

PRODUCT GROUP: UN CPC 6811
POSTAL SERVICES

2014:01
VERSION 1.0



TABLE OF CONTENTS

General Introduction	3
1 General information	4
2 Definition of the product group	5
2.1 Specification of Service provider Company	5
2.2 Specification of the product	5
3 Functional unit	6
4 Content declaration	6
5 Units and quantities	7
6 General system boundaries	7
7 Core Module	8
7.1 System boundaries	8
7.2 Cut-off rules	8
7.3 Allocation rules	8
7.4 Data quality rules	9
8 Upstream Module	9
8.1 System Boundaries	9
8.2 Data quality rules	10
9 Downstream Module	10
9.1 Recycling declaration and waste treatment	10
10 Environmental performance-related information	11
10.1 Use of resources	11
10.2 Potential environmental impact	11
10.3 Waste production	12
10.4 Other environmental indicators	12
11 Content of the EPD®	12
11.1 Programme related information	12
11.2 Product related information	12
11.3 Environmental performance-related information	13
11.4 Differences versus previous versions of the EPD	13
11.5 Verification	13
11.6 References	14
12 List of shortenings and explanations	14
13 Validity of the EPD®	14
14 Changes in this PCR document	14
15 Appendix default emission factors and other default data	15
15.1 CO ₂ emissions factors – electricity	15
15.2 CO ₂ , ch ₄ , and n ₂ 0 emissions factors – other energy types	15
15.3 Global warming potential	15
15.4 Other characterisation factors	15

PRODUCT GROUP: UN CPC 6811
POSTAL SERVICES

GENERAL INTRODUCTION

This is a Product Category Rules (PCR) document developed in the framework of the International EPD® System, operating in accordance with ISO 14025:2006 and 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

The International EPD® System is a system of voluntary environmental declarations applicable to any type of goods and services. The rules and requirements of the system are defined in the General Programme Instructions, available at the website: www.environdec.com.

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. This 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.

In the case of building 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, if relevant. The compliance with these standards shall be defined in each PCR.

The principle programme elements in International EPD® System are presented below. More information is available in the General Programme Instructions and on the website:

PURPOSE	ELEMENT IDENTIFICATION AND PRINCIPAL APPROACH
Complying with principles set in ISO 14025 on modularity and comparability	1. "Book-keeping LCA approach" (attributional LCA) 2. A Polluter-Pays (PP), allocation method
Simplifying work to develop Product Category Rules (PCR)	3. PCR Module Initiative (PMI) in order to structure PCR in modules according to international classification 4. PCR Moderator for leadership and support of the PCR work 5. Pre-certification of EPDs
Secure international participation in PCR work	5. Online PCR Forum for open and transparent stakeholder consultation
Facilitating identification and collection of LCA-based information	6. Selective data quality approach for specific and generic data
Broaden market applications of EPDs	8. Introducing Sector EPDs 9. Introducing "Single-issue EPDs"
Expand possibilities for organisations to issue EPDs in a cost-effective way	10. Introducing "EPD process certification"

Alignment of Product Category Rules (PCR) across intermediate and final products in the supply chain and of PCRs developed in the framework of other ISO 14025 compliant programmes is strongly encouraged. In order to have a unique identification of each product group, the United Nation Statistics Division - Classification Registry CPC codes (<http://unstats.un.org>) are used in the International EPD® System.

All PCR documents have a maximum period of validity after which the document shall be revisited.

PRODUCT GROUP: UN CPC 6811
POSTAL SERVICES

1 GENERAL INFORMATION

Name:	Postal services
Programme operator:	The International EPD® System, www.environdec.com . E-mail: info@environdec.com
Date:	2014-02-11
Registration no:	2014:01
This PCR was prepared by:	IPC, International Post Corporation together with a working group of four posts: Correos (Spain), CTT (Portugal), PostNord (Denmark/Sweden) and US Postal Service (USA)
Appointed PCR moderator:	Pieter Reitsma, Manager Sustainability, IPC pieter.reitsma@ipc.be
Open consultation period:	2013-09-11 until 2013-11-11
Review panel for this PCR:	The Technical Committee of the International EPD® System
Valid within the following geographical representativeness:	Global
Valid until:	2017-02-11
More information on this PCR's website:	http://environdec.com/en/PCR/Detail/?Pcr=9382 

This document provides Product Category Rules (PCR) for the assessment of the environmental performance of UN CPC 6811 (Postal services) and the declaration of this performance by an EPD.

