PUBLIC AND PRIVATE BUSES AND COACHES

PRODUCT CATEGORY CLASSIFICATION: UN CPC 49112 & 49113

PCR 2016:04
VERSION 2.0.4

VALID UNTIL: 2026-06-04

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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. Environmental Product Declarations (EPD) are voluntary documents for a company or organisation to present transparent information about the life cycle environmental impact for their goods or services.

The rules for the overall administration and operation of the programme are the General Programme Instructions, publicly available at www.environdec.com. A PCR complements the General Programme Instructions and the 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.

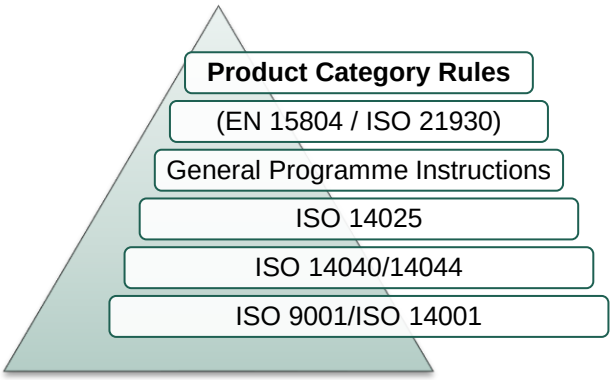

Figure 1 Illustration PCR in relation to the hierarchy of standards and other documents.

Within the present PCR, the following terminology is adopted:

- The term “shall” is used to indicate what is obligatory.
- The term “should” is used to indicate a recommendation, rather than a requirement.
- The term “may” or “can” is used to indicate an option that is permissible

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

Any references to this document should 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 when necessary, and 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 EPD, Environmental Product Declarations.

2 GENERAL INFORMATION

2.1 ADMINISTRATIVE INFORMATION

Name:	Public and private passenger buses and coaches
Registration no:	2016:04, version 2.0.4
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:	Gorka Benito Alonso, IK INGENIERIA, g.benito@ik-ingenieria.com
PCR Committee:	IK INGENIERIA, IRIZAR GROUP, IVL, MOVIA TRAFIK
Date of publication:	2025-08-05 (Version 2.0.4) Version 1.0 was published 2016-05-02. A version history is available in Section 7.
Valid until:	2026-06-04
Schedule for renewal:	A PCR is valid for a pre-determined period of time 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 document and renewing its validity. A PCR document may be revised during its period of validity provided significant and well-justified proposals for changes or amendments are presented. See www.environdec.com for up-to-date information and the latest version.
Reference documentation	▪ General Programme Instruction version 3.01. 2019-09-18 ▪ PCR Basic Module, CPC Division 49 “Transport equipment”, version 3.02, dated 2020-04-28 ▪ PCR 2009:05 Rolling stock (Version 3.02) ▪ PCR 2018:09 Business jets (Version 1.03) ▪ PCR 2015:02 Passenger commercial aeroplanes (Version 1.0) ▪ The UNECE Transport Division Vehicle Regulations, providing services to the World Forum for Harmonization of Vehicle Regulations (WP.29) ▪ Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC (Text with EEA relevance.) ▪ Regulation (EC) No 595/2009 of the European Parliament and of the Council of 18 June 2009 on type-approval of motor vehicles and engines with respect to

	emissions from heavy duty vehicles (Euro VI) and on access to vehicle repair and maintenance information ▪ Regulation No 101 of UNECE Vehicle Regulations - approval of passenger cars powered by an internal combustion engine or powered by a hybrid electric power train with regard to the measurement of the emission of carbon dioxide and fuel consumption and/or the measurement of electric energy consumption and electric range, and of categories M1 and N1 vehicles powered by an electric power train only with regard to the measurement of electric energy consumption and electric range ▪ Directive 2005/64/EC of the European Parliament and of the Council of 26 October 2005 on the type-approval of motor vehicles with regard to their reusability, recyclability and recoverability ▪ Regulation (EU) No 540/2014 of the European Parliament and of the Council of 16 April 2014 on the sound level of motor vehicles and of replacement silencing systems, and amending Directive 2007/46/EC and repealing Directive 70/157/EEC ▪ Regulation No 51 of UNECE Vehicle Regulations – Noise emissions ▪ ISO 22628 Road vehicles-Recyclability and recoverability –Calculation method ▪ Directive 2009/33/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of clean and energy-efficient road transport vehicles (Text with EEA relevance)
PCR language:	This PCR was developed and is available in English, as is mandated by the General Programme Instructions. The English version takes precedence in case of any discrepancies in translated versions.

2.2 SCOPE OF THE PCR

2.2.1 PRODUCT CATEGORY DEFINITION

This PCR applies only to public and private passenger buses and coaches, which are every single-deck, double-deck, rigid or articulated road vehicles of category M1, M2 or M3 as defined in Regulation (EU) 2018/858 (and its amendments):

- Category M1: Vehicles designed and constructed for the carriage of passengers and comprising no more than eight seats in addition to the driver's seat, when they are classified as buses (regular cars are not included in the scope of this PCR).
- Category M2: Vehicles designed and constructed for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass not exceeding 5 tonnes.
- Category M3: Vehicles designed and constructed for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass exceeding 5 tonnes.

