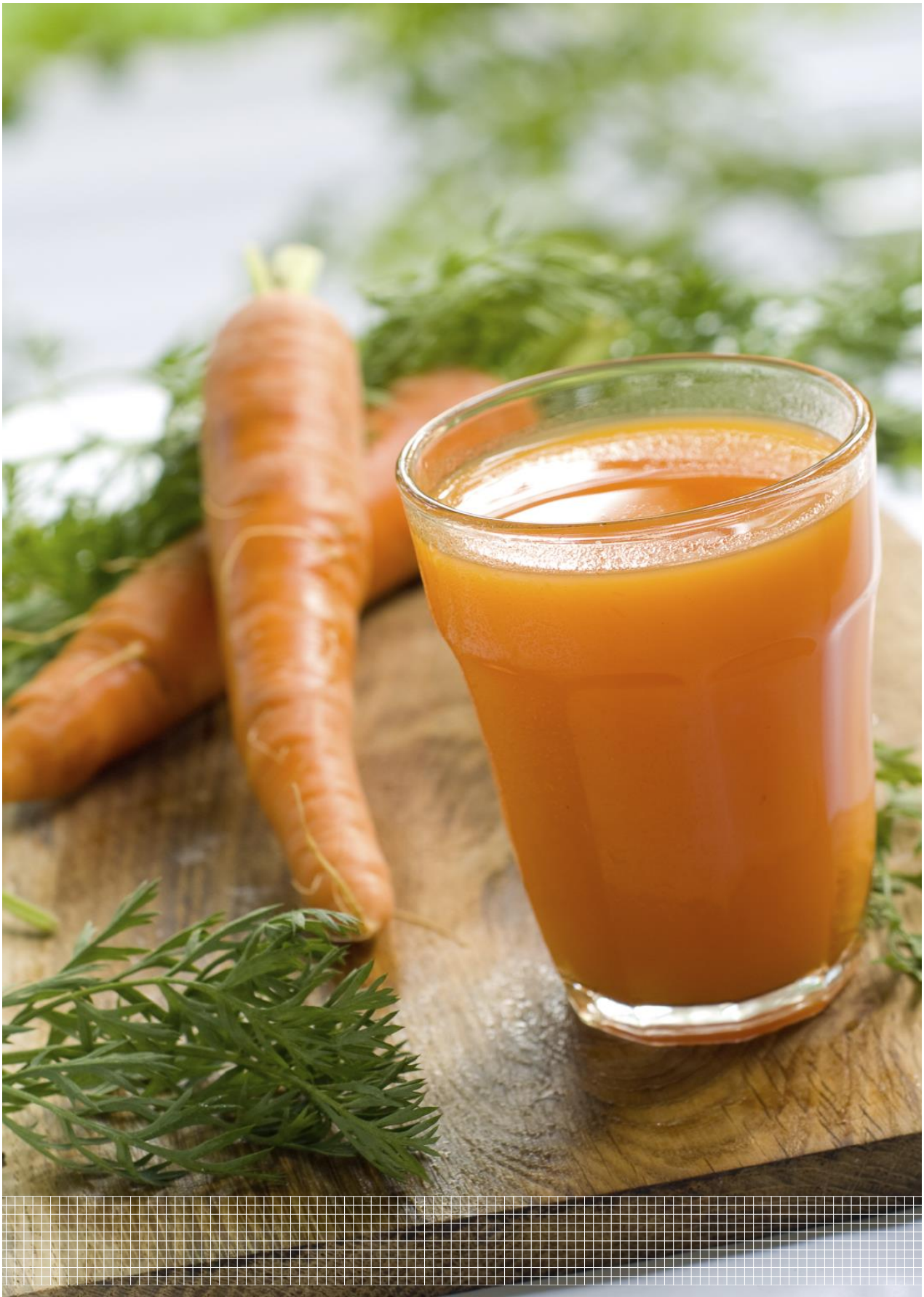
VEGETABLE JUICES, PLANT MILK AND OTHER PREPARED AND PRESERVED VEGETABLES, PULSES AND POTATOES

PRODUCT GROUP CLASSIFICATION: UN CPC 2132 AND 2139

2014:09
VERSION 1.02

VALID UNTIL: 2017-05-21



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GENERAL INTRODUCTION TO PRODUCT CATEGORY RULES IN THE INTERNATIONAL EPD® SYSTEM

This document constitutes Product Category Rules (PCR) developed in the framework of the International EPD® System: a programme for type III environmental declarations according to ISO 14025:2006. Environmental Product Declarations (EPD®) are voluntary documents providing transparent information about the life cycle environmental impact for any type of goods and services.