This PCR complies and has been developed in accordance 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 68: Postal and courier services", Version 1.0, dated 2009-08-06.

Postal operators are increasingly interested in demonstrating a strong environmental commitment and performance. Many postal operators have made their own declarations and independent life cycle assessments (LCA). In order to provide a common framework as a starting point to streamline these initiatives, this PCR has been developed by a working group of four posts (Correos (Spain), CTT (Portugal), PostNord (Denmark/Sweden) and US Postal Service (USA)). This PCR specifies the requirements to develop an LCA for postal organisations and sets the minimum criteria to create their environmental product declarations according to ISO (14025 and 14067). If you are to follow the ISO-standards such PCR has to be developed within a programme (as EPD).

Posts are recommended to report potential environmental impacts as mentioned in paragraph 10.2. However, every post is free to report any potential impact (for example only CO₂). To provide maximum transparency, any differences against the PCR should be explained clearly in the resulting environmental product declaration. As an example, US Postal Service does calculate emissions from other gasses, and reports those as CO₂equivalent, measured in metric tons. A postal operator can choose to only report CO₂, or other gasses aggregated as CO₂equivalent or report separately, as long as it is fully clear and transparent about what has been reported.

PRODUCT GROUP: UN CPC 6811
POSTAL SERVICES

Any comments to this PCR document may be given on the Global PCR Forum or directly to the PCR moderator during the period of validity.

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 any changes will be published on the international website: www.environdec.com.

The EPD shall refer to a specific PCR version number. The production of new PCR versions does not affect the EPD certification period.

2 DEFINITION OF THE PRODUCT GROUP

Included in this product group are physical postal services e.g. letters, non-addressed mail and parcels, as defined by UN CPC 6811. Further information about the classification may be found at: <http://unstats.un.org/unsd/cr/registry/regcs.asp?Cl=25&Lg=1&Co=6811>

The product group and CPC code shall be specified in the EPD.

2.1 SPECIFICATION OF SERVICE PROVIDER COMPANY

This section highlights all information related to the service provider company that is required in the EPD, separated into mandatory and voluntary items.

Mandatory information:

- company
- sites involved in the collection, sorting, transport and distribution
- issuer and contact information

Examples of voluntary information:

- ISO 14001 and/or EMAS certificate
- environmental policy
- information about industry-specific partnerships such as the IPC EMMS programme

2.2 SPECIFICATION OF THE PRODUCT

The minimum required categorization is the division of physical postal products between Letters / Unaddressed and Parcels; using the Universal Postal Union (UPU) definitions. Posts have the option of utilizing more granular categorization of postal products, if available.

In the EPD, posts shall at least describe: the time of delivery (J+1, J+2 etc.) and the coverage area of the postal service (national, continental, international, global).

Letters:

A letter is distributed by physical means of transportation. It is addressed mail that is enclosed in an envelope or other wrapping weighing at most 2 kg. For the minimum and maximum dimensions of a letter please refer to UPU-article RL 122.

Unaddressed mail:

Unaddressed mail shall not be addressed. Unaddressed mail is transported traditionally or by a combination of physical and electronic transportation. Unaddressed mail has a maximum weight of 2 kg, for the minimum and maximum dimension please refer to the same as for Letters, see above.

PRODUCT GROUP: UN CPC 6811
POSTAL SERVICES

Parcels:

A parcel may weigh up to 50 kg. For the minimum and maximum dimensions of a parcel please refer to the relevant UPU-articles.

	Letter / Unaddressed	Parcel
Weight	< 2kg	≥ 2kg < 50kg

Posts that are capable of realistically dividing their product-processes further are encouraged to do so; for example, a split between Letters / Unaddressed, Parcels and Extra-large Parcels or between Letters / Unaddressed, Packages and Parcels.

	Letter / Unaddressed	Parcel	Extra-large parcel
Weight	< 2kg	≥ 2kg < 30kg	≥ 30kg

	Letter / Unaddressed	Package	Parcel
Weight	< 100grams	≥ 100grams < 2kg	≥ 2kg < 50kg

3 FUNCTIONAL UNIT

The functional unit for letters and non-addressed mails is **one average gram of a delivery** of the defined service.

