PRODUCT CATEGORY RULES (PCR)
DATE 2021-06-21

RUBBER ARTICLES FOR FOOTWEAR

PRODUCT CATEGORY CLASSIFICATION: UN CPC 3627

PCR 2021:04
VERSION 1.0, 2021-06-21

VALID UNTIL 2025-06-21

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1 INTRODUCTION

This document constitutes Product Category Rules (PCR) developed in the framework of the International EPD® System: a programme for type III environmental declarations[1] according to ISO 14025:2006, ISO 14040:2006, ISO 14044:2006, and product-specific standards such as EN 15804 and ISO 21930 for construction products. Environmental Product Declarations (EPD) are voluntary documents for a company or organisation to present transparent, consistent and verifiable information about the environmental performance of their products (goods or services).

The rules for the overall administration and operation of the programme are the General Programme Instructions (GPI), publicly available at www.environdec.com. A PCR complements the GPI and the normative standards by providing specific rules, requirements and guidelines for developing an EPD for one or more specific product categories (see Figure 1). A PCR should enable different practitioners using the PCR to generate consistent results when assessing products of the same product category.

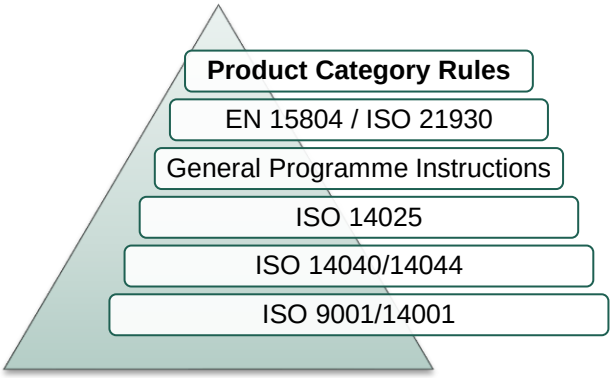

Figure 1 The hierarchy between PCRs, standards and other documents. EN 15804 and ISO 21930 are normative standards for construction products only.

Within the present PCR, the following terminology is adopted:

- The term “shall” is used to indicate what is obligatory, i.e. a requirement.
- The term “should” is used to indicate a recommendation, rather than a requirement. Any deviation from a “should” requirement shall be justified in the PCR development process.
- The terms “may” or “can” is used to indicate an option that is permissible.

For definitions of further terms used in the document, see the normative standards.

A PCR is valid for a pre-determined period of time to ensure that it is updated at regular intervals. The latest version of the PCR is available at www.environdec.com. Stakeholder feedback on PCRs is very much encouraged. Any comments on this PCR may be sent directly to the PCR Moderator and/or the Secretariat during its development or during its period of validity.

Any references to this document shall include the PCR registration number, name and version.

The programme operator maintains the copyright of the document to ensure that it is possible to publish, update, and make it available to all organisations to develop and register EPDs. Stakeholders participating in PCR development should be acknowledged in the final document and on the website.

[1] Type III environmental declarations in the International EPD® System are referred to as EPDs, Environmental Product Declarations.

2 GENERAL INFORMATION

2.1 ADMINISTRATIVE INFORMATION

Name:	Rubber articles for footwear
Registration number and version:	PCR 2021:04, Version 1.0
Programme:	The International EPD® System
Programme operator:	EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden. Website: www.environdec.com E-mail: info@environdec.com
PCR Moderator:	Carlo Brondi, STIIMA (Institute of Intelligent Industrial Technologies and Systems for Advanced Manufacturing)
PCR Committee:	STIIMA, Unione Industriale Varese, Frasson, Eurosuole, Vibram, Università di Siena, Politecnico di Milano, UNIC
Date of publication and last revision:	2021-06-21 (Version 1.0)
Valid until:	2025-06-21
Schedule for renewal:	A PCR is valid for a pre-determined time period to ensure that it is updated at regular intervals. When the PCR is about to expire, the PCR Moderator shall initiate a discussion with the Secretariat how to proceed with updating the PCR and renewing its validity. A PCR may be also be updated without prolonging its period of validity, provided significant and well-justified proposals for changes or amendments are presented. See www.environdec.com for the latest version of the PCR. When there has been an update of the PCR, the new version should be used to develop EPDs. The old version may however be used for 90 days after the publication date of the new version, as long as the old version has not expired.
Standards conformance:	▪ General Programme Instructions of the International EPD® System, version 4.0, based on ISO 14025 and ISO 14040/14044 ▪ PCR Basic Module, CPC Division 36 Rubber and plastics products, version 3.02 (CPC 36).
PCR language(s):	At the time of publication, this PCR was available in English. In case of translated versions, the English version takes precedence in case of any discrepancies.

2.2 SCOPE OF PCR

2.2.1 PRODUCT CATEGORY DEFINITION AND DESCRIPTION

This document provides Product Category Rules (PCR) for the assessment of the environmental performance of rubber articles for footwear and the declaration of this performance by an EPD. The product category corresponds to UN CPC 3627 Articles of vulcanized Rubber n.e.c.: hard rubber, articles of hard rubber.

This product category covers the product group of rubber articles that are used in the footwear manufacturing. Such articles are generally made in different compounds and then vulcanized through heating and pressing. Such articles are used to produce outsole and midsole within footwear and can be added separately after upsole assembly (footwear assembly) or footwear manufacturing (footwear modification or maintenance). Different sole features depend on specific functional requirements for rubber products in the reference market.

This PCR covers common soles for footwear manufacturing as well as rubber soles for footwear maintenance having the same function.

Within the product category CPC 3627, this PCR exclude all articles not having the same functional unit, such as:

- HS 4014 - Hygienic or pharmaceutical articles, of vulcanised rubber other than hard rubber, with or without fittings of hard rubber not used for footwear soles
- Articles belonging to categories HS 4016 and 4017 that are not used for the walking support in the footwear

The UN CPC hierarchy is represented as follow

UN CPC CODE	Description
3	Other transportable goods, except metal products, machinery and equipment
36	Rubber and plastics products
362	Other rubber products
3627	Articles of vulcanized rubber n.e.c.; hard rubber; articles of hard rubber

2.2.2 GEOGRAPHICAL SCOPE

This PCR may be used globally.

2.2.3 EPD VALIDITY

An EPD based on this PCR shall be valid for a 5-year period starting from the date of the verification report (“approval date”), or until the EPD has been de-registered from the International EPD® System.

An EPD shall be updated and re-verified during its validity if changes in technology or other circumstances have led to:

- an increase of 10% or more of any of the declared indicators of environmental impact,
- errors in the declared information, or
- significant changes to the declared product information, content declaration, or additional environmental, social or economic information.

If such changes have occurred, but the EPD is not updated, the EPD owner shall contact the Secretariat to de-register the EPD.

3 PCR REVIEW AND BACKGROUND INFORMATION

This PCR was developed in accordance with the PCR development process described in the GPI of the International EPD® System, including open consultation and review.