The rules for the overall administration and operation of the program are the General Programme Instructions, publicatlly available at the website (www.environdec.com). In addition to ISO 14025, the International EPD® System adheres to the following international standards:

- ISO 9001, Quality management systems
- ISO 14001, Environmental management systems
- ISO 14040, LCA - Principles and procedures
- ISO 14044, LCA - Requirements and guidelines

For construction products, the International EPD® System also allows the use of EN 15804 (Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products) and ISO 21930 (Environmental declaration of building products) as underlying standards. The compliance with these and other standards shall be clearly stated in each PCR and EPD® where it is relevant.

A PCR is defined in ISO 14025 as a set of specific rules, requirements and guidelines for developing Type III environmental declarations for one or more product categories. The PCR document specifies the rules for the underlying life cycle assessment (LCA) and sets minimum requirements on EPDs for a specific product group that are more detailed than the standards and the General Programme Instructions.

PCRs in the International EPD® System are developed in English in accordance with the procedure described in the General Programme Instructions. All PCR documents have a maximum period of validity after which the document shall be revisited. The template used for this PCR is based on the PCR template provided by the Guidance for Product Category Rule Development (2013).

EPDs are developed and registered based on a valid PCR. An EPD® shall be based on the latest version of the PCR, and refer to the version number and date of the PCR used. The production of new PCR versions does not affect the certification period of EPDs that are already published.

This PCR document is publically available at www.environdec.com. The PCR document is a living document. If relevant changes in the LCA methodology or in the technology for the product category occur, the document will be revised and the new version will be published on the website.

Stakeholder feedback on PCRs is very much encouraged. Any comments to this PCR document may be given on the PCR Forum on www.environdec.com or directly to the PCR moderator during its developmend or during the period of validity.

1 GENERAL INFORMATION

Name:	Vegetable juice, Plant milk and Other prepared and preserved vegetables, pulses and potatoes
Registration no:	2014:09
Programme operator:	The International EPD® System operated by EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden. Website: www.environdec.com E-mail: info@environdec.com
Appointed PCR moderator:	Adriana Del Borghi (adry@unige.it) CE.Si.S.P. - University of Genoa, Italy
PCR Committee:	CE.Si.S.P. (Centre for the Development of Product Sustainability) - University of Genoa, Italy www.cesisp.unige.it Conserve Italia Soc. Coop. Agricola, Italy www.conserveitalia.it
Date of publication:	2016-04-28 (Version 1.02) Version 1.0 was published 2014-05-21. A version history is available in Section 13
Date of expiration:	DRAFT (WILL BE 2017-05-21)
Schedule for renewal:	When the validity time is about to expire the PCR moderator shall initiate a discussion with the programme operator how to proceed with updating the document and extending the period of validity. See General Programme Instructions, Section C.5.
Open consultation period:	2014-01-24 until 2014-03-24 (Version 1.0)
Review panel for this PCR:	The Technical Committee of the International EPD® System. Full list of TC members available on www.environdec.com/TC
Valid within the following geographical representativeness:	Global
PCR language:	This PCR was developed and is available in English, as is mandated by the General Programme Instructions. The English version takes precedence over any translated versions in case of discrepancies.
More information on this PCR's website:	http://environdec.com/en/PCR/Detail/?Pcr=8493

This document provides Product Category Rules (PCR) for the assessment of the environmental performance of UN CPC 2132 (*Vegetable juices*), Plant milk (no CPC available) and UN CPC 2139 (*Other prepared and preserved vegetables, pulses and potatoes*) and the declaration of this performance by an EPD.

This PCR has been developed in accordance with and complies with the General Programme Instruction of the International EPD® System, version 2.01 dated 2013-09-18. It is based on the requirements and guidelines given in

"PCR Basic Module, CPC Division 21: "Meat, fish, fruit, vegetables, oils and fats" version 2.0. The PCR has been aligned to the "Network of food for PCRs" with the assistance of Filippo Sessa at Life Cycle Engineering to ensure that it is consistent with related PCRs in the International EPD® System.

This PCR document is publically available on www.environdec.com. The PCR is intended to be a living document. If relevant changes in the LCA methodology or in the technology for the product category occur, the document will be revised and any changes will be published on the website.