Inside M2 and M3 Category, it also applies for vehicles of:

- "Class I": vehicles constructed with areas for standing passengers, to allow frequent passenger movement
- "Class II": vehicles constructed principally for the carriage of seated passengers, and designed to allow the carriage of standing passengers in the gangway and/or in an area which does not exceed the space provided for two double seats
- "Class III": vehicles constructed exclusively for the carriage of seated passengers

All type of powertrains (diesel, gasoline, LPG, CNG, electric and hybrid) are included under the scope of this PCR.

The types of bodywork and codifications pertinent to the vehicles of category M are defined in Article 4 of Regulation (EU) 2018/858.

The product group and CPC code shall be specified in the EPD according to the classification as follows. The product category is defined under ISIC – CPC's classifications and can be found at:

https://unstats.un.org/unsd/classifications/unsdclassifications/cpcv21.pdf.

- Division: 49 - Transport equipment
  - Group: 491 - Motor vehicles, trailers and semi-trailers; parts and accessories thereof
    - Class: 4911 - Motor vehicles
      - **Subclass: 49112** - Public-transport type passenger motor vehicles
      - **Subclass: 49113** - Motor cars and other motor vehicles principally designed for the transport of persons (except public-transport type vehicles, vehicles specially designed for travelling on snow, and golf cars and similar vehicles)

According to the General Programme Instructions 3.01, similar products from the same company could be included in the same EPD. The following requirements must be met:

- Similar products with differences between the mandatory impact indicators lower than ±10% may be presented in the same EPD using the impacts of an environmentally representative product. The criteria for the choice of representative product shall be presented in the EPD, using, if applicable, statistical parameters;
- Similar products with differences between the mandatory impact indicators higher than ±10% may be presented in the same EPD but using separate columns or tables.

For the purpose of these requirements “similar products” means different variants of the same vehicle types covered by this PCR and produced by the same company with same core processes. Different versions could be included in the same EPD also, presenting environmental information using separate columns or tables.

For better understanding of what a vehicle type, variant and version means, requirements in “Part B Criteria for types of vehicle, variants and versions” of “Annex I” of Regulation (EU) 2018/858 will apply.

2.2.2 GEOGRAPHICAL SCOPE

This PCR may be applied globally, with the limitation that its content is based primarily on European conditions, standards and references. If the PCR and resulting EPD is used outside of Europe, local standards and references may be used in addition to the European references used in this PCR, if such results are displayed separately. Any such references, data and calculation methods shall be documented in the EPD.

Feedback on how the global applicability of this PCR can be increased may be submitted to the PCR moderator, to be used for future revisions of the PCR.

2.2.3 EPD VALIDITY

An EPD based on this PCR shall be valid from its registration and publication at www.environdec.com and for a five 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 indicators listed in 5.1,
- errors in the declared information, or
- significant changes to the declared product information, content declaration, or additional environmental 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

3.1 PCR REVIEW

3.1.1 VERSION 1.0

PCR review panel:	The Technical Committee of the International EPD® System. A full list of members available on www.environdec.com/TC. The PCR 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 moderator or PCR committee, and were excused from the review.
Review dates: Chair of the PCR review:	2016-03-12 until 2016-04-12 Greg Doudrich

3.1.2 VERSION 2.0

PCR review panel:	The Technical Committee of the International EPD® System. A full list of members available on www.environdec.com/TC. The PCR 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 moderator or PCR committee, and were excused from the review.
Review dates: Chair of the PCR review:	2020-09-10 until 2020-10-09 Maurizio Fieschi

3.2 OPEN CONSULTATION

3.2.1 VERSION 1.0

This PCR was available for open consultation from 2015-11-09 until 2016-01-17, during which any stakeholder was able to provide comments by posting on the PCR forum on www.environdec.com or by contacting the PCR moderator.

A total of 191 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. Comments were received during the open consultation by:

- Politecnico di Milano
- Volvo Group Trucks Technology (GTT) - Advanced Technology & Research

3.2.2 VERSION 2.0

This PCR was available for open consultation from 2020-07-03 until 2020-09-02, during which any stakeholder was able to provide comments by posting on the PCR forum on www.environdec.com or by contacting the PCR moderator.

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. Comments were received during the open consultation by:

- IRIZAR GROUP
- IVL Swedish Environmental Research Institute

3.3 EXISTING PCRS FOR THE PRODUCT CATEGORY

No PCRs identified in programmes operated in accordance with ISO 14025.

3.4 REASONING FOR DEVELOPMENT OF PCR

This PCR was developed in order to allow the declaration of life cycle environmental impacts of the product group in the format of a type III environmental declaration (EPD) in the International EPD® System, operated in accordance with ISO 14025 and other international standards.

