
**Sustainability in buildings and civil
engineering works — Core rules for
environmental product declarations of
construction products and services**

*Développement durable dans les bâtiments et les ouvrages de génie
civil — Règles principales pour les déclarations environnementales
des produits de construction et des services*



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Contents

	Page
Foreword	v
Introduction	vii
1 Scope	1
2 Normative references	2
3 Terms and definitions	2
4 Abbreviated terms	15
5 General aspects	16
5.1 Objectives of this core PCR.....	16
5.2 Life cycle stages and their information modules and module D.....	17
5.2.1 General.....	17
5.2.2 Types of EPD with respect to life cycle stages covered.....	19
5.2.3 Use of scenarios for assessment of information modules beyond the production stage.....	20
5.3 Average EPDs for groups of similar products.....	21
5.4 Use of EPDs for construction products.....	22
5.5 Comparability of EPDs for construction products.....	22
5.6 Documentation.....	23
6 PCR development and use	24
6.1 Core PCR structure.....	24
6.2 Relation between core PCR and sub-category PCR.....	25
6.3 Development of sub-category PCR.....	26
7 PCR for LCA	26
7.1 Methodological framework.....	26
7.1.1 Overarching principles for LCA modelling and calculation.....	26
7.1.2 Functional unit.....	26
7.1.3 Declared unit.....	27
7.1.4 Requirements for the use of RSL.....	28
7.1.5 System boundary with nature.....	28
7.1.6 System boundary between products systems.....	28
7.1.7 System boundaries and technical information for scenarios.....	33
7.1.8 Criteria for the inclusion and exclusion of inputs and outputs.....	42
7.1.9 Selection of data and data quality requirements.....	43
7.1.10 Units.....	44
7.2 Inventory analysis.....	44
7.2.1 Data collection.....	44
7.2.2 Calculation procedures.....	44
7.2.3 Allocation situations.....	44
7.2.4 Principles for allocation for both allocation situations.....	44
7.2.5 Allocation for co-products.....	45
7.2.6 Allocation between product systems (across the system boundary).....	47
7.2.7 Accounting of biogenic carbon uptake and emissions during the life cycle.....	47
7.2.8 Carbonation.....	48
7.2.9 Accounting of delayed emissions.....	49
7.2.10 Inventory indicators describing resource use.....	49
7.2.11 Greenhouse gas emissions from land-use change.....	50
7.2.12 Additional inventory indicators describing emissions and removals of carbon... ..	50
7.2.13 Inventory indicator describing consumption of freshwater.....	51
7.2.14 Environmental information describing waste categories and output flows.....	51
7.3 Impact assessment indicators describing main environmental impacts derived from LCA.....	53
8 Additional environmental information	54

8.1	General.....	54
8.2	Additional LCA-related environmental information not included in the pre-set LCIA indicators.....	54
8.3	Additional environmental information not derived from or related to LCA.....	55
8.4	Mandatory additional environmental information.....	55
8.4.1	Content of regulated hazardous substances.....	55
8.4.2	Release of dangerous substances from construction products.....	56
9	Content of an EPD	56
9.1	General.....	56
9.2	Declaration of general information.....	56
9.3	Declaration of the methodological framework.....	58
9.4	Declaration of technical information and scenarios.....	59
9.4.1	General.....	59
9.4.2	All stages — Transport.....	59
9.4.3	Construction stage — A5, installation.....	59
9.4.4	Use stage — B1 to B5.....	59
9.4.5	Use stage — B6 to B7.....	60
9.4.6	End-of-life stage — C1 to C4.....	60
9.4.7	Module D.....	60
9.5	Declaration of environmental indicators derived from LCA.....	61
9.5.1	LCA results from LCIA.....	61
9.5.2	LCA results from LCI.....	61
9.6	Declaration of additional environmental information	62
9.6.1	References	62
10	Project report	62
10.1	General.....	62
10.2	LCA-related elements of the project report.....	63
10.3	Rules for data confidentiality.....	64
10.4	Documentation on additional environmental information.....	64
10.5	Data availability for verification.....	65
11	Verification and validity of an EPD	65
	Annex A (normative) Requirements and guidance on the RSL and ESL	66
	Annex B (informative) Examples of average EPDs.....	69
	Annex C (informative) Release of dangerous substances	70
	Annex D (informative) Regulated substances of very high concern	72
	Annex E (informative) Environmental indicators derived from LCA	73
	Bibliography	78

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 59, *Buildings and civil engineering works*, Subcommittee SC 17, *Sustainability in buildings and civil engineering works*.