Any comments to this PCR document may be given on the PCR Forum on www.environdec.com or directly to the PCR moderator during the period of validity. The PCR Moderator should initiate a revision process before the validity time expires to give due time for announcing and collecting comments.

EPDs shall be based on the latest version of the PCR, and refer to the version number and date of the PCR used. The production of new PCR versions does not affect the certification period of EPDs that are already published.

2 DEFINITION OF THE PRODUCT GROUP

The product category includes CPC 2132 Vegetable juices (i.e. tomato juices and other vegetable juices), Plant milk (no CPC available) and CPC 2139 Other prepared and preserved vegetables, pulses and potatoes (e.g. preserved peas, beans[1], lentils, sweet corn, sieved tomatoes, chopped tomatoes, peeled tomatoes, tomato purée, tomato paste), packaged in different packaging materials.

The product category is defined under ISIC – CPC's classification as UN CPC classes 2132, 2139 and underlying sub-classes:

- Section: 2 - Food products, beverages and tobacco; textiles, apparel and leather products
- Division: 21 - Meat, fish, fruit, vegetables, oils and fats
- Group: 213 - Prepared and preserved vegetables, pulses and potatoes
  - **Class: 2132 - Vegetable juices (this PCR)**
    - **Sub-class: 21321 - Tomato juice**
    - **Sub-class: 21329 - Other vegetable juices**
  - **Class: 2139 - Other prepared and preserved vegetables, pulses and potatoes (this PCR)**
    - **Sub-class: 21391 - Prepared dishes and meals based on vegetables, pulses and potatoes**
    - **Sub-class: 21392 - Flour, meal, powder, flakes, granules and pellets of potatoes**
    - **Sub-class: 21393 - Dried vegetables**
    - **Sub-class: 21394 - Potatoes, otherwise prepared or preserved**
    - **Sub-class: 21395 - Beans, otherwise prepared or preserved, not frozen**
    - **Sub-class: 21396 - Peas, otherwise prepared or preserved, not frozen**
    - **Sub-class: 21397 - Mushrooms and truffles, otherwise prepared or preserved**
    - **Sub-class: 21399 - Other vegetables and pulses, preserved other than by vinegar, acetic acid or sugar, n.e.c.**

The product group of this PCR also includes all the types of plant milk (e.g. almond milk, soy milk, coconut milk and rice milk), for which no CPC classification appears to be available.

[1] This includes soy beans, even if they are sometimes classified as an oilseed rather than a bean as there does not appear to be any other suitable CPC classification for "Beans, soya, otherwise prepared or preserved, not frozen".

The product group of this PCR does not include the following related or similar classes:

- Class 2131 - Frozen vegetables, pulses and potatoes
- Class 2133 - Vegetables provisionally preserved
- Class 2134 - Vegetables, pulses and potatoes, preserved by vinegar or acetic acid
- Class 2143 – Fruit juices

More information is available at http://unstats.un.org/unsd/cr/registry/regcs.asp?Cl=25&Lg=1&Co=213

2.1 SPECIFICATION OF MANUFACTURING COMPANY

The following mandatory information shall be described in the EPD:

- Manufacturing company
- Manufacturing sites involved in the production
- Issuer and contact information
- Responsible for the publication of the EPD and other contact persons regarding e.g. EMS, environmental performance, LCA calculations etc.
- Information on environmental management system (EMS)

Examples of voluntary information:

- Specific aspects regarding the production
- Environmental policy
- Providers logotype

2.2 SPECIFICATION OF THE PRODUCT

The vegetables species (and the variety, if relevant) shall be declared in the EPD. The product group and CPC code shall be specified in the EPD. The cultivation system (i.e. conventional or organic, open field or greenhouse) shall be specified.

The vegetable processing phase shall be described. In case of dehydrated vegetables processing, the supply chain shall be described.

Details on packaging shall be given providing at least the following information: container size (e.g. 330 g, 400 g, 1,000 g), type (e.g. glass bottle, steel tin can, carton-based container), sell unit and pack format (i.e. cardboard cluster pack).

Any claims made about the product must be verifiable.

3 DECLARED UNIT

The declared unit is 1 kg of packaged product ready for consumption (the weight of packaging not included in this 1 kg). In the case of drinkable products, information should also be given of how to convert the weight into a corresponding amount in litres.

The reference flow shall be defined the at the customer gate, at the shelf or the retailer or at the market place.