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

4.1 FUNCTIONAL UNIT

The main function of a passenger road vehicle is the transportation of a given number of passengers over a predefined distance.

The functional unit chosen to quantify the main function is **transport of 1 passenger for 1 km**, and the road passenger vehicle total lifetime distance should be taken into account for the functional unit and LCA calculation.

The bus or coach capacity will be calculated according to available seats and space for standing at 100% load factor.

When determining the lifetime of the bus or coach passenger vehicle, a travelled distance of 800.000 km may be assumed as stated in Directive 2009/33/EC. [2]

The functional unit and the lifetime distance shall be stated in the EPD. The environmental impact shall be given per functional unit.

4.2 SYSTEM BOUNDARY

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

- Upstream processes (from cradle-to-gate); input to the core processes (i.e. raw material acquisition and refinement, and production of intermediate components),
- Core processes (from gate-to-gate); including the processes managed by the organisation owning the EPD,
- Downstream processes (from gate-to-grave); including the use stage of the vehicle and end-of-life (EOL) scenarios and treatments.

Data requirements and environmental results must be specified separately in the EPD for each life cycle stage (upstream, core and downstream), to ensure comparability and to avoid wrong interpretation. The LCA calculations shall include all upstream, core and downstream processes as described in Sections 4.3.

Upstream, core and downstream processes within the system boundaries are the ones related only with the production, operation and disposal of the road passenger vehicle. Facilities and infrastructure that are not part of the subject of the study itself are out of the system boundaries (i.e. facilities for energy and material production, roads and infrastructure for transport, manufacturing plants, dismantling and disposal facilities...). Exclusion of any process within the system boundary, as described in Sections 4.3, shall in general be avoided and if necessary shall be justified and reported in the EPD.

4.2.1 LIFE CYCLE STAGES

4.2.1.1 UPSTREAM MODULE

The following upstream processes shall be included:

- Extraction and production of raw and basic materials – e.g. aluminium, stainless steel, polyethylene, etc.
  - This shall include all the associated processes like mining, transportation, used electricity, heat, steam and fuel. The waste generated from the included processes and its treatment shall also be included. All this information is often incorporated in the LCA tool when a cradle-to-gate process/dataset for material production is selected.
- Production of components and auxiliary materials for vehicle assembly/manufacturing
  - 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.

[2]Other travelled distances are allowed, as most of the times they are given by the transport operator according to the service scenario (km/year, route and service years). The reference 800.000km is given as basic value for those companies wanting to develop an EPD not for a specific contractor.

- Data referring to contractors that supply main parts or main auxiliaries could be requested from the contractor as specific data or calculated using general or proxy data from the recommended databases.

- Transportation from tier 1 (direct) suppliers to the road vehicle assembly/manufacturing facility, in at least 80% by weight of the vehicle, from supplier's manufacturing facilities to road vehicle assembly plant.

The following upstream processes shall be excluded:

- Building, maintenance, dismantling and disposal of material and energy production plants
- Building, maintenance, dismantling and disposal of suppliers' manufacturing facilities
- Transportation of raw and basic materials to suppliers' manufacturing
- Production of packaging

4.2.1.2 CORE MODULE

The following Core processes shall be included:

- Production and use of electricity, heat, and steam fuel used for the vehicle assembly.
- Production and use of water and known auxiliary materials (welding, mounting equipment, etc. which are not included in upstream module) used for the vehicle assembly.
- Waste generated and treatment of waste from the assembly processes on the manufacturer site
- Transportation of the road vehicle from the assembly facility to the location of its use (to the customer)
- Manufacturing internal processes as painting, material machining, superficial treatments, etc.,
- Manufacturing processes and activities during the Core supply chain referring to contractors (such as external painting, material machining, superficial treatments, etc.), not made in the EPD owner manufacturing plant but by suppliers, should be included in the study and process data could be requested from the contractor as specific data or calculated using general data from the recommended databases.

The following processes shall be excluded:

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

4.2.1.3 DOWNSTREAM MODULE

The following downstream processes shall be included:

- Production and consumption of fuel/electricity for road vehicle operation
- Production of materials used to operate the vehicle
- Production of maintenance materials and spare parts (based on the road vehicle preventive maintenance program)
- Waste from maintenance materials and spare parts (based on the road vehicle preventive maintenance program)
- End-of-life processes of the vehicle after use.

Note that environmental performance results for operation and maintenance/ end-of-life processes should be reported separately in the EPD.

The following processes shall be excluded:

- Building, maintenance, dismantling and disposal of road vehicle disassembly and waste treatment facilities
- Building, maintenance, dismantling and disposal of road infrastructure and service facilities
- Production and use of cleaning agents used during road vehicle operation

- Treatment and disposal of waste generated from passenger road vehicles during operation

4.2.1.3.1 OPERATION OF THE VEHICLE: FUEL AND ENERGY CONSUMPTION, POLLUTANT EMISIONS AND MAINTENANCE

Information regarding fuel consumption (also electricity consumption in the case of hybrid and electric buses) shall be declared in the EPD.