The functional unit for parcels is **one average kilogram of a delivery** of the defined service.

When using the above functional units, posts are obliged to provide the average distance of a delivery.

A more advanced functional unit would be **'one average gram per 100,000 kilometres of a delivery'**. Although this functional unit would be undoubtedly more accurate, it would also be, because of the multitude of products and routes, extremely complex to calculate.

If a Post prefers to use the functional unit 'per item', that Post can multiply the average weight of a letter or parcel with the amount per 'average gram of a delivery' of such letter or parcel.

If available, Posts are encouraged to utilize more defined units that include weight, cube dimensions, mode of transportation and distances travelled from entry to delivery.

It is possible to use an additional functional unit in the EPD, however, it needs to be both properly defined and justified. The defined system boundaries must be respected. For example, the functional unit could perhaps be expressed in terms of amount of information.

4 CONTENT DECLARATION

This section is not relevant as this is a service PCR.

5 UNITS AND QUANTITIES

The International System of Units (“SI units”) shall be used in all notations unless otherwise stated. The preferred power and energy units:

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

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

6 GENERAL SYSTEM BOUNDARIES

Figure 1 shows the general system boundaries. Further information is available in the following sections of this PCR.

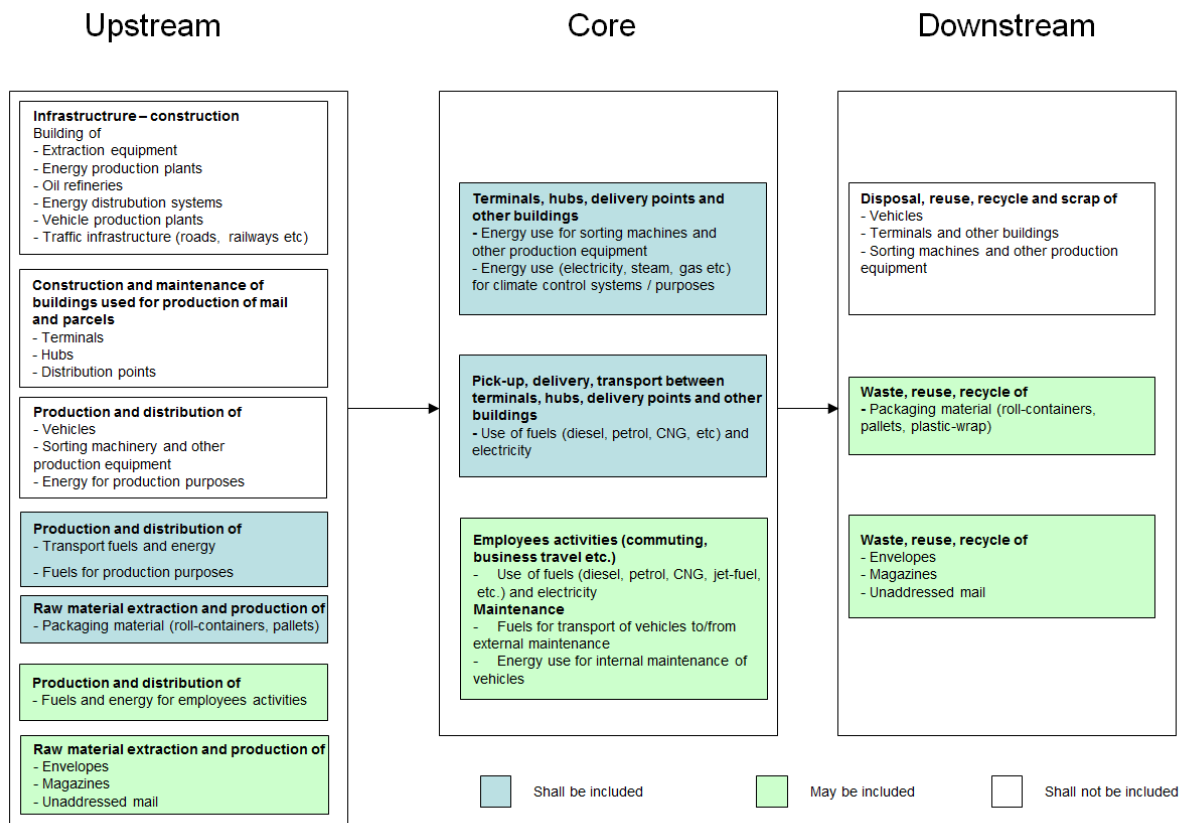


Figure 1: An overview of Core Module (core process) and the upstream and downstream processes.

