditions.

b) **Geographical coverage:**
The data shall be representative of the geographical area relevant to the life cycle of the cleaning product, including production, use, and end-of-life stages.

c) **Technology coverage:**
The data must correspond to the specific technologies or technology mix used in the processes being modelled.

d) **Precision:**
Precision refers to the degree of variability in the data, which should be quantified where possible (e.g. through variance or standard deviation).

e) **Completeness:**
Completeness reflects the percentage of relevant flows (mass, energy, emissions, etc.) that are measured or estimated within the system boundaries.

f) **Representativeness:**
A qualitative assessment of how well the data set reflects the actual conditions of the studied system, considering time-related, geographical, and technological aspects.

g) **Consistency:**
The study shall apply a uniform methodology across all data sets and life cycle stages to ensure internal consistency of the analysis.

h) **Reproducibility:**
The data and methods should be described in sufficient detail to allow an independent practitioner to replicate the results.

i) **Sources of data:**
All data sources must be identified and their origin (e.g. measured, calculated, or estimated; primary or secondary) shall be clearly documented.

j) **Uncertainty:**
The study shall assess the uncertainty related to data quality, models, and assumptions, and explain how it might affect the LCA results.

7.2 SELECTION OF DATA

Selection of data shall be consistent with the goal and scope of the EPD. Two types of data are used to developed EPD specific data and generic data. Specific data is the data representative of a product, product group, derived from specific production processes or average data derived from specific production processes. Generic data is publicly available and may be average or specific, including literature data, data from LCA database. Normally generic data is used to production of raw materials, use stage and end of life stage.

As a general rule, specific data from actual production processes shall be the first preference when calculating an EPD for a cleaning product. If specific data is not available for all processes, representative average or generic data may be used, following these guidelines:

- For EPDs representing average cleaning products, data shall be based on representative average values from the production of the products included in the EPD scope.
- For EPDs representing specific products, specific primary data shall be used for all processes over which the manufacturer has direct control. Generic or average data may be used for processes outside the manufacturer's control (e.g., raw material extraction, electricity generation, chemical production).
- Generic data may be used for some end-of-life processes such as:
    - Product distribution
    - Consumer use (e.g., rinsing or dilution in water)
    - End-of-life treatment (e.g. packaging waste incineration or recycling)
- For scenarios relating to the use and end-of-life stages, the data shall be:
    - Specific (based on actual measurements), or

- Specific average (based on a representative average of multiple sources), especially when average products are declared.

- All generic data used in the LCA must be documented in the project report and include information about Technological, Geographical representativeness and Time-related representativeness.

8 Environmental Performance Indicators

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.

Core environmental impact indicators

Impact category	Indicator	Unit (expressed per functional unit or per declared unit)
Climate change - total	Global Warming Potential total (GWP-total)	kg CO2 eq.
Climate change - fossil	Global Warming Potential fossil fuels (GWP-fossil)	kg CO2 eq.
Climate change - biogenic	Global Warming Potential biogenic (GWP-biogenic)	kg CO2 eq.
Climate change - land use and land use change	Global Warming Potential land use and land use change (GWP-luluc)	kg CO2 eq.
Ozone Depletion	Depletion potential of the stratospheric ozone layer (ODP)	kg CFC 11 eq.
Acidification	Acidification potential, Accumulated Exceedance (AP)	mol H+ eq.
Eutrophication aquatic freshwater	Eutrophication potential, fraction of nutrients reaching freshwater and compartment (EP -freshwater)	kg PO4 eq.
Eutrophication aquatic marine	Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine)	kg N eq.
Eutrophication terrestrial	Eutrophication potential, Accumulated Exceedance	mol N eq.
Photochemical ozone formation	Formation potential of tropospheric ozone (POCP)	kg NMVOC eq.
Depletion of abiotic resources -	Abiotic depletion potential for nonfossil resources (ADPminerals & metals)	kg Sb eq.

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Depletion of abiotic resources -	Abiotic depletion for fossil resources potential (ADP-fossil)	MJ, net calorific value
Water use	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	m3 world eq. deprived

Additional environmental impact indicators

Impact Category	Indicator	Unit (expressed per functional unit or per declared unit)
Particulate Matter emissions	Potential incidence of disease due to PM emissions (PM)	Disease incidence
Ionizing radiation, human health	Potential Human exposure efficiency relative to U235 (IRP)	kBq U235 eq.
Eco-toxicity (freshwater)	Potential Comparative Toxic Unit for ecosystems (ETP-fw)	CTUe
Human toxicity, cancer effects	Potential Comparative Toxic Unit for humans (HTP-c)	CTUh
Human toxicity, non-cancer effects	Potential Comparative Toxic Unit for humans (HTP-nc)	CTUh
Land use related impacts/ Soil quality	Potential soil quality index (SQP)	dimensionless

Parameters describing resource use

Parameter	Unit (expressed per functional unit or per declared unit)
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ, net calorific value
Use of renewable primary energy resources used as raw materials	MJ, net calorific value
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ, net calorific value
Use of non-renewable primary energy resources used as raw materials	MJ, net calorific value
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value
Use of secondary material	kg
Use of renewable secondary fuels	MJ, net calorific value
Use of non-renewable secondary fuels	MJ, net calorific value

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Net use of fresh water	m^3

Environmental information describing waste categories

Parameter	Unit (expressed per functional unit or per declared unit)
Hazardous waste disposed	kg
Non-hazardous waste disposed	kg
Radioactive waste disposed	kg

Environmental information describing output flows

Indicator	Unit (expressed per functional unit or per declared unit)
Components for re-use	kg
Materials for recycling	kg
Materials for energy recovery	kg
Exported energy	MJ per energy carrier

9 Multiple Product EPD, Sector EPD and Duplicate/ Like product EPD:

Refer to the GGTI General program instructions for more requirements.

10 EPD Content

The content of the EPD shall meet the requirements of Global GreenTag EPD Program EPD template. The following information must be included in the EPD's as per ISO 14025:

a. Identification and description of the organization making the declaration
b. Description of the product
c. Product identification
d. Name of the program, the program operator's address, and, if applicable, the program logo and website
e. PCR identification
f. Date of publication and period of validity
g. Data from Life Cycle Assessment (LCA), Life Cycle Inventory (LCI), or information modules
h. Additional environmental information
i. Content declaration covering materials and substances
j. Information on stages not considered if the declaration is not based on an LCA covering all life cycle stages
k. A statement indicating that environmental declarations from different programs may not be directly comparable
l. Information on where explanatory materials may be obtained.

Refer GGTI General Program Instructions for more details.

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. 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 14027:2017 Environmental labels and declarations — Development of product category rules

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

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