The Service Conformity testing (ISC / PEMs testing) requirements from Regulation (EC) 595/2009 shall apply, along with test methods and driving cycles described in Regulation No 101 of UNECE Vehicle Regulations. Specific test cycles or documented studies according with average or typical vehicle could be used.

For electric vehicles, the use of the energy mix in the region/country where the vehicle is operated shall be used in LCA calculations. If it is unknown or if the EPD represents an average use of the vehicle, it could be approximated as the European (EU27) electricity mix. For EU27 countries, in order to adopt a suitable region- or country-specific electricity mix (reflecting approximately the region(s)/countries' share) a similar precision will be required. The mix shall be documented and detailed in the LCA report and the EPD. It is also possible to declare results for different electricity mixes/regions, in separate tables and providing traceability data for the mixes.

Consumption due to heating and air conditioning, auxiliaries, losses in batteries, charging stations, etc., shall be included in the energy use in operation as they are related with the vehicle operation.

Production of maintenance materials and spare parts (based on the road vehicle preventive maintenance program) shall be included in LCA calculations, as well as waste generated from maintenance activities,

Notes:

Regulation (EC) No 595/2009 on type-approval of motor vehicles and engines with respect to emissions from heavy-duty vehicles (Euro VI), establishes emission limits and common technical requirements for these vehicles, laying down rules for in-service conformity, on-board diagnostic (OBD) systems and measurement of fuel consumption.

Commission Regulation (EU) No 582/2011 requires that the on-board diagnostic (OBD) threshold limit (OTL) for carbon monoxide emissions be specified.

WHSC (World Harmonized Stationary Cycle) test, the WHTC (World Harmonized Transient Cycle) test and/or PEMS (Portable Emissions Measurement System) tests are described in Regulation (EU) No 582/2011

4.2.1.3.2 NOISE EMMISIONS

The noise emissions of the road vehicle shall de declared in the EPD.

The noise made by the vehicle shall be measured by the two methods described in Annex II methods and instruments for measuring the noise made by motor vehicles of Regulation (EU) no 540/2014, or equivalent internal tests, for the vehicle in motion and for the vehicle when stationary. In the case of a vehicle where an internal combustion engine does not operate when the vehicle is stationary, the emitted noise shall only be measured in motion. The sound level measured in accordance with the provisions of Annex II, mathematically rounded to the nearest integer value, shall not exceed the limits from

4.2.1.3.3 END-OF-LIFE OF THE VEHICLE

The end-of-life modelling shall follow ISO 22628:2002.

The calculation method prescribed in Annex B to the standard ISO 22628:2002 shall apply and the manufacturer shall submit a data presentation form fully completed during the verification audit, established in accordance with Annex A to the standard ISO 22628:2002. It shall include the materials breakdown.

4.2.1.3.4 RECYCLABILITY AND RECOVERABILITY

The recyclability and recoverability rates of the road vehicle shall de declared in the EPD. These rates shall be calculated according to ISO 22628:2002.

4.2.2 OTHER BOUNDARY SETTING

4.2.2.1 Boundary towards nature

All resources from nature and emissions to nature should be included in the calculations. Boundaries to nature are defined as where flows of material and energy resources from nature enter the system boundaries, or where emissions to air, water and soil exit the system boundaries,.

4.2.2.2 Boundaries in time

The life cycle inventory (LCI) data shall be representative for the time period for which the EPD is valid (maximum three years).

4.2.2.3 Boundaries in the life cycle

See Section 4.2.1. The EPD may present the information divided into additional sub-divisions.

4.2.2.4 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 “Polluter-Pays Principle” concept in General Programme Instructions 3.1. for more information).

4.3 SYSTEM DIAGRAM

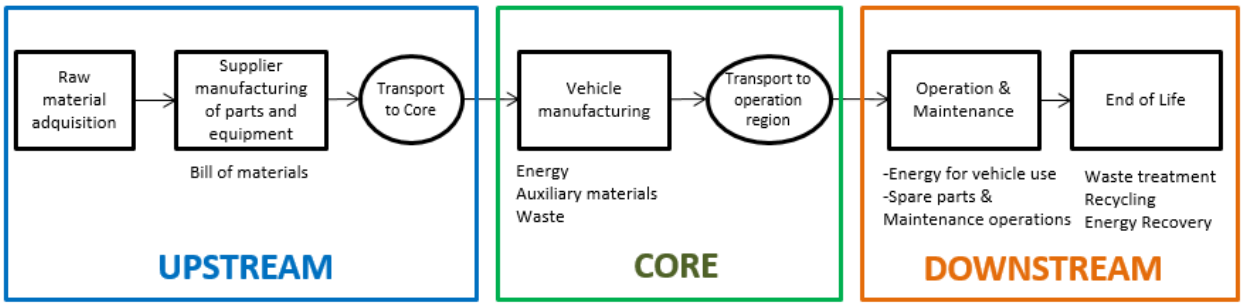

Figure 2 System diagram illustrating the life cycle of buses and coaches covered by this PCR.