3.1 OPEN CONSULTATION

3.1.1 VERSION 1.0

This PCR was available for open consultation from 2020-04-07 until 2020-06-07, during which any stakeholder was able to provide comments by contacting the PCR Moderator and/or the Secretariat.

Stakeholders were invited via e-mail or other means to take part in the open consultation and were encouraged to forward the invitation to other relevant stakeholders. No stakeholders provided comments during the open consultation.

3.2 PCR REVIEW

3.2.1 VERSION 1.0

PCR review panel:	The Technical Committee of the International EPD® System. A full list of members is available at www.environdec.com. The review panel may be contacted via info@environdec.com. Members of the Technical Committee were requested to state any potential conflict of interest with the PCR Committee, and if there were conflicts of interest they were excused from the review.
Chair of the PCR review:	Gorka Benito
Review dates:	2021-02-03 until 2021-03-09

3.3 EXISTING PCRS FOR THE PRODUCT CATEGORY

As part of the development of this PCR, existing PCRs and other internationally standardized methods that could potentially act as PCRs were considered to avoid unnecessary overlaps in scope and to ensure harmonisation with established methods of relevance for the product category. The existence of such documents was checked among the following EPD programmes and international standardisation bodies:

- International EPD® System. www.environdec.com.

No specific PCR covering the same functional unit has been identified. However, the following existing PCRs were identified with possible overlapping scopes. Table 1 lists the identified PCRs and other standardized methods.

Table 1 Existing PCRs and other internationally standardized methods that were considered to avoid overlap in scope and to ensure harmonisation with established methods.

NAME OF PCR/STANDARD	PROGRAMME/ STANDARDISATION BODY	REGISTRATION NUMBER, VERSION NUMBER/DATE OF PUBLICATION	SCOPE
leather footwear – cpc 2933	EPD International	2013:15, version 2.11	Assessment of the environmental performance of footwear with uppers of leather other than sports footwear, footwear incorporating a protective metal toe-cap and miscellaneous special footwear and the declaration of this performance by an EPD. Definition of criteria for duration.
finished bovine leather product group – cpc 2912	EPD International	2011:13, version 2.1	Assessment of the environmental performance of "Finished bovine leather" that can be used as main element for the upper in the footwear.

3.4 REASONING FOR DEVELOPMENT OF PCR

This PCR was developed in order to enable publication of Environmental Product Declarations (EPD) for this product category based on ISO 14025, ISO 14040/14044 and other relevant standards to be used in different applications and target audiences.

This PCR intends to introduce harmonization within components for footwear having different functional requirements in order to proficiently be integrated within existing PCR and footwear EPD.

Soles have specific requirements that could be not fully addressed by existing PCRs. Target audience are the producers of this specific item, the footwear companies and final users.

3.5 UNDERLYING STUDIES USED FOR PCR DEVELOPMENT

The methodological choices made during the development of this PCR (declared/functional unit, system boundary, allocation methods, impact categories, data quality rules, etc.) were primarily based on the following underlying studies:

- Muñoz ZR, 2013. Water, energy and carbon footprints of a pair of leather shoes. Master's thesis, KTH Royal Institute of Technology.
- Cheah et al., 2013. Manufacturing-focused emissions reductions in footwear production. Journal of Cleaner Production (44).
- Milà i Canals et al., 1998. Application of Life Cycle Assessment to Footwear. International Journal of LCA 3 (4).
- W. L. Gore & Associates GmbH, 2014. LCA of a pair of GORE-TEX ® branded waterproof and breathable hiking boots.
- Gottfridsson M, Zhang Y, 2015. Environmental impacts of shoe consumption: Combining product flow analysis with an LCA model for Sweden. Master's thesis, Chalmers university of technology
- Peiris, 2015. Comparative Analysis of Life Cycle Assessment (LCA) on Levis Jeans and Nike Shoes. National University of Singapore.
- Brugnoli F, Kráľ I, 2012. Life Cycle Assessment, Carbon Footprint in Leather Processing (Review of methodologies and recommendations for harmonization). Eighteenth session of the Leather and Leather Products Industry Panel, Shanghai, China.
- Albers et al., 2008. Analyzing the Environmental Impacts of Simple Shoes: A Life Cycle Assessment of the Supply Chain and Evaluation of End-of-Life Management Options. University of Santa Barbara.
- Guţă et al., 2016. Applications of Life Cycle Assessment to Leather industry – an overview and a case study. ICAMS 2016, INCDTP - Division Leather and Footwear Research Institute (ICPI).
- Luca et al., 2018. Life Cycle Assessment of two alternative end-of-life scenarios for leather safety shoes. ICAMS 2018.
- Mansell G, 2019. Life Cycle Assessment of AERA Footwear.

- Van Rensburg et al., 2020. Life cycle and End-of-Life management options in the footwear industry: A review. Waste Management & Research.
- Ashton EG, 2018. Analysis of footwear development from the design perspective: Reduction in solid waste generation. Strategic Design Research Journal.
- Maciel et al., 2017. Comparative Life Cycle Assessment among Three Polyurethane - Adhesive Technologies for the Footwear Industry. ACS Sustainable Chem. Eng. 5.

4 GOAL AND SCOPE, LIFE CYCLE INVENTORY AND LIFE CYCLE IMPACT ASSESSMENT

The goal of this section is to provide specific rules, requirements and guidelines for developing an EPD for the product category as defined in Section 2.2.1.

4.1 FUNCTIONAL UNIT

The functional unit is a pair of soles (Eurosize 42) for footwear, providing the protection of the sole of the foot, the support to walking in the footwear for a reference service life (RSL) with specific further properties to be declared (e.g. a certain slip resistance according to test ISO 20345:2012, see appendix for functional properties of the footwear) and maintaining the footwear integrity according to the standard ISO 4649:2010 and ISO 4674-1, (see Section 4.7.3.3). The reference flow is a pair of soles (Eurosize 42) for footwear.

The functional unit shall be stated in the EPD. The environmental impact shall be given according to the reference flow per functional unit. A description of the function of the product should be included in the EPD, if relevant.

4.2 TECHNICAL SPECIFICATION, LIFESPAN AND REFERENCE SERVICE LIFE (RSL)

RSL shall be defined through the equation (1).

$$RSL = 0.00012 N_{sy} \times A_{ind}{}^{-0.641} \quad (1)$$

Where:

- RSL is the average reference service life of a sole expressed in years under the hypothesis of continuous use within a year
- A_{ind} is the abrasion index of the sole expressed as mm^3 according to the standard ISO, (2010), ISO 4649:2010(E), Rubber, vulcanized or thermoplastic - Determination of abrasion resistance using a rotating cylindrical drum device
- 0.00012 is a normalization coefficient and is expressed as $(year^2 * mm^3)/step$
- N_{sy} is the number of steps within a year (step/year). E.g. 750.000 step/year are referred to trekking use of the sole while, 225.000 step/year are referred to casual use of the sole for city walk.
- C is a coefficient (C) which consider the average yearly steps under the hypothesis of full daily use of the sole

4.3 SYSTEM BOUNDARY

The International EPD® System uses an approach where all attributional processes from “cradle to grave” should be included using the principle of “limited loss of information at the final product”. This is especially important in the case of business-to-consumer communication.