The overview shows a relatively small mandatory (blue) part, more advanced posts however can extend to the green part where they feel comfortable. For ‘production and distribution of transport fuels and energy and fuels for production purposes’ we refer to generic data that can be found (in Europe) in ELCD and (in the US) in the US LCI. Commercial LCA databases such as Ecoinvent and GaBi may also be used. For ‘own-operated (internal) vehicle maintenance’ we refer to fuel usage to and from the garage / service-station and the use of electricity and heating of the garage / service station; for ‘outsourced (external) vehicle maintenance’ we refer to fuel usage to and from the garage / service-station.

In the LCA, the environmental performances associated with each of the three life-cycle stages above are reported separately.

PRODUCT GROUP: UN CPC 6811
POSTAL SERVICES

7 CORE MODULE

7.1 SYSTEM BOUNDARIES

The main activity that has to be included in the core module is the collection, sorting, transportation and distribution of postal services. The main environmental aspects that have to be considered are:

- Energy use for sorting machines and other production equipment
- Heat, climate control systems and electricity use in buildings
- Use of fuels in transport (diesel, petrol, electricity etc.)
- Maintenance of vehicles includes transportation of vehicles and loading units to maintenance areas

The activities of both the own-operations and the activities carried-out through subsidiaries and subcontractors should be included.

7.1.1 GEOGRAPHICAL BOUNDARIES

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.

The geographical coverage for both the EPD and the LCA shall be clearly defined (national, regional, international etc.). The geographic field of the activities concerning sorting, storage and distribution of letters and parcels shall be described in the LCA.

7.1.2 TIME BOUNDARIES

The time period for which the LCA results are collected shall be defined. The data should be representative of the years/time frame for which this PCR is valid.

7.1.3 BOUNDARIES TO OTHER PRODUCT LIFE CYCLES

The boundaries in the life cycle are illustrated in the system boundary chart in figure 1. The manufacturing, use and end-of-life treatment of the transported goods shall not be included. Building of site, infrastructure and production of manufacturing equipment, including means of transportation, shall not be included.

Employee activities such as commuting, business travel and energy use in headquarters may be included. If personnel activities are included they shall be reported separately and in a transparent manner.

7.2 CUT-OFF RULES

Processes/activities that altogether do not contribute to more than 5% of the total environmental impact (within the system boundaries) for any impact category are can be omitted from the inventory analysis. Parts and materials not included in the LCA shall be documented.

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.

The general idea could be to avoid as much as possible the cut off of environmental aspects. Cut-off should be an output of the sensitivity analysis based on the LCI results and it shall be discussed during the LCA verification.

7.3 ALLOCATION RULES

When any activity, related to the above mentioned products, is carried out jointly for some of them, using the same infrastructures or equipment, the environmental impact allocation shall be weight-based, using the best available approach. If weight-based is not feasible a cost-based allocation can be used. Further sensitivity analyses shall be carried out in an LCA.

PRODUCT GROUP: UN CPC 6811
POSTAL SERVICES

7.4 DATA QUALITY RULES

- Both owned and leased buildings shall be included. The data shall be site-specific if no exception is made in these calculation rules
- Both own operated and subcontracted transports shall be included

Relevant PCR on transport should be used as much as possible when calculating emissions from transport (own and subcontracted).

When calculating emissions from own operated transport, calculations shall be based on fuel consumption data and calculated using own, national, source- or facility specific emission factors if available. If no own, national, source or facility specific emission factors can be used, default internationally accepted emission factors, as referred to in Chapter 15 (page 15), should be used. A source or reference for the emission factors used shall be documented (for example 'in line with EN16258').

When calculating emissions from subcontracted transport, calculations should be done in the same way as own operated transport. If no data is available, emissions should be calculated using freight transport in tonne-kilometres. Generally calculations should fully be in line with GHG / EMMS / ISO14064.