The declared unit shall be declared in the EPD. The environmental impact shall be given per declared unit.

4 CONTENT DECLARATION

The gross weight of material (i.e. product composition) shall be declared in the EPD at a minimum of 99% of one product unit.

For tomato products, the weight of fresh tomatoes required for each of the products includes tomatoes used to produce tomato juice shall be specified.

5 UNITS AND QUANTITIES

The International System of Units (SI units) shall be used.

Exceptions are allowed for:

- land use: could be used hectare (ha) in some data about crops yields. Results shall be reported in square meter (m^2);
- fuel consumption in agricultural activities: data could be reported in litres (l).

The preferred power and energy units are:

- kW (MW) for power
- kWh (MWh) for energy

A maximum of three significant digits shall be used when reporting LCA results.

6 GENERAL SYSTEM BOUNDARIES

The International EPD® System has adopted an LCA calculations procedure which is separated into three different life cycle stages, see Figure 1:

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

In the EPD®, the environmental performance associated with each of the three life-cycle stages above shall be reported separately

UPSTREAM	CORE	DOWNSTREAM
• Cultivation phase • Semi-product manufacturing (where applicable) • Production of agricultural inputs and ingredients, additives, auxiliary products • Production of packaging materials	• Transportation to food processing plant • Food processing • Packaging processes • Cold or frozen storage • Wastewater treatment	• Final product distribution • Primary packaging end of life

Figure 1 Presentation of Core Module, upstream and downstream processes.

The figure illustrates that all relevant unit processes taking place in the upstream-, core- and downstream processes shall be included. To identify the relevance of including upstream and downstream infrastructure the commonly defined cut-off rules shall be applied.

6.1 UPSTREAM PROCESSES

The **upstream processes** comprise cradle-to-gate environmental information.

- Production of seeds, cuttings or plants for the cultivation.
- Production of agricultural inputs, such as fertilizers and pesticides used in the agriculture.
- Cultivation phase (e.g. land preparation, planting operation, irrigation, fertilization).
- Emissions from fertilizer application.
- Dehydration process (where applicable).
- Semi-products manufacturing (where applicable).
- Generation of energy wares used in agriculture, at the farm, and in production.
- Production of ingredients and additives used in the product.
- Production of auxiliary products used such as detergents for cleaning, refrigerating etc..
- Production of primary, secondary and tertiary packaging materials.

6.2 CORE PROCESSES

The **core process** represents the “production phase” and comprises gate-to-gate environmental information on the production stage and on the handling of process-related emissions and waste.

- Transportation of vegetables from field to processing plants.
- Transportation of semi-products and primary packaging to processing plants.
- Food processing (e.g. washing, mixing, thermal treatment).
- Rehydrating process (where applicable).
- Packaging processes (e.g. filling, labelling).
- Cold or frozen storage.
- Wastewater treatment.
- Waste treatment of waste generated during manufacturing;
- Impacts due to the electricity production according the proper energy mix hypotheses (see Section 7.4)

6.3 DOWNSTREAM PROCESSES

The **downstream processes** comprise quantitative information on product distribution and packaging end-of-life phase.

- Transportation from final production plants to an average distribution platform (weighted average).
- Primary packaging end-of-life.

Refrigeration at the final customer is not included as closed containers of preserved vegetables do not need any refrigeration.

7 CORE PROCESSES

7.1 SYSTEM BOUNDARIES

7.1.1 TECHNICAL SYSTEM

Data shall reflect the technology actually used. Core processes comprise the activities related to processing and packaging of products listed in Section 6.2.

Relevant hypotheses that shall be considered are:

- A minimum of 99% of all materials and substances used for one product unit shall be included.
- Products not compliant to the quality requirements and other by-products (e.g. peels, seeds, crop residues) sold as pet and livestock feed or sent to organic waste treatment shall be considered as by-products and reported as indicated in the specific section. Environmental impacts related to their management and treatment should not be included in the system boundaries.
- Wastewater treatment shall be included in the system boundaries. The use of wastewater sludge (e.g. as organic fertilizer) shall not be considered.
- Other waste generated in the production phase (including packaging waste) shall be declared as ”kg of waste” without including their treatment.
- If several production plants/farms are involved in the production chain, an average virtual plant/farm shall be defined by accounting for the annual production (expressed in mass) as the weighting factor.
- The equipment with an expected lifetime over three years, e.g. buildings shall not be included if not likely having a significant environmental impact. Maintenance of the buildings and machines with a periodicity of less than three years shall be included.
- Travel to and from work by personnel should not be included.