The scope of this PCR and EPDs based on it is cradle-to-gate with options since the rubber articles are commonly provided to other manufacturing facilities. However, the scope can be optionally extended to the end-of-life (EOL) stage by dealing with footwear sole as a separate item from the other footwear components. Also, assembly of the sole within footwear, distribution to final customer as well as sole maintenance during its use may optionally be included within the system boundaries.

If the system boundaries are limited to cradle-to-gate, the EPD shall not be used for business-to-consumer communication.

4.3.1 LIFE-CYCLE STAGES

For the purpose of different data quality rules and for the presentation of results, the life cycle of the product in this PCR is divided into three life cycle stages:

- Upstream processes (from cradle-to-gate)
- Core processes (from gate-to-gate)
- Downstream processes (from gate-to-gate or gate-to-grave)

In the EPD, the environmental performance associated with each of the three life-cycle stages above shall be reported separately and in aggregated form. The processes included in the scope of the PCR and belonging to each life cycle stage are described in Sections 4.3.1.1–4.3.1.3.

4.3.1.1. Upstream processes

All relevant unit processes along the upstream supply chain shall be included, for example:

- Extraction of resources
- Transport of resources to refinement
- Refinement of resources
- Production of electricity and fuels used in the upstream module
- Production of auxiliary products used such as detergents for cleaning, etc.
- Production of chemical compounds
- Manufacturing of primary and secondary packaging

Upstream processes not listed may also be included. All elementary flows at resource extraction shall be included, except for the flows that fall under the general cut-off rule in Section 4.5.

4.3.1.2. Core processes

All relevant unit processes along the upstream supply chain shall be included, for example:

- External transportation to the core processes
- Manufacturing of the sole
- Storage
- Maintenance (e.g. of the machines)
- Waste treatment of waste generated during manufacturing;
- Production of electricity and fuels used in the core module

Manufacturing processes not listed may also be included. Manufacturing of a minimum of 99% of the total weight of the declared product including packaging shall be included.

The following processes shall not be included:

- Manufacturing of production equipment, buildings and other capital goods.
- Business travel of personnel.
- Travel to and from work by personnel.
- Research and development activities.

4.3.1.3. Downstream processes

Mandatory downstream processes include transport to final footwear manufacturer or intermediate supplier since the sole is an intermediary item to be further assembled within footwear. The PCR is thus set up in order to provide environmental information to the subsequent footwear life cycle. Downstream processes may also include processes of sole assembly, distribution to final customer and sole maintenance that are related to its implementation within footwear as well as end-of-life processes.

The following attributional processes are part of the product system and classified as downstream processes:

- Transportation from preparation to an average retailer/distribution platform (mandatory)
- End-of-life processes of packaging waste (mandatory)
- Assembly in a footwear facility (including additional consumptions and emission necessary for its assembly within the footwear) (optional)

- Distribution to final customer
- Use of the product, specifically sole maintenance (including additional material consumption and emissions necessary for its maintenance within the footwear) (optional)
- End-of-life processes of any wasted part of the product within footwear (optional)

In some case, the sole can be directly manufactured within the footwear facility. In such case, the core process and the downstream process do not require intermediate transport for manufacturing.

4.3.2 OTHER BOUNDARY SETTING

4.3.2.1. Boundary towards nature

Boundaries to nature are defined as where flows of material and energy resources leaves nature and enters the technical system, i.e. the part of the environment that is made or modified by humans. Emissions to air, water and soil cross the system boundary when they are emitted from the product system

4.3.2.2. Boundary towards other technical systems

Boundaries towards other technical systems define the flow of materials and components to/from the product system under study and from/to other product systems. If there is an inflow of recycled material to the product system in the production/manufacturing stage, the transport from the scrapyard/collection site to the recycling plant, the recycling process, and the transportation from the recycling plant to the site where the material is being used shall be included. If there is an outflow of material or component to recycling, the transportation of the material to the scrapyard/collection site shall be included. The material or component going to recycling is then an outflow from the product system.

See Section **Fel! Hittar inte referenskälla.** for further guidance.

4.3.2.3. Temporal boundary

The temporal boundary defines the time period for which the life cycle inventory data is recorded, e.g. for how long emissions from waste deposits are accounted. As default, the time period over which inputs to and outputs from the product system is accounted for shall be 100 years from the year that the LCA model best represents, considering the representativeness of the inventory data. This year shall, as far as possible, represent the year of the publication of the EPD.

4.3.2.4. Geographical boundary

The geographical boundary defines the geographical coverage of the LCA. This shall reflect the physical reality of the product under study, accounting for the representativeness of technology, input materials and input energy.

