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Environmental management for concrete and concrete structures —

Part 8: Environmental labels and declarations

Management environnemental du béton et des structures en béton —
Partie 8: Étiquettes et déclarations environnementales pour le béton

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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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).

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For an explanation of 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 www.iso.org/iso/foreword.html.

ISO/TC 71, *Concrete, reinforced concrete and pre-stressed concrete*, Subcommittee SC 8, *Environmental management for concrete and concrete structures*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

A list of all parts in the ISO 13315 series can be found on the ISO website.

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Introduction

The use of concrete in buildings and civil engineering works has a large impact on the environment throughout the life cycle. Therefore, the designers, producers, constructors and users of concrete and concrete structures are increasingly demanding information on the environmental performance of concrete and concrete structures in the form of environmental labels and declarations.

This document comprehensively includes Type I environmental labelling and Type III environmental declarations in one standard in a harmonized way. It is intended to provide the clear and scientifically sound principles and procedures for the environmental labels and declarations for concrete and concrete structures that are consistent with ISO 14020, ISO 14024, ISO 14025 and ISO 21930.

Figure 1 shows the relationship of this document with other International Standards.

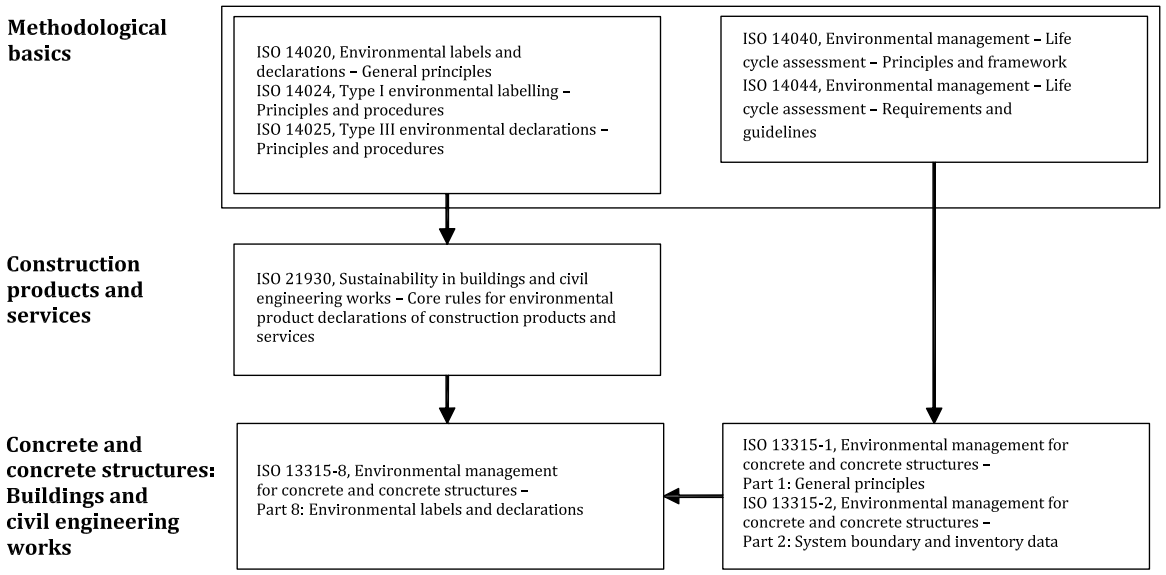


Figure 1 — Relationship of this document with other International Standards

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Environmental management for concrete and concrete structures —

Part 8:
Environmental labels and declarations

1 Scope

This document provides a general principle, procedures and requirements for environmental labels and declarations for concrete and concrete structures. It is used for the environmental labels and declarations for concrete constituents, reinforcement, concrete, concrete products and concrete structures.

NOTE This document contains more specific requirements for environmental labels and declarations for concrete and concrete structures, based on ISO 14020, ISO 14024, ISO 14025 and ISO 21930.

This document includes the following phases of concrete and concrete structures:

— production phase of concrete constituents, concrete and concrete products;

— execution phase of concrete structures;

— use phase of concrete structures; and

— end-of-life phase.