Any deviation from these rules must be declared in the LCA and in the EPD.

7.1.2 BOUNDARIES IN TIME

Input and output data of the core module shall reflect one reference year or an annual average of a defined reference period and be representative during the validity of the EPD.

The technical service life of infrastructures shall be defined.

7.1.3 BOUNDARIES TOWARDS NATURE

Any inputs directly from nature shall be included as well as all emissions to nature.

7.1.4 BOUNDARIES TOWARDS GEOGRAPHY

The data for the core module shall be representative for the actual production processes and representative for the site/region where the respective process is taking place.

In the case of processes performed in different countries, this should be clearly stated and the method used for calculating the average environmental impacts shall be explained in the LCA.

7.1.5 BOUNDARIES TOWARDS OTHER TECHNICAL SYSTEMS

If there is an inflow of recycled material to the production system in the production/manufacturing phase, the recycling process and the transportation from the recycling process to where the material is used shall be included. If there is an outflow of material to recycling, the transportation of the material to the recycling process shall be included. The material going to recycling is then an outflow from the production system (see General Programme Instructions).

7.2 CUT-OFF RULES

Life Cycle Inventory data for a minimum of 99% of total inflows to the core module shall be included. Inflows not included in the LCA shall be documented in the EPD.

It is important to emphasize that – in most cases – all available data shall be used. Using cut-off rules should not give the perceptions of “hiding” information, but rather to facilitate the data collection for practitioners. It is important to document parts and materials not included in the LCA.

7.3 ALLOCATION RULES

The following stepwise procedure shall be followed when necessary:

1. The allocation of the environmental impacts to co-products from multi-output unit processes within the core module should be avoided by applying a more detailed system description;
2. If allocation cannot be avoided, physical relationships (e.g. mass) between inputs and outputs of the systems should be underlined;

Products not destined to human consumption must be considered waste.

Allocation always implies valuation and the main goal for the allocation choices made for this product category is to keep the allocation methodology rather simple but transparent and maintain comparability between EPDs.

7.4 DATA QUALITY RULES

Specific data (also referred to as primary data) shall be used for the Core Module. Specific data are gathered from the sites where specific processes are carried out.

For the electricity used in the process, there are two alternatives: the company buys the energy from the electricity mix on the actual market or from a specific supplier. While in the first case the national electricity mix shall be adopted, in the second case a specific energy mix could be used if available. Electricity production impacts should be accounted for in this priority:

- RECS or Guarantee of origin from supplier
- Electricity supplier’s residual energy mix
- National mix/electricity mix on the actual market (preferably residual mix, otherwise national mix

The electricity mix used shall be documented.

8 UPSTREAM PROCESSES

For the cultivation of raw materials please refer to the existing PCRs for CPC 012 and CPC 011, 014, 017 and 019 ("Arable crops") (Section: 0 - Agriculture, forestry and fishery products. Division: 01 - Products of agriculture, horticulture and market gardening. Group: 012 – Vegetables and Group: 017 - Pulses (dried leguminous vegetables)).

8.1 SYSTEM BOUNDARIES

The processes listed in Section 6.1 shall be included in the upstream module. 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 1 % cut-off rule.

8.1.1 TECHNICAL SYSTEM

Data shall reflect the technology actually used.

The processes listed below can be excluded.

- Emissions of heavy metals from phosphorus fertilizer application.
- Leakage and emissions from pesticides.

8.2 DATA QUALITY RULES

As a general rule, specific data shall always be used if available. For the upstream module, selected generic data and other generic data may – under certain criteria -- also be used if specific data are not available.

Specific data should be used for:

- Crop yield
- Water consumption
- Fuel consumption
- Fertilizers and pesticides consumption

If specific data cannot be retrieved, selected generic data (also referred to as secondary data) are allowed to be used to substitute specific data providing they fulfil prescribed characteristics according the Annex A of General Programme Instruction.

Selected generic data may be used for:

- Emissions due to the use of fertilizers.
- Production of seeds, cuttings or plants for the cultivation.