4.4 SYSTEM DIAGRAM

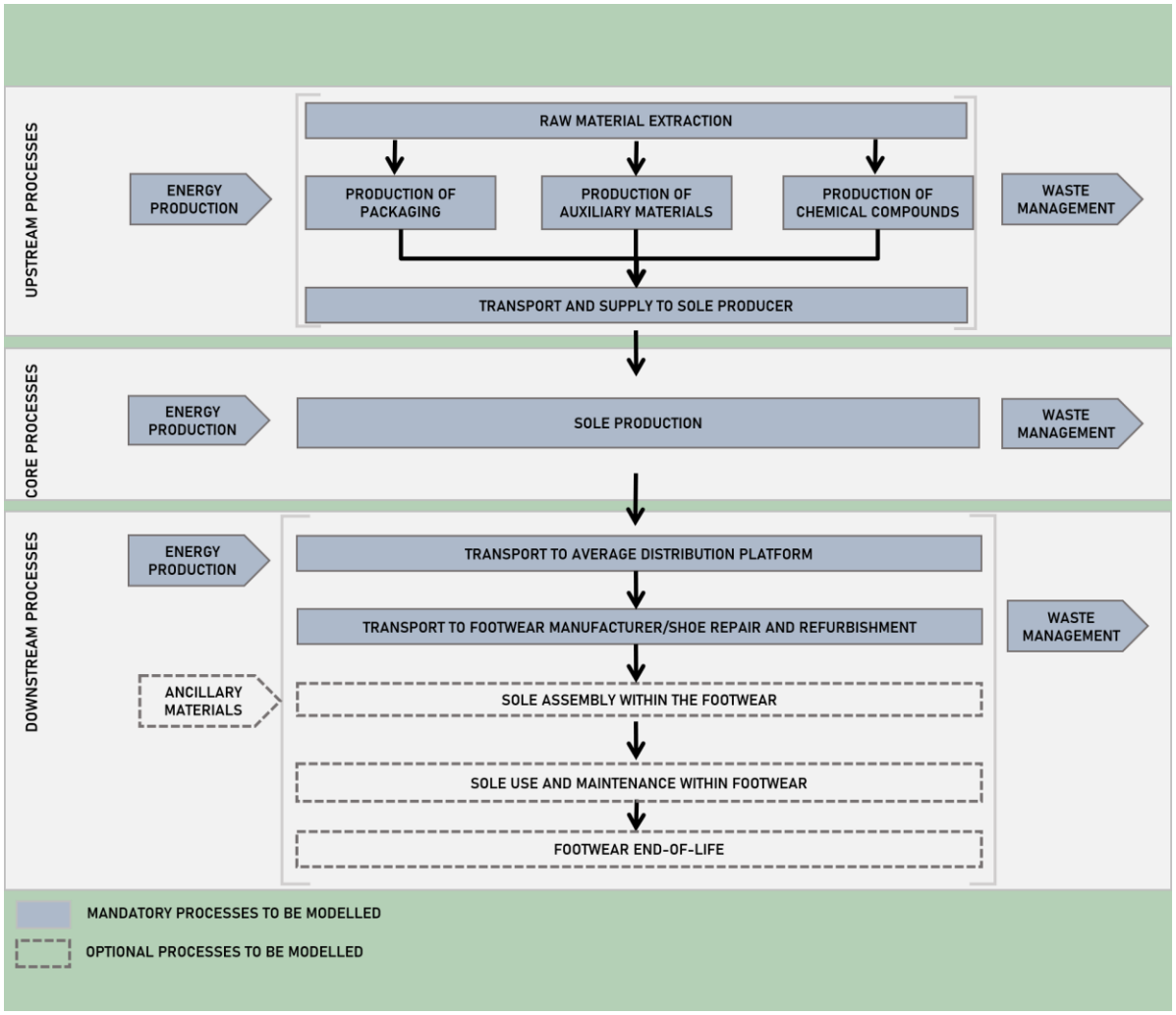

Figure 2 System diagram illustrating the processes that are included in the product system, divided into upstream, core and downstream processes.

4.5 CUT-OFF RULES

A cut-off rule of 1% shall be applied. In other words, the included inventory data (not including inventory data of processes that are explicitly outside the system boundary as described in Section 4.3) shall together give rise to at least 99% of the results of any of the environmental impact categories. Also, 99% of the mass of the product content and 99% of the energy use of the product life cycle shall be accounted for. The cut-off of inventory data should, however, be avoided, and all available inventory data shall be used.

The cut-off of inventory data, based on the above cut-off rule, should be an output of a sensitivity analysis, alone or in combination with expert judgment based on experience of similar product systems. Further, the cut-off shall be possible to verify in the verification process, hence the exclusion of inventory data based on the cut-off rule shall be documented in the LCA report, and the EPD developer shall provide the information the verifier considers necessary to verify the cut-off.

4.6 ALLOCATION RULES

Allocation can be divided into allocation of co-products, i.e. allocation of unit processes that generate several products, and allocation of waste, i.e. allocation of unit processes that generate materials that are, for example, landfilled recovered, recycled or reused, and which require further processing to cease being waste and become products (see criteria for end-of-waste state in Section 4.6.2).

The principles for allocation of co-products and allocation of waste are described separately in the following subsections

4.6.1 CO-PRODUCT ALLOCATION

The following hierarchy of allocation methods shall be followed for co-product allocation:

1. Allocation shall be avoided, if possible, by dividing the process to be allocated into sub-processes and collecting the inventory data for each sub-process.
2. If allocation cannot be avoided, the inventory data should be partitioned between the different co-products in a way that reflects the underlying physical relationships between them, i.e. allocation should reflect the way in which the inventory data changes if the quantities of delivered co-products change.
3. If a physical relationship between the inventory data and the delivery of co-products cannot be established, the inventory data should be allocated between the co-products in a way that reflects other relationships between them. For example, inventory data might be allocated between co-products in proportion to their economic values. If economic allocation is used, a sensitivity analysis exploring the influence of the choice of the economic value shall be included in the LCA report.

For key processes in the product system, Table 2 provides specific allocation guidance.

PROCESS	MAIN PRODUCT AND CO-PRODUCTS	ALLOCATION METHOD
CORE	SOLE AND OTHER SOLE COPRODUCTS AND NON-SOLE COPRODUCTS WITHIN MANUFACTURING SITE	In case other coproduct price significantly differ[2] from soles price, an economic allocation shall be preferentially applied as conservative approach in place of mass allocation including a sensitivity analysis of results reflecting the influence of the choice of the economic value. Sole coproducts includes other soles produced within the same facility that are out of scope for the LCA study. Non-sole coproducts include both other rubber products and material flows that are sold externally. In case other coproducts price do not significantly differ from soles price, a mass allocation shall be applied.

Table 2 Allocation method for key processes in the product system

4.6.2 ALLOCATION OF WASTE TREATMENT PROCESSES

Allocation of waste shall follow the polluter pays principle and its interpretation in EN 15804: “processes of waste processing shall be assigned to the product system that generates the waste until the end-of-waste state is reached.” The end-of-waste state is reached when all the following criteria for the end-of-waste state are fulfilled (adapted from EN 15804):

- the recovered material, component or product is commonly used for specific purposes;
- a market or demand, identified e.g. by a positive economic value, exists for such a recovered material, component or product;
- the recovered material, component or product fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and
- the use of the recovered material, product or construction element will not lead to overall adverse environmental or human health impacts.

The above outlined principle means that the generator of the waste shall carry the full environmental impact until the point in the product life cycle in which the end-of-waste criteria are fulfilled. Waste may have a negative economic market value, and then the end-of-waste stage is typically reached after (part of) the waste processing and further refinement, at the point at which the waste no longer has a negative market value. This allocation method is (in most cases) in line with a waste generator’s juridical and financial responsibilities. See the GPI for further information and examples.

[2] Price variation can be considered significant in case price variation among different soles types exceeds 20%.

4.7 DATA QUALITY REQUIREMENTS AND SELECTION OF DATA

Life cycle inventory data are classified into specific data and generic data, where the latter can be selected generic data or proxy data. The data categories are defined as follows:

- specific data (also referred to as “primary data” or “site-specific data”):
  - data gathered from the actual manufacturing plant where product-specific processes are carried out;
  - actual data from other parts of the life cycle traced to the product under study, for example site-specific data on the production of materials or generation of electricity provided by contracted suppliers, and transportation data on distances, means of transportation, load factor, fuel consumption, etc., of contracted transportation providers; and
  - LCI data from databases on transportation and energy ware that is combined with actual transportation and energy parameters as listed above.
- generic data (sometimes referred to as “secondary data”), divided into:
  - selected generic data: data (e.g. commercial databases and free databases) that fulfil prescribed data quality requirements for precision, completeness, and representativeness (see below Section 4.7.1),
  - proxy data: data (e.g. commercial databases and free databases) that do not fulfil all of the data quality requirements of “selected generic data”.

Specific data shall be used for the core processes. Specific data shall be used for upstream and downstream processes, when available, otherwise generic data may be used. Generic data should be used in cases in which they are representative for the purpose of the EPD, e.g. for bulk and raw materials on a spot market, if there is a lack of specific data on the final product or if a product consists of many components.