4.4 CUT-OFF RULES

LCI data for a minimum of 95% 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.

4.5 ALLOCATION RULES

If relevant, the allocation of environmental impacts to co-products should be based on a mass criterion. It is also acceptable to use the number of parts produced as allocation criteria. Any other allocation procedures based on the product’s physical or chemical characteristics must be justified. The use of economic allocation criteria should be avoided because of its sensitivity to market specific conditions. The allocation procedures shall be documented in the LCA report and if the economical allocation has been used, a specific sensitivity analysis shall be provided to the verifier and the monitoring of the relationship between results and current economic value shall be documented and updated.

An allocation problem occurs when a process results in multiple output products and where there is only aggregate information available about the emissions. The priorities suggested by ISO 14040 shall be considered in the procedure definition, however, the method of avoiding allocation by expanding the system boundaries is not applicable within the framework of the International EPD® System due to the rationale of the book-keeping LCA approach (attributional LCA) used and the concept of modularity.

4.5.1 CO-PRODUCT ALLOCATION

The following decision-hierarchy shall be applied for multifunctional products and multiproduct processes:

1. Allocation shall be avoided by dividing the unit process into two or more sub-processes and collecting the environmental data related to these sub-processes.

2. If not possible, the inputs and outputs of the system shall be partitioned between its different products or functions in a way that reflects the underlying physical relationships between them; i.e. they should reflect the way in which the inputs and outputs are changed by quantitative changes in the products or functions delivered by the system. As described above, mass or number of parts are the preferred basis of physical allocation – the use of other characteristics must be justified.

3. If steps 1 or 2 are not possible, allocation problems shall be solved by economic allocation. The reference values used shall be those taken from the real market where the products are sold and data shall be representative for the time period and the geographical scope for which the EPD is valid (maximum three years).

4.5.2 REUSE, RECYCLING, AND RECOVERY

In the framework of the International EPD® System, the methodological choices for allocation for reuse, recycling and recovery have been set according to the polluter pays principle (PPP). This means that the generator of the waste shall carry the full environmental impact until the point in the product's life cycle at which the waste is transported to a scrapyard or the gate of a waste processing plant (collection site). The subsequent user of the waste shall carry the environmental impact from the processing and refinement of the waste but not the environmental impact caused in the "earlier" life cycles. See General Programme Instruction for further information and examples.

4.6 DATA QUALITY RULES

An LCA calculation requires two different kinds of information:

- data related to the **environmental aspects** of the considered system (such materials or energy flows that enter the production system). These data usually come from the company that is performing the LCA calculation.
- data related to the **life cycle impacts** of the material or energy flows that enter the production system. These data usually come from databases.

Data on environmental aspects shall be as specific as possible and shall be representative of the studied process.

Data on the life cycle of materials or energy inputs are classified into three categories – specific data, selected generic data, and proxy data, 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, and data from other parts of the life cycle traced to the specific product system under study, e.g. materials or electricity provided by a contracted supplier that is able to provide data for the actual delivered services, transportation that takes place based on actual fuel consumption, and related emissions, etc.,
- **generic data** (sometimes referred to as "secondary data"), divided into**:**
  - **selected generic data** – data from commonly available data sources (e.g. commercial databases and free databases) that fulfil prescribed data quality characteristics for precision, completeness, and representativeness,
  - **proxy data** – data from commonly available data sources (e.g. commercial databases and free databases) that do not fulfil all of the data quality characteristics of "selected generic data".

As a general rule, specific data shall always be used.

It is mandatory to use specific data for the core processes. Specific data are gathered from the actual manufacturing plant(s) where specific processes are carried out and data from other parts of the life cycle 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:

- Renewable Energy Certificates (RECs) or Guarantee of Origin from electricity 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.

For the upstream processes, downstream processes, and infrastructure, generic data may also be used if specific data are not available.

4.6.1 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", a number of pre-set characteristics must be fulfilled and demonstrated:

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

If "other generic data" is used, the environmental impacts associated to "other generic data" must not exceed 10% of the overall environmental impact from the product system.

Any generic data should be peer reviewed by a third party, and where possible, that third party has experience in that industry sector and region.

Other international adoptions of this PCR should reference appropriate local databases rather than these European references. Companies with two or more technologies available must choose a mix of technology and the determined % must be defined and explained in the EPD.

4.7 RECOMMENDED DATABASES FOR GENERIC DATA

Table 1 lists recommended databases for generic data. Please note that this listing does not imply that other data that fulfil the data quality requirements may not be used and that data quality assessment shall also be performed for the data sets in the recommended database by an LCA practitioner.