8.2.1 RULES FOR USING GENERIC DATA

The book-keeping (attributional) LCA approach in the International EPD® System forms the basic prerequisites for selecting generic data. For allowing the use of selected generic data selected prescribed characteristics for precision, completeness and representativeness must be fulfilled and demonstrated, including but not limited to:

- Reference year to be as actual as possible, preferably being representative for at least 5 years,
- Cut-off criteria to be met on the level of the modelled product system are the qualitative coverage of at least 99% of-both the energy, the mass, and the overall relevance of the flows,
- Completeness where the inventory data set should in principle cover all elementary flows that contribute to a relevant degree of the impact categories, and
- Representativeness of the resulting inventory for the good or service in the given geographical reference should, as a general principle, be better than ± 5 %.

Data calculated with system expansion should not be used, but if no other data is available, any negative flows should be changed to zero.

If specific data cannot be retrieved, the following databases for selected generic data could be used for Europe, paying attention to the year of reference (i.e. the year for which the data is valid):

MATERIAL	DATABASE
Steel	Worldsteel www.worldsteel.org
Primary copper Copper products	ICA (International Copper Association) www.copperinfo.com ECI (European Copper Institute – Life Cycle Centre) www.copper-life-cycle.org
Electricity	Data combined with IEA (International Energy Agency) statistics on electricity generation mixes for nations, regions etc. www.iea.org/Textbase/stats/index.asp
Fuels	European Reference Life Cycle Data System" (ELCD) http://lca.jrc.ec.europa.eu/
Aluminium	EAA (European Aluminium Association) www.aluminium.org
Plastics	PE Plastics Europe (former APME Association of Plastics Manufacturers in Europe) www.plasticseurope.org
Chemicals	PE Plastics Europe (former APME Association of Plastics Manufacturers in Europe) www.plasticseurope.org
Transports	NTM (Network for Transport and Environment) or regional alternatives www.ntm.a.se/eng-index.asp
Building materials and products	BEES (Building for Environmental and Economic Sustainability www.bfrl.nist.gov/oae/software/bees.html
Waste management	European Reference Life Cycle Data System" (ELCD) http://lca.jrc.ec.europa.eu/

In other parts of the world other databases may be more appropriate.

Note that any credits (for avoided impacts) shall be included in data used from databases. Data from databases using data calculated with a consequential approach using system expansion and credits are not permitted in LCA for EPDs. If no other data are available for a certain input all negative parameters shall be set to zero.

If specific data, selected generic data or other data that meets the requirements of the International EPD® System is not available as the necessary input data, other generic data may be used and documented. The environmental impacts associated to other generic data must not exceed 10% of the overall environmental impact from the product system.

8.2.2 DATA QUALITY DECLARATION

The EPD® may include an indicator suitable for demonstrate the relevance of specific, selected generic and other generic data.

8.3 OTHER CALCULATION RULES

If there are no site or region-specific data available, emissions due to fertilizer use shall be calculated according to the rules described by PCR for CPC 011, 014, 017 and 019 ("Arable crops") Section 8.4.

9 DOWNSTREAM PROCESSES

The processes listed in Section 6.3 shall be included in the downstream module. The downstream module shall be based on relevant scenarios for the geographical area in which the EPD® is valid.

9.1 TRANSPORT TO AN AVERAGE DISTRIBUTION PLATFORM

Transport of the product to an average distribution platform shall, as a first option, be based on the actual transportation distances. As a second option, it could be calculated as the average distance of a product of that product type transported with different means of transport or, if also such data is not available be calculated as a fixed long transport such as e.g.1,000 km distance transport with lorry or 10,000 km by airplane, according to product type.

9.2 END-OF-LIFE OF PACKAGING

End-of-life scenarios for packaging shall be defined in the EPD. The information shall be technically and economically practicable, and compliant with current regulations.

10 ENVIRONMENTAL PERFORMANCE-RELATED INFORMATION

10.1 USE OF RESOURCES

The consumption of natural resources and resources per declared unit shall be reported in the EPD, divided into core, upstream and, if relevant, downstream processes.

Input parameters, extracted resources:

- Non-renewable resources
  - Material resources
  - Energy resources (used for energy conversion purposes)
- Renewable resources
  - Material resources
  - Energy resources (used for energy conversion purposes)
- Secondary resources
  - Material resources (see content declaration, section 4.)
  - Energy resources (used for energy conversion purposes)
- Recovered energy flows (such thermal) expressed in MJ
- Water use divided in:
  - Total amount of water
  - Direct amount of water used by the core process

The following requirements on the resource declaration also apply:

- all parameters for resource consumption shall be expressed in mass, with the exception of renewable energy resources used for the generation of hydroelectric, wind electricity and solar energy, which shall be expressed in MJ;

- all parameters shall not be aggregated but reported separately. Resources which contribute for less than 5% in each category shall be included in the resources list as “other”;
- nuclear power shall be reported among the non-renewable energy resources as kg of uranium calculated by converting the thermal energy (MJ) considering a reactor of III generation with an efficiency of 33%).