This second edition cancels and replaces the first edition (ISO 21930:2007), which has been technically revised with the following changes:

- updated to apply as the core set of product category rules (PCR) for environmental product declarations (EPDs) of any construction product or service used in any type of construction works;
- updated to apply to all construction products and services used in any type of construction works;
- guidance on PCR for sub-categories of construction products has been added;
- specific requirements on how to define system boundaries, allocation principles and activities to be included in information modules has been revised;
- framework for documentation of technical data and guidance for defining scenarios has been added;
- an option to provide supplementary environmental information (module D), which contains supplementary LCA-based information that describes potential environmental aspects (benefits and loads) if the primary product is reused, recycled or recovered for energy at the end-of-life has been added;
- process on how to develop an average EPD for product groups has been added;
- data requirements and data quality have been specified;
- accounting and reporting of biogenic carbon during the life cycle has been added;
- accounting and reporting of delayed emissions of biogenic carbon – biogenic carbon sinks has been added;
- accounting and reporting of carbonation has been added;

- mandatory reporting of radioactive waste has been added;
- optional impact category abiotic depletion potentials (ADP_{elements}) and the mandatory inventory indicator abiotic depletion potential (ADP_{fossil}) have been added;
- an informative annex discussing possible approaches for reporting product volatile organic compound (VOC) emissions to indoor air and gamma radiation emitted during the use stage of the life cycle has been added;
- information on methods for reporting product emissions to air, soil and water during the use stage of the life cycle has been added.

Introduction

Designers, manufacturers, users, owners and other stakeholders in the building and construction sector are increasingly demanding information that enables them to make decisions to address environmental impacts of construction works. These demands are currently addressed only through various national initiatives applying a variety of approaches.

It is essential that there is uniformity in the means and methods of expressing environmental product declarations (EPDs) using a modular approach, which enables consistent assessment at the construction works level. This includes a consistent outline and process for developing the parts of the EPD that are based on basic life cycle inventory data, as well as additional information not based on life cycle assessment (LCA). The different interested parties expect non-biased information that is consistent with the current best practice and understanding.

Type III environmental declarations (see ISO 14025) are EPDs providing quantified environmental data using predetermined parameters that are based on ISO 14040 and ISO 14044 and, where relevant, additional environmental information.

This document is one in a suite of documents dealing with sustainability in construction works that includes the following:

- a) ISO 15392;
- b) ISO 16745-1;
- c) ISO 16745-2;
- d) ISO 21929-1;
- e) ISO 21931-1;
- f) ISO/TS 12720;
- g) ISO/TS 21929-2;
- h) ISO/TR 21932;
- i) ISO/CD 20887;¹⁾
- j) ISO/DIS 21931-2.¹⁾

This document deals only with environmental impacts and aspects and excludes consideration of the social and economic aspects of sustainability. The relationship among the documents is elaborated in [Figure 1](#).

1) Under preparation.