This document applies to the partial life cycle (certain phases of the life cycle) or the entire life cycle of concrete and concrete structures. It applies to new concrete and concrete structures as well as to existing concrete and concrete structures.

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 13315-1:2012, *Environmental management for concrete and concrete structures — Part 1: General principles*

ISO 13315-2, *Environmental management for concrete and concrete structures — Part 2: System boundary and inventory data*

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

ISO 14024, *Environmental labels and declarations — Type I environmental labelling — Principles and procedures*

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

ISO/TS 14027, *Environmental labels and declarations — Development of product category rules*

ISO 14040, *Environmental management — Life cycle assessment — Principles and framework*

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

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ISO 16204, *Durability — Service life design of concrete structures*

ISO 21930, *Sustainability in buildings and civil engineering works — Core rules for environmental product declarations of construction products and services*

ISO 22965-1, *Concrete — Part 1: Methods of specifying and guidance for the specifier*

ISO 22965-2, *Concrete — Part 2: Specification of constituent materials, production of concrete and compliance of concrete*

ISO 22966, *Execution of concrete structures*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
concrete constituent
material used to produce concrete

Note 1 to entry: The concrete constituents include cement, aggregates, additions, admixtures, water or fibres.

3.2
declared unit
quantity of a construction product for use as a reference unit in an *environmental declaration* (3.3), based on life cycle assessment, for the expression of environmental information needed in *information modules* (3.6)

[SOURCE: ISO 21930:2017, 3.1.11, modified — "EPD" has been changed to "environmental declaration" and "LCA" to "life cycle assessment".]

3.3
environmental declaration
declaration providing quantified environmental data using predetermined parameters and, where relevant, additional environmental information

[SOURCE: ISO 14025:2006, 3.2, modified — "Type III" has been deleted from the term and "environmental declaration" has been changed to "declaration" in the definition. The Notes to entry have been removed.]

3.4
environmental label
certified label on products indicating overall environmental preferability of a product within a particular product category based on life cycle considerations

[SOURCE: ISO 14024:2018, 3.1, modified — "Type I" and "programme" have been deleted and "labelling" has been changed to "label" from the term. In addition, "voluntary, multiple-criteria-based third party programme that awards a licence which authorizes the use of environmental" has been replaced with "certified" in the definition.]

3.5
functional unit
quantified performance of a product system for concrete and concrete structures for use as a reference unit

[SOURCE: ISO 14040:2006, 3.20, modified — "for concrete and concrete structures" has been added to the definition.]

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3.6
information module
compilation of data to be used as a basis for *environmental labels* (3.4) and declarations, covering a unit process or a combination of unit processes that are part of the life cycle of a product

[SOURCE: ISO 14025:2006, 3.13, modified — "a Type III environmental declaration" has been changed to "environmental labels and declaration".]

3.7
precast concrete product
product made of concrete cast and cured in a place other than the final location of use (factory produced or site manufactured)

EXAMPLE The precast concrete product include precast concrete and concrete masonry units.

[SOURCE: ISO 22966:2009, 3.14, modified — "element" has been replaced with "product in the term and "concrete element" has been changed to "product made of concrete" in the definition. An Example has been added and the Note to entry has been deleted.]

3.8
product category rules
PCR
set of specific rules, requirements and guidelines for developing *environmental declarations* (3.3) for one or more product categories

[SOURCE: ISO 14025:2006, 3.5, modified — "Type III" has been deleted.]

3.9
reinforcement
steel or fibre reinforced polymer (FRP) used to reinforce concrete such as reinforcing bars and prestressing or post stressing tendons

3.10
service life
period of time after installation during which a concrete structure or its parts meet or exceed the performance requirements

[SOURCE: ISO 15686-1:2011, 3.25, modified — "facility" has been changed to "concrete structure" and "component" has been deleted.]

4 Symbols and abbreviated terms

Symbol	Description	Unit
E	energy	mega joule or kilowatt hour
m	mass	tonne (metric tonne), kilogram or gram
A	area	square metres
V	volume	cubic metres
AP	acidification potential	—
EP	eutrophication potential	—
GWP	global warming potential	—
LCA	life cycle assessment	—

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