DATA	DATABASE / SOURCE
Steel, Iron ore and Pig Iron	World Steel Association www.worldsteel.org Ecoinvent database www.ecoinvent.com Gabi database http://www.gabi-software.com/databases/gabi-databases/
Electricity	Data combined with IEA (International Energy Agency) statistics on electricity generation mixes for nations, regions, etc. http://www.iea.org/statistics/
	European Reference Life Cycle Data System (ELCD) http://eplca.jrc.ec.europa.eu/ELCD3/
	Ecoinvent database www.ecoinvent.com Gabi database http://www.gabi-software.com/databases/gabi-databases/
Chemicals	European Commission Environment http://ec.europa.eu/enterprise/sectors/chemicals/reach/index_en.htm Ecoinvent database www.ecoinvent.com Gabi database http://www.gabi-software.com/databases/gabi-databases/
Transports	European Reference Life Cycle Data System (ELCD) http://eplca.jrc.ec.europa.eu/ELCD3 Ecoinvent database www.ecoinvent.com Gabi database http://www.gabi-software.com/databases/gabi-databases/
Waste management	European Reference Life Cycle Data System (ELCD) http://eplca.jrc.ec.europa.eu/ELCD3/ Ecoinvent database www.ecoinvent.com Gabi database http://www.gabi-software.com/databases/gabi-databases/

Table 1 Recommended databases for generic data.

4.8 IMPACT CATEGORIES AND IMPACT ASSESSMENT

The EPD shall declare the default impact categories as described in the General Programme Instructions. The characterisation models and factors to use for the default impact categories are available on www.environdec.com/impact-categories and shall be updated on a regular basis based on the latest developments in LCA methodology and ensuring the market stability of EPDs. 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.

See also 4.4.5 for more detailed requirements about environmental information to be declared about resource consumption, waste production and other environmental data.

4.9 OTHER CALCULATION RULES AND SCENARIOS

4.9.1 UPSTREAM PROCESSES

The following requirements apply to the 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 could be requested from the contractor as specific data or calculated using general data from the recommended databases.
- The 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 based on the actual transportation mode, distance from the supplier, and vehicle load.

- In case specific data is lacking, selected generic data may be used. If this is also lacking, proxy data may be used.
- For the electricity used in the upstream processes, electricity production impacts shall be accounted for in this priority when specific data are used in the upstream processes:

    1. Specific electricity mix as generated, or purchased, from an electricity supplier, demonstrated by a Guarantee of Origin (or similar, where reliability, traceability, and the avoidance of double-counting are ensured) as provided by the electricity supplier. If no specific mix is purchased, the residual electricity mix from the electricity supplier shall be used.[3]
    2. National residual electricity mix or residual electricity mix on the market
    3. National electricity production mix or electricity mix on the market.

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

4.9.2 CORE PROCESSES

The following requirements apply to the core processes:

- Specific data shall be used for the assembly of the vehicle and for the manufacture of main parts as well as for on-site generation of steam, heat, electricity, etc., where relevant.
- For the electricity used in the core processes, electricity production impacts 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, where reliability, traceability, and the avoidance of double-counting are ensured) as provided by the electricity supplier. If no specific mix is purchased, the residual electricity mix from the electricity supplier shall be used.[4]
    2. National residual electricity mix or residual electricity mix on the market
    3. National electricity production mix or electricity mix on the market.

    The mix of electricity used in the core processes shall be documented in the EPD, where relevant.
- 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.
- Waste treatment processes of manufacturing waste should be based on specific data, if available.
- Transport of the vehicle to retail or customer shall, as a first option, be based on the actual delivery mode and distances. It could be possible that the delivery of the product is made directly by operating the vehicle itself, then specific data shall be used for vehicle operation and an estimate on an average distance travelled should be based on specific data. If no specific data is available on average distance travelled, the vehicle shall be assumed to be driven to the retail or customer, based on specific data for vehicle operation, and the distance driven shall be assumed to be 1,000 km.

4.9.3 DOWNSTREAM 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 (see 4.3.1.3).
- Data on the pollutant emissions from the use stage should be based on documented tests, verified studies in conjunction with average or typical vehicle use, or recommendations concerning suitable vehicle use. Whenever applicable, test methods shall be internationally recognised.
- For electric vehicles, the use of electricity in the region/country where the vehicle is used (as specified in the geographical scope of the EPD) shall be accounted for in the following priority:

[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 production mix of the electricity supplier.

[4] 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 of the electricity supplier.

1. National residual electricity mix or residual mix on the market
2. National electricity production mix or electricity mix on the market

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

- Scenarios for the end-of-life stage 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.

5 CONTENT AND FORMAT OF THE EPD

Flexibility is allowed in the formatting and layout provided that the EPD still includes the prescribed information. A generic template for EPDs is available via www.environdec.com

As a general rule the EPD content:

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

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

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 that includes the main content of the EPD. This summary is part of the EPD and, thus, subject to the same verification procedure.