Any data used should preferably represent average values for a specific reference year. However, the way these data are generated could vary, e.g. over time, and in such cases they should have the form of a representative annual average value for a specified reference period. Such deviations should be declared.

4.7.1 RULES FOR USING GENERIC DATA

For generic data to be classified as “selected generic data”, the following requirements apply:

- datasets shall be based on attributional LCA modelling (e.g., not be based on marginal data and not include credits from system expansion),
- the reference year shall be as current as possible and should be representative for the validity period of the EPD,
- the 1% cut-off rule (as described in Section A.3.3) shall be met on the level of the product system,
- datasets shall represent average values for a specific reference year; however, how data are generated could vary, e.g. over time, and then they should have the form of a representative annual average value for a specified reference period (such deviations shall be justified and declared in the EPD), and
- the representativeness of the data shall be assessed to be better than ±5%, in terms of the environmental impact calculated on the basis of the data, of data that is fully representative for the given temporal, technological and geographical context.

Compound mixes are expected to be a relevant driver in the EPD. Selected generic shall be used specifically in this PCR to model compound chemical families.

- In the inventory phase compound mixes should be provided in detail by the product manufacturer.
- In the modelling phase compound mixes shall be coupled with the related chemicals by following the hierarchy:
  - chemical formula
  - chemical family having the same functional group
  - chemical physical properties

Section 4.7.2 provides a list of examples of databases/data sets to be used for generic data.

If selected generic data that meets the above data quality requirements are not available, proxy data may be used. The environmental impacts associated with proxy data shall not exceed 10% of the overall environmental impact of the product system.

The EPD may include a data quality declaration to demonstrate the share of specific data, selected generic data and proxy data contributing to the results of the environmental impact indicators.

4.7.2 EXAMPLES OF DATABASES FOR GENERIC DATA

Table 3 lists examples of databases and datasets to be used for generic data. Please note that a data quality assessment shall be performed also for data listed in the table, and that other data that fulfil the data quality requirements may also be used.

PROCESS	GEOGRAPHICAL SCOPE	DATASET	DATABASE
Packaging	Preferentially related to the geographic area	-	Ecoinvent – latest version
Compound mixes	Preferentially related to the geographic area of production	Preferential use of dataset covering most chemical families (e.g. Eco-profiles of the European plastics industry). If possible, avoid using too many different dataset.	Ecoinvent – latest version
Energy	National	-	Ecoinvent – latest version
Transport	Global	-	Ecoinvent – latest version

Table 3 Examples of databases and datasets to use for generic data.

In case data are not available, specific alternative databases can be used (e.g. database CM.Chemical essentials by carbonminds) in order to provide significant improvement in modelling and to ensure major adherence of process description with available studies. Alternatively, referenced literature studies as integration of suggested databases could be used under the same scopes.

4.7.3 DATA QUALITY REQUIREMENTS AND OTHER MODELLING GUIDANCE PER LIFE-CYCLE STAGE

Below are further data quality requirement per life-cycle stage. Exceptions to the requirements may be accepted, if justified in the EPD; such exceptions are subject to the approval by the verifier on a case-to-case basis.

4.7.3.1. Upstream processes

- Data referring to processes and activities upstream in a supply chain over which an organisation has direct management control shall be specific and collected on site.
- Data referring to contractors that supply main parts, packaging, or main auxiliaries should be requested from the contractor as specific data, as well as infrastructure, where relevant.
- Data on transport of main parts and components along the supply chain to a distribution point (e.g. a stockroom or warehouse) where the final delivery to the manufacturer can take place, should be specific and based on the actual transportation mode, distance from the supplier, and vehicle load.
- Data referring to chemical families should be modelled according to the following the hierarchy:
  - chemical formula
  - chemical family having the same functional group
  - chemical physical properties
- In case specific data is lacking, selected generic data may be used. If this is also lacking, proxy data may be used (see Section 4.7).
- For upstream processes modelled with specific data, generation of electricity used shall be accounted for in this priority:
  1. Specific electricity mix as generated, or purchased from an electricity supplier, demonstrated by a Guarantee of Origin or similar as provided by the electricity supplier.

2. Residual electricity mix of the electricity supplier on the market.
3. Residual electricity mix on the market.
4. Electricity consumption mix on the market.

The residual electricity mix is the mix when all contract-specific electricity that has been sold to other customers has been subtracted from the total consumption mix.

"The market" in the above hierarchy may correspond a national electricity market, if this can be justified.

The mix of electricity used in upstream processes shall be documented in the EPD, where relevant.

- Packaging: specific data shall be used for the consumer packaging production if it is under the direct control of the organization or if the environmental impact related to the consumer packaging production is more than 10% of the total product environmental indicators. In other cases, generic data may be used. When consumer packaging shows the organization's logo, the LCA report should report the exerted/non-exerted direct control on the production of consumer packaging by the organization.

4.7.3.2. Core processes

- Transport from the final delivery point of raw materials, chemicals, main parts, and components (see above regarding upstream processes) to the manufacturing plant/place of service provision should be based on the actual transportation mode, distance from the supplier, and vehicle load, if available.
- Goods: Specific data shall be used for the assembly of the product and for the manufacture of main parts as well as for on-site generation of steam, heat, electricity, etc., where relevant.
- Services: Specific data shall be used for the consumption of materials, chemicals, steam, heat, electricity, etc., necessary for execution of the service
- For electricity used in the core processes, generation of electricity used shall be accounted for in this priority:
    1. Specific electricity mix as generated, or purchased from an electricity supplier, demonstrated by a Guarantee of Origin or similar as provided by the electricity supplier.
    2. Residual electricity mix of the electricity supplier on the market.
    3. Residual electricity mix on the market.
    4. Electricity consumption mix on the market. This option shall not be used for electricity used in processes over which the manufacturer (EPD owner) has direct control[3].

  The residual electricity mix is the mix when all contract-specific electricity that has been sold to other customers has been subtracted from the total consumption mix.

  "The market" in the above hierarchy may correspond a national electricity market, if this can be justified.

  The mix of electricity used in the core processes shall be documented in the EPD, where relevant.
- Waste treatment processes of manufacturing waste should be based on specific data, if available.

4.7.3.3. Downstream processes

This PCR should include the distribution process to assembly phase nearby footwear assembler. Furthermore, PCR could be optionally extended to the assembly, distribution to final customer, sole maintenance and use, and end-of-life processes.

The following requirements apply to the downstream processes:

- Data for the use stage are usually based on scenarios, but specific data should be used when available and relevant (e.g. chemical additives for coupling with footwear, material loss during life cycle, energy for washing etc.).

[3] For electricity markets without trade of Guarantees of Origin (or similar), the residual mix will, however, be identical to the consumption mix.

- Data on the emissions from the use stage should be based on documented tests, verified studies in conjunction with average or typical product use, or recommendations concerning suitable product use. Whenever applicable, test methods shall be internationally recognised.
- The use of electricity in the region/country where the product is used (as specified in the geographical scope of the EPD), specifically for soil maintenance, shall be accounted for in the following priority:

    1. Residual electricity mix on the market.
    2. Electricity consumption mix on the market.

  The residual electricity mix is the mix when all contract-specific electricity that has been sold to other customers has been subtracted from the total production mix.