Specific data (also referred to as primary data) shall be used for the Core Module. Specific data are gathered from the actual manufacturing plant(s) where specific processes are carried out and data from other parts of the lifecycle traced to the specific product system under study, e.g. materials or electricity provided from a contracted supplier being able to provide data for the actual delivered services, transportation taking place based on the actual fuel consumption and related emissions, etc.

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 mix of electricity shall be documented.

8 UPSTREAM MODULE

8.1 SYSTEM BOUNDARIES

Production and distribution of fuels and energy

Raw material extraction and production of fuel may be included.

The calculation of impacts at each stage of the LCA, from raw material extraction to final service provision, should be made using credible, accepted and transparent data sources. Where available, we would encourage the use of national or regional level data sources.

For example, in the U.S, relevant data may be obtained through organisations such as the Energy Information Administration <http://www.eia.gov/>. Reliable data sources should be obtained specific to the region(s) in which you operate, such as the South African Chamber of Mines.

If required, international sources may also be used, with data obtained through reliable institutions such as the International Energy Agency <http://www.iea.org/>.

When electricity is known to its source or supplier, and there is specific LCA data available, this data shall be used. If the supplier's mix is not available, the national or regional electricity mix shall be used.

Production of packaging material/envelope may be included. It shall be clearly defined in the EPD and reported separately. If the supplier is known and there is specific LCA data available, this data shall be used. If specific data is

PRODUCT GROUP: UN CPC 6811
POSTAL SERVICES

not available, default data can be used. Relevant PCR should be used when calculating production of packaging material/envelope.

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.

8.2.1 RULES FOR USING GENERIC DATA

The book-keeping (attributorial) 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 $\pm 5\%$.

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, 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.

9 DOWNSTREAM MODULE

Waste, reuse and recycle of packaging material/envelope may be included. It shall be clearly defined in the EPD and reported separately.

9.1 RECYCLING DECLARATION AND WASTE TREATMENT

Recommendations for waste treatment may be included in the EPD. The potential environmental impact and benefit of reuse, recycling and waste-treatment (based on scenarios for the intended market or markets) may be included in the EPD, but should be presented separately from other results. *Reuse* is any operation by which products or components (that are not waste) are used again for the same purpose for which they were conceived (e.g. using the same box again. It is important that a well-founded estimation of the number of reuses is made. *Recycling* is any recovery operation by which waste materials are reprocessed into products, materials or substances, whether for the original or other purposes (e.g. process a box to get paper/cardboard for producing new products).

Waste management of transport packaging shall be included in the downstream module, based on scenarios for the relevant market.

10 ENVIRONMENTAL PERFORMANCE-RELATED INFORMATION

10.1 USE OF RESOURCES

The consumption of natural resources and resources per functional unit may be reported in the EPD, divided into core, upstream and, if relevant, downstream modules.

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
 - 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;
- 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%;
- renewable energy obtained from the grid is only to be included as such if it is certified.

10.2 POTENTIAL ENVIRONMENTAL IMPACT

The environmental impact per functional unit for the following environmental impact categories shall be reported in the EPD, divided into core, upstream and downstream module:

- emissions of greenhouse gases (expressed in global warming potential, GWP, in 100 years, CO₂-eq.)
- emissions of ozone-depleting gases (expressed as the sum of ozone-depleting potential in CFC 11-equivalents, 20 years)
- emissions of acidification gases (expressed as the sum of acidification potential expressed in SO₂-eq.)
- emissions of gases that contribute to the creation of ground level ozone (expressed as the sum of ozone-creating potential, ethane-equivalents)
- emissions of substances to water contributing to oxygen depletion (expressed as PO₄³⁻-eq.).

See 15.3 and 15.4 for sources of recommended characterisation factors.

PRODUCT GROUP: UN CPC 6811
POSTAL SERVICES

10.3 WASTE PRODUCTION

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

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

10.4 OTHER ENVIRONMENTAL INDICATORS

Information about biogenic CO₂ emissions is not necessary. If reported, the biogenic CO₂ emissions shall be separated from the other greenhouse gases (expressed in global warming potential, GWP, in 100 year perspective)

11 CONTENT OF THE EPD[®]

11.1 PROGRAMME RELATED INFORMATION

Name of the programme and programme operator

- Name of the programme and the programme operator
- The reference PCR document
- Registration number
- Date of publication and validity
- Geographical scope of application of the EPD if deviating from an international coverage
- Information about the year or reference period of the underlying data to the EPD
- Reference to the website — www.environdec.com — for more information.