10.2 POTENTIAL ENVIRONMENTAL IMPACTS

The following potential environmental impacts shall be reported in the EPD:

- Emission of greenhouse gases (expressed as the sum of global warming potential, GWP, 100 years), in CO_2 equivalents. Information about biogenic CO_2 emissions is optional. If reported the biogenic CO_2 emissions shall be separated from fossil CO_2 and other greenhouse gases, CO_2 sequestration shall not be considered, emissions from land use change should be included.
- Emission of acidifying gases (expressed as the sum of acidification potential expresses in sulphur dioxide (SO_2) equivalents).
- Emissions of gases that contribute to the creation of ground level ozone (expressed as the sum of ozone-creating potential, ethene-equivalents).
- Emission of substances to water contributing to oxygen depletion (expressed as PO_4^{3-}-equivalents).

The recommended characterisation factors to use are available on the website, www.environdec.com.

10.2.1 SPECIFICATIONS FOR GWP CALCULATIONS

Both emissions to the atmosphere and removals from the atmosphere shall be accounted for the assessment of the overall GHG emissions of the product being assessed. This assessment shall include the gases arising from both fossil and biogenic sources for all products, with the exception of human food and animal feed products. Emissions and removals of biogenic carbon shall be reported separately.

Where some or all removed carbon will not be emitted to the atmosphere within the 100-year assessment period, the portion of carbon not emitted to the atmosphere during that period shall be treated as stored carbon. Following issues shall be taken into account:

- carbon storage might arise where biogenic carbon forms part or all of a product (e.g. wood fibre in a table), or where atmospheric carbon is taken up by a product over its life cycle (e.g. cement),
- while forest management activities might result in additional carbon storage in managed forests through the retention of forest biomass, this potential source of storage is not included in the scope of the International EPD® System.

GHG emissions offset mechanism shall not be used at any point in the assessment of the GHG emissions of the product. The organisation could declare its participation to some offsetting program in the other information section of the EPD® or single issue EPD.

10.3 WASTE PRODUCTION

Waste generated along the whole life cycle production chains shall be treated following the technical specifications described in the General Programme Instructions. When the amount of waste has to be declared, the following information shall be reported:

- Hazardous waste, in kg (as defined by regional directives)
- Non-hazardous waste, in kg
- By-products, in kg

10.4 OTHER ENVIRONMENTAL INDICATORS

The following indicators shall be reported in the EPD, divided into the two or three modules (if applicable):

- **Land use**: m^2a (in case of land occupation)
  - Volume and/or surface used of specified land category (e.g. according to Corine Land Cover Classes level one at a minimum - 5 classes)
  - Number of years that the areas are occupied

The following issues could be addressed.

- **Human toxicity**. This category concerns effects of toxic substances on the human environment. Characterisation factors, Human Toxicity Potentials (HTP), are calculated with USES-LCA, describing fate, exposure and effects of toxic substances for an infinite time horizon. For each toxic substance HTP's are expressed as 1,4-dichlorobenzene equivalents/ kg emission.
- **Freshwater aquatic eco-toxicity**. This category indicator refers to the impact on fresh water ecosystems, as a result of emissions of toxic substances to air, water and soil. Eco-toxicity Potential (FAETP) is calculated with USES-LCA, describing fate, exposure and effects of toxic substances. The time horizon is infinite. Characterisation factors are expressed as 1,4-dichlorobenzene equivalents/kg emission.

10.5 ADDITIONAL ENVIRONMENTAL INFORMATION

Under this heading information that is not part of the LCA but identified as an important environmental aspect of the product or information asked for by customers and other stakeholders, shall be declared. Any literature reference or methodology used to acquire and describe additional environmental information shall be openly accessible and made available to the verifier.

The following issues should be addressed.

- **Recycling of primary packaging**: recommendations for the responsible and correct recycling of packaging materials and the potential environmental impacts and benefits of recycling of primary packaging.