  "The market" in the above hierarchy may correspond a national electricity market, if this can be justified.

  The mix of electricity used in the downstream processes shall be documented in the EPD, where relevant.
- The distribution of sole from footwear assembly to final customer can be optionally modelled by excluding weight of the other part of the footwear. If included, the transport of the product to the customer shall be described in the EPD and be accounted for in this priority:

    1. Actual transportation distances and types.
    2. Calculated as the average distance of a sole producer to distribution platforms of that product type transported by different means of transport modes.
    3. Calculated as a fixed long transport, such as 5000 km transport by lorry or 10 000 km by airplane, according to product type.
- The assembly within the footwear is an optional process and should include inventory of specific material consumption and emissions for sole assembly within footwear manufacturing.
- Scenarios for the end-of-life stage can be optionally included for material use (e.g. rubber dismissal) during sole maintenance and for the end-of-life of the sole. Such scenarios shall be technically and economically practicable and compliant with current regulations in the relevant geographical region based on the geographical scope of the EPD. Key assumptions regarding the end-of-life stage scenario shall be documented.

4.7.4 DATA QUALITY DECLARATION

EPDs may include a declaration of the quality of data used in the LCA calculations.

4.8 ENVIRONMENTAL PERFORMANCE INDICATORS

The EPD shall declare the default environmental performance indicators and their methods as described at the website (www.environdec.com/indicators), which includes both inventory indicators and indicators of potential environmental impact. The source and version of the impact assessment methods and characterisations factors used shall be reported in the EPD. Alternative regional impact assessment methods and characterisation factors may be calculated and displayed in addition to the default list. If so, the EPD shall contain an explanation of the difference between the different sets of indicators, as they may appear to the reader to display duplicate information.

If the default list of environmental performance indicators and methods at the website is updated, the previous version of the list is valid in parallel to the new version during a transition period of 90 days, as described at the website.

Apart from the required inventory indicators, other inventory data may also be declared in the EPD, if relevant and useful for EPD users. Such data shall not be declared in the main body of the EPD, but in an annex.

4.9 INCLUDING MULTIPLE PRODUCTS IN THE SAME EPD

4.9.1 PRODUCTS FROM THE SAME COMPANY

Similar products from a single or several manufacturing sites covered by the same PCR and manufactured by the same company with the same major steps in the core processes may be included in the same EPD if none of the declared environmental

performance indicators differ by more than 10% between any of the included products. The results for the environmental performance indicators of one representative product shall be declared according to Section 5.4.5. The choice of representative product shall be justified in the EPD, using, where applicable, statistical parameters.

4.9.2 SECTOR EPDS

The International EPD® System allows for an industry association to develop an EPD in the form of a Sector EPD. A Sector EPD declares the average product of multiple companies in a clearly defined sector in a clearly defined geographical area. Products covered in a sector EPD shall follow the same PCR and the same declared/functional unit shall be applied.

Any communication of the results from a Sector EPD should contain the information that the results are based on averages obtained from the sector as defined in the EPD. The communication shall not claim that the sector EPD results are representative for a certain manufacturer or its product.

The following information shall also be included a Sector EPD:

- a list of the contributing manufacturers that the Sector EPD covers,
- a description of how the selection of the sites/products has been done and how the average has been determined, and
- a statement that the document covers average values for an entire or partial product category (specifying the percentage of representativeness) and, hence, the declared product is an average that is not available for purchase on the market.

5 CONTENT AND FORMAT OF EPD

EPDs based on this PCR shall contain the information described in this section. Flexibility is allowed in the formatting and layout provided that the EPD still includes the prescribed information. A generic template for EPDs is available at www.environdec.com.

The EPD content shall:

- be in line with the requirements and guidelines in ISO 14020 (Environmental labels and declarations – General principles),
- be verifiable, accurate, relevant and not misleading, and
- not include rating, judgements or direct comparison with other products[4].

An EPD should be made with a reasonable number of pages for the intended audience and use.

The content of EPDs published in machine-readable format shall correspond with the content of the underlying EPD.

5.1 EPD LANGUAGES

EPDs should be published in English but may also be published in additional languages. If the EPD is not available in English, it shall contain an executive summary in English including the main content of the EPD. This summary is part of the EPD and, thus, also subject to the verification process.

5.2 UNITS AND QUANTITIES

The following requirements apply for units and quantities:

- The International System of Units (SI units) shall be used where available, e.g., kilograms (kg), Joules (J) and metres (m). Reasonable multiples of SI units may be decided in the PCR to improve readability, e.g., grams (g) or megajoules (MJ). The following exceptions apply:
  - Resources used for energy input (primary energy) should be expressed as kilowatt-hours (kWh) or megajoules (MJ), including renewable energy sources, e.g., hydropower, wind power and geothermal power.
  - Water use should be expressed in cubic metres (m^3)
  - Temperature should be expressed in degrees Celsius (°C),
  - Time should be expressed in the units most practical, e.g., seconds, minutes, hours, days or years.
  - Results of the environmental performance indicators shall be expressed in the units prescribed by the impact assessment methods, e.g. kg CO_2 equivalents.
- Three significant figures[5] should be adopted for all results. The number of significant digits shall be appropriate and consistent.
- Scientific notation may be used, e.g. 1.2E+2 for 120, or 1.2E-2 for 0.012.
- The thousand separator and decimal mark in the EPD shall follow one of the following styles (a number with six significant figures shown for illustration):
  - SI style (French version): 1 234,56
  - SI style (English version): 1 234.56

  In case of potential confusion or intended use of the EPD in markets where different symbols are used, the EPD shall state what symbols are used for thousand separator and decimal mark.
- Dates and times presented in the EPD should follow the format in ISO 8601. For years, the prescribed format is YYYY-MM-DD, e.g., 2017-03-26 for March 26th, 2017.

[4] Therefore, results of normalization are not allowed to be reported in the EPD.

[5] Significant figures are those digits that carry meaning contributing to its precision. For example with two significant digits, the result of 123.45 shall be displayed as 120, and 0.12345 shall be displayed as 0.12. In scientific notation, these two examples would be displayed as $1.2*10^2$ and $1.2*10^{-2}$.

- The result tables shall:
  - Only contain values or the letters “ND” (Not Declared). It is not possible to specify ND for mandatory indicators. ND shall only be used for voluntary parameters that are not quantified because no data is available.[6]
  - Contain no blank cells, hyphens, less than or greater than signs or letters (except “ND”).
  - Use the value “0” only for parameters that have been calculated to be zero.
  - Footnotes shall be used to explain any limitation to the result value.

5.3 USE OF IMAGES IN EPD

Images used in the EPD, especially pictures featured on the cover page, may in themselves be interpreted as an environmental claim. Images such as trees, mountains, wildlife that are not related to the declared product shall therefore be used with caution and in compliance with national legislation and best available practices in the markets in which the EPD is intended to be used.