5.2 UNITS AND QUANTITIES

The following requirements apply for units and quantities:

- The International System of Units (SI units) shall be used, 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.
- Three significant figures[5] should be adopted for all results. The number of significant digits shall be appropriate and consistent.
- 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.
- The result tables shall:
  - Only contain values or the letters “INA” (Indicator Not Assessed). It is not possible to specify INA for mandatory indicators. INA 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 “INA”).

[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 $1.2*10^{-2}$.

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

- 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 should 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 5.4.4)
- Environmental performance (see Section 5.4.5)
- Additional environmental information (see Section **5.4.6**)
- References (see Section 5.4.9)

The following information shall be included, when applicable:

- Information related to Sector EPDs (see Section 5.4.7)
- 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,*
- *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,

[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.

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 mandatory statement from ISO 14025: "*EPDs within the same product category but from different programmes may not be comparable*."
- A statement that the EPD owner has the sole ownership, liability and responsibility of the EPD
- Information about verification[8] and reference 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
Third party verifier: *<name, organisation and signature of the third-party verifier>* *In case of certification bodies:* Accredited by: *<name of the accreditation body and accreditation number, if applicable>.* *In case of individual verifiers:* Approved by: The International EPD® System Technical Committee, supported by the Secretariat
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☐ No

5.4.3 VEHICLE INFORMATION

The vehicle 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,
- Vehicle identification by name, and an unambiguous identification of the vehicle by standards, concessions or other means,
- Identification of the vehicle 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),

[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.

- Classification of Products by Activity (NACE/CPA) or
- Australian and New Zealand Standard Industrial Classification (ANZSIC),

- Description of the vehicle, its application/intended use and technical functions, e.g. expected service life time,
- 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,
- Functional unit,
- 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 that the EPD system boundary is "cradle-to-grave",
- Relevant websites for more information or explanatory materials.
- A technical description of the vehicle in terms of functional characteristics, main vehicle components and or materials, expected service life time etc. At least the following information described on the basis of some essential aspects of construction and design must be provided:
  - chassis/floor pan,
  - type of powertrain and engine (diesel, electric, hybrid, GLP...). Maximum output, torque, equipment, position and arrangement of the engines...
  - number of axles and wheels
  - Front axle load (Max), Rear axle load (Max), Gross vehicle weight
  - Axle distance, Front overhang, Rear overhang
  - Chassis length and width
  - Wheel lock (°)
  - Turning circle (Ø)
  - Gearbox
  - Driving cab (forward, semi-forward or normal)
  - Passenger capacity
  - Brakes and safety
  - Suspension
  - Steering
  - Electrical systems
  - Air conditioning system

This section may also include:

- Name and contact information of organisation carrying out the underlying LCA study,
- Additional information about the underlying LCA-based information, such as assumptions, cut-off rules, data quality and allocation.

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 content of materials shall be declared in the EPD at a minimum of 95% in weight of the final vehicle and shall be classified into the following categories as a minimum, adapted from ISO 22628.

- Metals;
- Polymers, filled and unfilled (excluding elastomers: rubber);
- Elastomers;
- Glass;
- Fluids;

- Modified organic natural materials (MONM), such as leather, wood, cardboard and cotton fleece;
- Electric and electronic equipment
- Others, including components and/or materials for which the material contents cannot be established).

Fiber reinforced polymers materials (carbon fibre reinforced polymer, glass fibre reinforced polymer, aramide) shall be classified as polymers. A detailed material report shall be part of the LCA report.

Information on the hazardous properties of materials and chemical substances should follow the requirements given in the latest revision of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)[9], issued by United Nations or national or regional applications of the GHS.

As an example, the following regulations should be used for EPDs intended to be used in the European Union:

- Regulation (EC) No 1907/2006 of the European parliament and of the council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures

5.4.4.1 Information about recycled materials

To avoid any misunderstanding about which material may be considered “recycled material”, the guidance given in ISO 14021 shall be taken into account. 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 not strongly connected with the vehicle distribution, the producer could avoid information about packaging if not relevant.

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 (results for the downstream stage should be further divided into operation and maintenance/end-of-life processes), using the default impact categories, characterisation models and factors available on www.environdec.com/impact-categories.

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

Resources are the elementary flows crossing the system boundary between nature and the studied product system. The EPD shall declare the mandatory indicators for resource use listed at www.environdec.com/indicators per functional unit, per life-cycle stage and in aggregated form.

Results for the downstream stage should be further divided into operation and maintenance/end-of-life processes.

[9] The GHS document is available on www.unece.org.

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 follow requirements at www.environdec.com/indicators for the declaration of waste production and output flows.

5.4.6 ADDITIONAL INFORMATION

If applicable, additional 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, can be added in the EPD. Any literature reference or methodology used to acquire and describe additional environmental information shall be openly accessible and made available to the verifier.

5.4.7 INFORMATION RELATED TO SECTOR EPDS

For sector EPDs, the following information shall also be included:

- 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.