11.2 PRODUCT RELATED INFORMATION

11.2.1 SPECIFICATION OF THE SERVICE PROVIDER COMPANY

See 2.1

11.2.2 SPECIFICATION OF THE PRODUCT

See 2.2

11.2.3 FUNCTIONAL UNIT

See 3

11.2.4 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.

PRODUCT GROUP: UN CPC 6811
POSTAL SERVICES

11.2.5 VALIDITY OF THE EPD

The geographical area and the time during which the EPD is valid shall be reported in the EPD.

11.3 ENVIRONMENTAL PERFORMANCE-RELATED INFORMATION

11.3.1 USE OF RESOURCES

In this category the consumption of natural resources and resources shall be reported

See 10.1

11.3.2 POTENTIAL ENVIRONMENTAL IMPACT

In this category the potential environmental impacts shall be reported.

See 10.2

11.3.3 OTHER ENVIRONMENTAL INDICATORS

In this category relevant indicators shall be reported

See 10.3

11.4 DIFFERENCES VERSUS PREVIOUS VERSIONS OF THE EPD

When changes are made, compared to previous EPD version, those changes will be made transparent.

11.5 VERIFICATION

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

Product Category Rules (PCR) review was conducted by: <i>The Technical Committee of the International EPD® System. Chair: Massimo Marino.</i> <i>Contact via info@environdec.com.</i>
Independent verification of the declaration and data, according to ISO 14025:2006: <input type="checkbox"/> EPD process certification <input type="checkbox"/> EPD verification
Third-party verifier: <i>Name and contact information</i>
Accredited or approved by (if relevant): <i>Name of the accreditation body</i>

PRODUCT GROUP: UN CPC 6811
POSTAL SERVICES

11.6 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 LIST OF SHORTENINGS AND EXPLANATIONS

LCA	Life-cycle assessment
EPD	Environmental product declaration
PCR	Product Category Rules
LPG	Liquid petroleum gas
CPC	Central Product Clarification
ISO	International Organisation for Standardisation
EMAS	EU Eco-Management and Audit Scheme
UPU	Universal Postal Union
EN	European Standards
RECS	Renewable Energy Certificate System
GWP	Global Warming Potential
CFC	Chlorofluorocarbon

13 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 is 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 checks aimed to evaluate the main environmental aspects relevant for the LCA calculation.

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

14 CHANGES IN THIS PCR DOCUMENT

VERSION 1.0, 2014-02-11

First publication, replacing the expired PCR 2003:07 Distribution of messages, letters and parcels.

15 APPENDIX DEFAULT EMISSION FACTORS AND OTHER DEFAULT DATA

15.1 CO₂ EMISSIONS FACTORS – ELECTRICITY

CO₂ emissions factors for electricity differ between countries on an annual basis due to changes in grid mixes.

For 2013 data see: Table "CO₂ emissions per kWh from electricity generation (by country)", pages 110 to 112 of International Energy Agency's 2013 report "CO₂ emissions from fuel combustion – Highlights (2013 edition)":
<http://www.iea.org/publications/freepublications/publication/CO2EmissionsFromFuelCombustionHighlights2013.pdf>

15.2 CO₂, CH₄, AND N₂O EMISSIONS FACTORS – OTHER ENERGY TYPES

For CO₂, CH₄ and N₂O emissions factors for other energy types, refer to "Table 2.2. Default emission factors for stationary combustion in the energy industries (kg of greenhouse gas per TJ on a Net Calorific Basis)", p.16, in the "2006 IPCC Guidelines for National Greenhouse Gas Inventories". http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf

15.3 GLOBAL WARMING POTENTIAL

Global warming potentials (GWP) are available from the IPCC 2007 report:
http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

15.4 OTHER CHARACTERISATION FACTORS

Characterisation factors, other than GWP, are available from a number of sources including:

- The International EPD® System (<http://www.environdec.com/en/The-International-EPD-System/General-Programme-Instructions/Recommended-characterisation-factors/>)
- ReCiPe (<http://www.lcia-recipe.net/>)
- CML (<http://cml.leiden.edu/software/data-cmlia.html>)

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