5.4 EPD REPORTING FORMAT

The reporting format of the EPD shall include the following sections:

- Cover page (see Section 5.4.1)
- Programme information (see Section 5.4.2)
- Product information (see Section 5.4.3)
- Content declaration (see Section □)
- Environmental performance (see Section 5.4.5)
- Additional environmental information (see Section 5.4.6)
- Additional social and economic information (see Section 5.4.7)
- References (see Section 5.4.9)

The following sections shall be included, if relevant:

- Differences versus previous versions (see Section 5.4.8)
- Executive summary in English (see Section 5.4.10)

5.4.1 COVER PAGE

The cover page shall include:

- Product name and image
- Name and logotype of EPD owner
- The text “Environmental Product Declaration” and/or “EPD”
- Programme: The International EPD® System, www.environdec.com
- Programme operator: EPD International AB
- Logotype of the International EPD® System
- EPD registration number as issued by the programme operator[7]
- Date of publication (issue): 20XX-YY-ZZ

[6] This requirement does not intend to give guidance on what indicators are mandated (“shall”) or voluntary.

[7] The EPD shall not include a “registration number” if such is provided by the certification body, as this may be confused with the registration number issued by the programme operator.

- Date of revision: 20XX-YY-ZZ, when applicable
- Date of validity; 20XX-YY-ZZ
- A note that *"An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com."*
- A statement of conformity with ISO 14025.
- For EPDs covering multiple products: a statement that the EPD covers multiple products and a list of all products covered by the EPD.
- For Sector EPDs: a statement that the EPD is a Sector EPD.
- For construction product EPDs:

In the case of EPDs registered through a regional hub (a regional or national programme based on and fully aligned with the International EPD® System through an agreement with the programme operator), "Programme", "Programme operator", and "Logotype" shall be expanded to include a reference to the regional programme and the organisation responsible for it.

Where applicable, the cover page shall also include the following information:

- Information about dual registration of EPD in another programme, such as registration number and logotype.
- A statement of conformity with other standards and methodological guides.

5.4.2 PROGRAMME INFORMATION

The programme information section of the EPD shall include:

- Address of programme operator: *EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden, E-mail: info@environdec.com*
- The following statement on the requirements for comparability of EPDs, adapted from ISO 14025: *"EPDs within the same product category but from different programmes may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison."*
- A statement that the EPD owner has the sole ownership, liability and responsibility of the EPD
- Information about verification[8] and the PCR in a table with the following format and contents:

Product category rules (PCR): *<name, registration number, version and UN CPC code(s)>*
PCR review was conducted by: *<name and organisation of the review chair, and information on how to contact the chair through the programme operator>*
Independent third-party verification of the declaration and data, according to ISO 14025:2006: ☐ EPD process certification ☐ EPD verification ☐ Pre-verified tool
In case of certification bodies: Accredited by: *<name of the accreditation body and accreditation number, if applicable>.* *In case of individual verifiers:* *<Name, and organisation of the individual verifier. The signature may also be included>* Approved by: The International EPD® System

[8] If the EPD has been verified by an approved individual verifier who has received contractual assistance from a certification body that is not accredited, this certification body shall not be included in this table.

The procedure for follow-up during EPD validity, as defined in the GPI, involves third-party verifier: ☐ Yes ☐ No

5.4.3 PRODUCT INFORMATION

The product information section of the EPD shall include:

- address and contact information to EPD owner,
- description of the organisation. This may include information on products- or management system-related certifications (e.g. ISO 14024 Type I environmental labels, ISO 9001- and 14001-certificates and EMAS-registrations) and other relevant work the organisation wants to communicate (e.g. SA 8000, supply-chain management and social responsibility),
- name and location of production site,
- product identification by name, and an unambiguous identification of the product by standards, concessions or other means,
- identification of the product according to the UN CPC scheme system. Other relevant codes for product classification may also be included, e.g.
  - Common Procurement Vocabulary (CPV),
  - United Nations Standard Products and Services Code® (UNSPSC),
  - Classification of Products by Activity (NACE/CPA),
  - Australian and New Zealand Standard Industrial Classification (ANZSIC), or
  - Global Trade Item Number (GTIN).
- a description of the product,
- a description of the technical purpose of the product, including its application/intended use,
- a description of the background system, including the main technological aspects,
- for EPDs covering multiple products: a description of the selection of products/sites, a list of contributing manufacturers (if Sector EPD), etc. (see Section 4.9),
- geographical scope of the EPD, i.e., for which geographical location(s) of use and end-of-life the product's performance has been calculated,
- declared/functional unit,
- reference service life (RSL) and/or technical/actual lifespan, if relevant,
- declaration of the year(s) covered by the data used for the LCA calculation and other relevant reference years,
- reference to the main database(s) for generic data and LCA software used, if relevant,
- system diagram of the processes included in the LCA, divided into the life cycle stages,
- description if the EPD system boundary is "cradle-to-gate", "cradle-to-gate with options" or "cradle-to-grave",
- information on which life-cycle stages are not considered (if any), with a justification of the omission, and
- references to any relevant websites for more information or explanatory materials.

This section may also include:

- name and contact information of organisation carrying out the underlying LCA study,
- any additional information about the underlying LCA-based information, such as cut-off rules, data quality, allocation methods, and other methodological choices and assumptions,
- a description of the material properties of the product with a declaration of relevant physical or chemical product properties, such as density, etc., and

- if end-of-life treatment is not included, the EPD shall contain a statement that it shall not be used for communicating environmental information to consumers/end users of the product.

5.4.4 CONTENT DECLARATION

The content declaration shall have the form of a list of materials and chemical substances including information on their environmental and hazardous properties. The gross weight of material shall be declared in the EPD at a minimum of 99 % of one unit of product.

Information on the hazardous properties of materials and chemical substances should follow

(1) the requirements given in the latest revision of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) , issued by United Nations or national or regional applications of the GHS.

(2) Restricted Substances List 2020_AFIRM_RSL_2020_0131 and the American Apparel & Footwear Association (AAFA) Restricted Substances List RESTRICTED SUBSTANCE LIST (RSL) March 2020 | 21st Edition

- https://www.aafaglobal.org/AAFA/Solutions_Pages/Restricted_Substance_List.aspx
- https://www.afirm-group.com/afirm-rsl/

Sole production should comply with existing regulation at national level. Substances of Very High Concern according to documents (1) and (2) should be listed in the content declaration.

5.4.4.1. Information about recycled materials

When a product is made in whole or in part with recycled materials, the provenience of the materials (pre-consumer or post-consumer) shall be presented in the EPD as part of the content declaration.

To avoid any misunderstanding about which material that may be considered “recycled material”, the guidance given in ISO 14021 shall be considered. In brief, the standard states that:

- only pre-consumer or post-consumer materials (scraps) shall be considered in the accounting of the recycled materials, and
- materials coming from scrap reutilisation (such as rework, regrind, or scrap generated in a process and capable of being reclaimed within the same process that generated it) shall not be considered as recycled content.