11 CONTENT OF THE EPD®

As a general rule the EPD® content:

- must be verifiable;
- must not include rating, judgements or direct comparison with other products.

EPD®s can be published on several languages, but if the EPD® document is not available in English, the organisation shall provide a summary in English including the main content of the EPD® to be available on www.environdec.com.

The EPD® cover page (if existent) shall as a minimum include relevant information about the product, such as name and an image, the EPD® logotype and date of publication and validity

11.1 PROGRAMME RELATED INFORMATION

The programme related part of the EPD shall include:

- Reference to the International EPD® System as the programme operator
- EPD® logotype
- Reference PCR document(s) and CPC codes
- EPD® registration number as provided by the Secretariat

- Date of publication and validity. If relevant, the revision schedule may be indicated.
- Declaration of the year(s) covered by the data used for the LCA calculation
- Geographical scope of application of the EPD®
- Reference to the website – www.environdec.com – and other relevant websites for more information.

11.2 PRODUCT RELATED INFORMATION

11.2.1 SPECIFICATION OF THE PRODUCTION COMPANY

See 2.1

11.2.2 SPECIFICATION OF THE PRODUCT

See 2.2

11.2.3 DECLARED UNIT

See 3

11.3 CONTENT DECLARATION

See Section 4

11.4 ENVIRONMENTAL PERFORMANCE-RELATED INFORMATION

Upstream, Core and downstream processes shall be reported separately for the resource use, potential environmental impact and other indicators such as waste.

11.4.1 USE OF RESOURCES

In this category the consumption of natural resources and resources per declared unit shall be reported. See 10.1

11.4.2 POTENTIAL ENVIRONMENTAL IMPACT

In this category the potential environmental impact per declared unit shall be reported.

See 10.2

11.4.3 OTHER ENVIRONMENTAL INDICATORS

In this category relevant indicators shall be reported per declared unit.

See 10.3

11.5 ADDITIONAL ENVIRONMENTAL INFORMATION

See 10.4

11.6 MANDATORY STATEMENTS

The following information is mandatory to include in the EPD:

- any omission of life cycle stages not making the EPD cover the full life cycle, with a justification of the omission,
- means of obtaining explanatory materials, for example references to chosen methodologies,
- a statement that “EPDs within the same product category but from different programmes may not be comparable”.

The EPD shall also give the following information about the verification process:

Product Category Rules (PCR) review was conducted by: *The Technical Committee of the International EPD® System. Chair: Massimo Marino.* *Contact via info@environdec.com.*
Independent verification of the declaration and data, according to ISO 14025:2006: □ EPD process certification □ EPD verification
Third party verifier: *Name and contact information* Accredited or approved by: *Name of the accreditation body. For individual verifiers: “The International EPD® System”*

11.7 DIFFERENCES VERSUS PREVIOUS VERSIONS OF THE EPD®

The main causes for changes in environmental performance in comparison with previous EPD versions shall be described shortly.

11.8 REFERENCES

The EPD shall, if relevant, refer to:

- The underlying LCA
- The PCRs used
- Other documents that verify and complement the EPD
- Instruction for recycling
- Programme instructions
- Sources of additional information

12 VALIDITY OF THE EPD®

The validity of the EPD is set at three years after which the declaration must necessarily be revised and reissued.

During the validity period surveillance follow up shall be agreed with the verifier in order to evaluate if the content are still consistent with the current situation. It is not necessary to perform a full LCA, only the monitoring of main parameters is requested. The surveillance verification could be organised as documental check aimed to the evaluation of the main environmental aspects relevant for the LCA calculation.

The EPD shall be updated if one of the environmental indicators has worsened for more than 10% compared with the data currently published.

The validity of the EPD shall be reported in the EPD.

During the validation maintenance procedure, at least the following parameters should be monitored:

- Yield

- Water consumption
- Electricity and fuel consumption
- Product composition
- Packaging

13 CHANGES IN THIS PCR DOCUMENT

VERSION 1.0, 2014-05-21

Original version, aligned with the network of PCRs for food.

VERSION 1.01, 2015-10-16

Minor editorial edit by the Secretariat:

- Updated General introduction
- Definition of product group was clarified to include Beans, soya, otherwise prepared or preserved, not frozen

VERSION 1.02, 2016-04-28

Minor editorial edit by the Secretariat:

- Expanded scope to include plant milk (no suitable CPC classification available). The name of the PCR was changed to include plant milk
- Editorial changes and minor editions