Methodological basics	<p>ISO 15392: Sustainability in building construction — General principles</p> <p>ISO/TS 12720: Sustainability in buildings and civil engineering works — Guidelines on the application of the general principles in ISO 15392</p> <p>ISO/TR 21932: Sustainability in buildings and civil engineering works — A review of terminology</p> <p>ISO/CD 20887: Sustainability in buildings and civil engineering works — Design for disassembly and adaptability of buildings (under preparation)</p> <p>ISO 21929-1: Sustainability in building construction — Sustainability indicators — Part 1: Framework for the development of indicators and a core set of indicators for buildings</p> <p>ISO/TS 21929-2: Sustainability in building construction — Sustainability indicators — Part 2: Framework for the development of indicators for civil engineering works</p>		
Construction works	<p>ISO 16745-1: Sustainability in buildings and civil engineering works — Carbon metric of an existing building during use stage — Part 1: Calculation, reporting and communication</p> <p>ISO 16745-2: Sustainability in buildings and civil engineering works — Carbon metric of an existing building during use stage — Part 2: Verification</p> <p>ISO 21931-1: Sustainability in building construction — Framework for methods of assessment of the environmental performance of construction works — Part 1: Buildings</p> <p>ISO/DIS 21931-2: Sustainability in buildings and civil engineering works — Framework for methods of assessment of the sustainability performance of construction works — Part 2: Civil engineering works (under preparation)</p>		
Construction products and services	<p>ISO 21930: Sustainability in buildings and civil engineering works — Core rules for environmental product declarations of construction products and services</p>		
	Environmental aspects	Economic aspects	Social aspects

Figure 1 — Suite of related documents for sustainability in buildings and civil engineering works

Sustainability in buildings and civil engineering works — Core rules for environmental product declarations of construction products and services

1 Scope

This document provides the principles, specifications and requirements to develop an environmental product declaration (EPD) for construction products and services, construction elements and integrated technical systems used in any type of construction works.

This document complements ISO 14025 by providing specific requirements for the EPD of construction products and services.

This document establishes a core set of requirements to be considered as core product category rules (PCR) to develop an EPD for any construction product or service.

In addition, this document, as the core PCR document for construction products, construction elements and integrated technical systems:

- a) includes the rules for calculating the life cycle inventory analysis (LCI), the predetermined environmental indicators and the life cycle impact assessment (LCIA) results that are reported in the EPD;
- b) describes which life cycle stages are considered in a particular type of EPD, which processes are to be included in the life cycle stages and how the stages are subdivided into information modules;
- c) defines rules for the development of scenarios;
- d) includes the rules for reporting relevant environmental and technical information that are not covered by LCA;
- e) defines the core elements to be included in an EPD;
- f) establishes the structure of a project report;
- g) defines the conditions under which construction products can be compared, based on the information provided by an EPD;
- h) provides requirements and guidelines on PCR for sub-categories of construction products;
- i) includes mandatory and unalterable requirements for any PCR based on this document.

EPDs for construction products, as described in this document, are primarily intended for use in B2B communication, but their use in B2C communication under certain conditions is not precluded. For EPDs intended for B2C communication, refer to ISO 14025 (see [5.4](#)).

The assessment of social and economic impacts at the product level is not covered by this document.

NOTE 1 In this document, unless otherwise designated, the term construction product is used for any good(s) or service(s) related to construction works.

NOTE 2 Construction assemblies, construction elements and integrated technical systems, incorporated within construction works, can be considered construction products.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6707-1, *Buildings and civil engineering works — Vocabulary — Part 1: General terms*

ISO 14020:2000, *Environmental labels and declarations — General principles*

ISO 14025:2006, *Environmental labels and declarations — Type III environmental declarations — Principles and procedures*

ISO 14044:2006, *Environmental management — Life cycle assessment — Requirements and guidelines*

ISO 14046:2014, *Environmental management — Water footprint — Principles, requirements and guidelines*

ISO 14050:2009, *Environmental management — Vocabulary*

ISO 15392:2008, *Sustainability in building construction — General principles*

ISO 15686-1:2011, *Buildings and constructed assets — Service life planning — Part 1: General principles and framework*

ISO 15686-2, *Buildings and constructed assets — Service life planning — Part 2: Service life prediction procedures*

ISO 15686-7, *Buildings and constructed assets — Service life planning — Part 7: Performance evaluation for feedback of service life data from practice*

ISO 15686-8, *Buildings and constructed assets — Service-life planning — Part 8: Reference service life and service-life estimation*

ISO 21931-1:2010, *Sustainability in building construction — Framework for methods of assessment of the environmental performance of construction works — Part 1: Buildings*

ISO/TR 21932, *Sustainability in buildings and civil engineering works — A review of terminology*

EN 15804, *Sustainability of construction works — Environmental product declarations — Core rules for the product category of construction products*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6707-1, ISO 14050, ISO/TR 21932 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>