5.4.4.2. Information about packaging

As packaging is strongly connected with the product, the producer shall provide information about packaging in the EPD, when applicable. Packaging may be classified as:

- Distribution Packaging: packaging designed to contain one or more articles or packages, or bulk materials, for the purposes of transport, handling and/or distribution (ISO 21067-1:2016, Section 2.2.6)
- Consumer Packaging: packaging constituting, with its content, a sales unit for the final user or consumer at the point of retail (ISO 21067-1:2016, Section 2.2.7).

Consumer packaging is generally the outcome of eco-design processes, or other activities, under direct control of the organisation. Many critical categories with strict legal requirements belong to consumer packaging category like food contact packaging and pharmaceutical packaging.

The weight of the packaging per product, and the type and function of the packaging, shall be reported in the EPD.

A statement of the source of the materials (pre-consumer or post-consumer) shall be presented in the EPD when the packaging is made in whole or in part by recycled materials.

5.4.5 ENVIRONMENTAL PERFORMANCE

5.4.5.1. Environmental impacts

The EPD shall declare the environmental impact indicators, per functional unit and per life cycle stage, using the default impact categories, characterisation models and factors available on www.environdec.com/indicators The source and version of the characterisation models and the factors used shall be reported in the EPD. Alternative regional life cycle impact assessment methods and characterisation factors are allowed to be calculated and displayed in addition to the default list. If so, the EPD shall contain an explanation of the difference between the different sets of indicators, as they may appear to the reader to display duplicate information.

5.4.5.2. Use of resources

The EPD shall declare the indicators for resource use listed at www.environdec.com/indicators per functional unit, per life-cycle stage and in aggregated form.

Notes:

- In order to identify the primary energy used as an energy carrier (and not used as raw materials), the parameter may be calculated as the difference between the total input of primary energy and the input of energy resources used as raw materials.
- Energy content of biomass used for feed or food purposes shall not be considered.
- The net use of fresh water does not constitute a “water footprint” as potential environmental impacts due to the water use in different geographical locations is not captured. For this indicator:
  - Evaporation, transpiration, product integration, release into different drainage basins or the sea, displacement of water from one water resource type to another water resource type within a drainage basin (e.g. from groundwater to surface water) is included.
  - In-stream water use is not included.
  - For water used in closed loop processes (such as cooling system) and in power generation only the net water consumption (such as reintegration of water losses) should be considered.
  - Seawater shall not be included.[9]
  - Tap water or treated water (e.g. from a water treatment plant), or wastewater that is not directly released in the environment (e.g. sent to a wastewater treatment plant) are not elementary water flows, but intermediate flows from a process within the technosphere.
  - Additional transparency in terms of geographical location, type of water resource (e.g. groundwater, surface water), water quality and temporal aspects may be included as additional information.

5.4.5.3. Waste production and output flows

Waste generated along the whole life cycle production chains shall be treated following the technical specifications described in the GPI. The EPD shall declare the indicators for waste production and output flows as listed at www.environdec.com/indicators per functional unit, per life-cycle stage and in aggregated form.

5.4.6 ADDITIONAL ENVIRONMENTAL INFORMATION

An EPD may declare additional environmentally relevant information not derived from the LCA-based calculations, such as:

- the release of dangerous substances into indoor air, soil, and water during the use stage,
- instructions for proper use of the product, e.g. to minimise energy or water consumption or to improve the durability of the product,

[9] It may be relevant to include seawater if it is used to obtain energy from it, or it is the only source of water in a definite site. This may be displayed separately, e.g. as “seawater for desalinization”.

- instructions for proper maintenance and service of the product, e.g. to minimise energy or water consumption or to improve the durability of the product,
- information on key parts of the product that determine its durability,
- information on recycling including, e.g. suitable procedures for recycling the entire product or selected parts and the potential environmental benefits gained,
- information on a suitable method of reuse of the product (or parts of the products) and procedures for disposal as waste at the end of its life cycle,
- information regarding disposal of the product, or inherent materials, and any other information considered necessary to minimise the product's end-of-life impacts, and
- a more detailed description of an organisation's overall environmental work, in addition to the information listed under Section 5.4.3, such as:
    - the existence of any type of organised environmental activity, and
    - information on where interested parties may find more details about the organisation's environmental work.

It is recommended to add information enabling comparisons with other soles, such additional product information may regard:

- Environmental or quality labels
- Eco-design policy aiming at reducing environmental impact

Furthermore, a detail of different manufacturing practices preferably based on the specific product under study can enforce the contextualization of the presented results. In particular, detailed description of an organisation's overall environmental work such as:

- the existence of a quality or environmental management system or any other type of organised environmental activity,
- the contribution to specific environmental aspects, and
- sources where interested parties may find more details about the organisation's environmental work.

Any additional environmental information declared shall be substantiated and verifiable, and be derived using appropriate methods and be specific, accurate, not misleading, and relevant to the specific product. Quantitative information is preferred over qualitative information.

5.4.7 ADDITIONAL SOCIAL AND ECONOMIC INFORMATION

The EPD may also include other relevant social and economic information as additional and voluntary information. This may be product information or a description of an organisation's overall work on social or economic sustainability, such as activities related to supply chain management or social responsibility.

Any additional social and economic information declared shall be substantiated and verifiable, and be derived using appropriate methods and be specific, accurate, not misleading, and relevant to the specific product. Quantitative information is preferred over qualitative information.

5.4.8 DIFFERENCES VERSUS PREVIOUS VERSIONS

For EPDs that have been updated, the following information shall be included:

- a description of the differences versus previously published versions, and
- a revision date on the cover page.

5.4.9 REFERENCES

A reference section shall be included, including a list of all sources referred to in the EPD, including the GPI (including version number), and PCR (registration number, name, and version) used to develop the EPD.

5.4.10 EXECUTIVE SUMMARY IN ENGLISH

The executive summary, if included (see Section 5.1), shall contain relevant summarised information related to the programme, product, environmental performance, information related to pre-certified EPDs, and information related to sector EPDs. Besides this, further information may be added such as additional environmental, social or economic information, references as well as differences versus previous EPD versions.

6 LIST OF ABBREVIATIONS

ANZSIC	Australian and New Zealand Standard Industrial Classification
CPC	Central product classification
CPV	Common procurement vocabulary
EPD	Environmental product declaration
GPI	General Programme Instructions
GTIN	Global trade item number
ISO	International Organization for Standardization
LCA	Life cycle assessment
LCI	Life cycle inventory
NACE/CPA	Classification of products by activity
ND	Not declared
PCR	Product category rules
REACH	Restriction of chemicals
RSL	Reference service life
SI	The International System of Units
UN	United Nations
UNSPSC	United Nations standard products and services code

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ISO (2014) ISO 14046:2014, Environmental management – Water footprint – Principles, requirements and guidelines.

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8 VERSION HISTORY OF PCR

VERSION 1.0, 2021-06-21

Original version of the PCR.

RUBBER ARTICLES FOR FOOTWEAR
PRODUCT CATEGORY CLASSIFICATION: UN CPC 3627