5.4.8 DIFFERENCES VERSUS PREVIOUS VERSIONS

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

- a description of the differences versus previously published versions, e.g. a description of the percentage change in results and the main reason for the change;
- a revision date on the cover page

5.4.9 REFERENCES

This section shall include a list of references, including the General Programme Instructions (including version number), standards and PCR (registration number, name and version). The source and version of the characterisation models and the factors used shall be reported in the EPD.

5.4.10 EXECUTIVE SUMMARY IN ENGLISH

For EPDs published in another language than English, an executive summary in English shall be included.

The executive summary should contain relevant summarised information related to the programme, product, environmental performance, additional information, information related to sector EPDs, references and differences versus previous versions.

6 GLOSSARY

CO_2	Carbon dioxide
CPC	Central product classification
EPD	Environmental product declaration
ISO	International Organization for Standardization
kg	kilogram
LCA	Life cycle assessment
PCR	Product Category Rules
SI	The International System of Units
SO_2	Sulphur dioxide
UN	United Nations
ISC	In Service Conformity testing
WHTC	World Harmonized Transient Cycle
WHSC	Portable Emissions Measurement System

7 REFERENCES

- General Programme Instruction version 3.01. 2019-09-18
- PCR Basic Module, CPC Division 49 “Transport equipment”, version 3.02, dated 2020-04-28
- PCR 2009:05 Rolling stock (Version 3.02)
- PCR 2018:09 Business jets (Version 1.03)
- PCR 2015:02 Passenger commercial aeroplanes (Version 1.0)
- The UNECE Transport Division Vehicle Regulations, providing services to the World Forum for Harmonization of Vehicle Regulations (WP.29)
- Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC (Text with EEA relevance.)
- Regulation (EC) No 595/2009 of the European Parliament and of the Council of 18 June 2009 on type-approval of motor vehicles and engines with respect to emissions from heavy duty vehicles (Euro VI) and on access to vehicle repair and maintenance information
- Regulation No 101 of UNECE Vehicle Regulations - approval of passenger cars powered by an internal combustion engine or powered by a hybrid electric power train with regard to the measurement of the emission of carbon dioxide and fuel consumption and/or the measurement of electric energy consumption and electric range, and of categories M1 and N1 vehicles powered by an electric power train only with regard to the measurement of electric energy consumption and electric range
- Directive 2005/64/EC of the European Parliament and of the Council of 26 October 2005 on the type-approval of motor vehicles with regard to their reusability, recyclability and recoverability
- Regulation (EU) No 540/2014 of the European Parliament and of the Council of 16 April 2014 on the sound level of motor vehicles and of replacement silencing systems, and amending Directive 2007/46/EC and repealing Directive 70/157/EEC
- Regulation No 51 of UNECE Vehicle Regulations – Noise emissions
- ISO 22628 Road vehicles-Recyclability and recoverability –Calculation method
- Directive 2009/33/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of clean and energy-efficient road transport vehicles (Text with EEA relevance).

8 VERSION HISTORY OF PCR

VERSION 1.0, 2016-05-02

Original version.

VERSION 1.01, 2016-05-09

Editorial update to correct broken references.

VERSION 1.1, 2018-06-19

- PCR update to fulfil GPI 3.0 requirements.
- Section about “operation of the vehicle: fuel and energy consumption, pollutant emissions and maintenance” rewritten for better understanding and update of reference regulations and test-methods used.
- Editorial changes

VERSION 1.2, 2019-05-16

- Corrected reference to characterisation factors to be used (not EN 15804)
- Editorial changes

VERSION 1.21, 2019-09-06

- Clarified terms of use
- Editorial changes

VERSION 2.0, 2020-12-04

- PCR updated after the validity period of the previous version had ended
- Update of reference EU directives and regulations
- Editorial changes to fulfil GPI 3.01 requirements.

VERSION 2.0.1, 2022-06-20

- Correction of “transport of the vehicle to the customer” appearing in “Downstream” in Section 4.9.3. It has been corrected to appear in “Core” (Section 4.9.2).
- Editorial changes in Sections 5.4.5.1 to 0, to clarify the indicator list at www.environdec.com/indicators applies also for the indicators of resource use, waste production and other output flows.

VERSION 2.0.2, 2023-01-23

- Update of the LCI data requirement (from 99% to 95%) in 4.4 and 5.4.4, to harmonize with other PCR for transportation vehicles.
- Removal of recyclability and recoverability objective requirements in 4.2.1.3.4, as the PCR shall not include requirements about the environmental performance.
- Removal of requirements of the Regulation (EC) No 595/2009 regarding emission limits in 4.2.1.3.1, as the PCR shall not include requirements about the already applicable legal regulations.
- Editorial changes in Section 0 for better clarification.

VERSION 2.0.3, 2024-10-30

The validity period was prolonged with one year due to the initiation of the updating process.

VERSION 2.0.4, 2025-08-05

The validity period of the PCR was extended by 6 months, until 2026-06-04, due to the initiation of an updating process.

PUBLIC AND PRIVATE BUSES AND COACHES
PRODUCT CATEGORY CLASSIFICATION: UN CPC 49112 & 49113