Draft for Public Comment

Form 36

DPC: 23/30467033 DC

BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000
Fax: +44 (0)20 8996 7400
www.bsigroup.com

Date: 22 June 2023
Origin: European

Latest date for receipt of comments: 15 August 2023

Project No. 2022/02885

Responsible committee: B/543 Round and sawn timber

Interested committees:

Title: Draft BS EN 16485 Round and sawn timber - Environmental Product Declarations - Product category rules for wood and wood-based products for use in construction.

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

i) has any issues related to 3rd party IPR, patent or copyright
ii) affects other national standard(s)
iii) requires additional national guidance or information

WARNING: THIS IS A DRAFT AND MUST NOT BE REGARDED OR USED AS A BRITISH STANDARD. THIS DRAFT IS NOT CURRENT BEYOND 15 August 2023

This draft is issued to allow comments from interested parties; all comments will be given consideration prior to publication. No acknowledgement will normally be sent. **See overleaf for information on the submission of comments.**

No copying is allowed, in any form, without prior written permission from BSI except as permitted under the Copyright, Designs and Patent Act 1988 or for circulation within a nominating organization for briefing purposes. Electronic circulation is limited to dissemination by e-mail within such an organization by committee members.

Further copies of this draft may be purchased from BSI Shop http://shop.bsigroup.com or from BSI Customer Services, Tel: +44(0) 20 8996 9001 or email cservices@bsigroup.com. British, International and foreign standards are also available from BSI Customer Services.

Information on the co-operating organizations represented on the committees referenced above may be obtained from https://standardsdevelopment.bsigroup.com/.

Responsible Committee Secretary: Committee Service Centre (BSI)
Direct tel: 020 8996 7009
E-mail: csc@bsigroup.com

Documents
Document Sharing Hub
Full document details: 23/30467033 DC

Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at **https://standardsdevelopment.bsigroup.com/**. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx

1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex **(e.g. 3.1)**	Paragraph/ Figure/Table/Note	**Type of comment**	**Commend (justification for change) by the MB**	**Proposed change by the MB**	**Secretariat observations on each comment submitted**
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

Documents
Document Sharing Hub

Full document details: 23/30467033 DC

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 16485

June 2023

ICS

Will supersede EN 16485:2014

English Version

Round and sawn timber - Environmental Product Declarations - Product category rules for wood and wood-based products for use in construction

Bois ronds et sciages - Déclarations environnementales de produits - Règles de définition des catégories de produits en bois et à base de bois pour l'utilisation en construction

Rund- und Schnittholz - Umweltproduktdeklarationen - Produktkategorieregeln für Holz und Holzwerkstoffe im Bauwesen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 175.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

© 2023 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. prEN 16485:2023 E

Documents
Document Sharing Hub

Full document details: 23/30467033 DC

Contents

European foreword ... 3
Introduction ... 4
1 Scope ... 5
2 Normative references ... 6
3 Terms and definitions ... 6
4 4 Abbreviations ... 7
5 General aspects ... 8
5.1 Objective of this general PCR for wood and wood-based construction products ... 8
5.2 Types of EPD with respect to life cycle stages covered ... 8
5.3 Comparability of EPD for construction products ... 8
5.4 Additional environmental information ... 8
5.5 Ownership, responsibility and liability for the EPD ... 8
5.6 Communication formats ... 8
6 Product Category Rules for LCA ... 9
6.1 Product category ... 9
6.2 Life cycle stages and their information modules to be included ... 9
6.3 Calculation rules for the LCA ... 9
6.4 Inventory analysis ... 26
6.5 Impact assessment ... 29
7 Content of the EPD ... 29
7.1 Declaration of general information ... 29
7.2 Declaration of environmental parameters derived from LCA ... 29
7.3 Scenarios and additional technical information ... 31
7.4 Additional information on release of dangerous substances to indoor air, soil and water during the use stage ... 32
7.5 Aggregation of information modules ... 32
7.6 Additional environmental information ... 32
8 Project report ... 33
8.1 General ... 33
8.2 LCA-related elements of the project report ... 33
8.3 Documentation on additional information ... 33
8.4 Data availability for verification ... 33
9 Verification and validity of an EPD ... 33
Annex A (informative) End of life formulae ... 34
Annex B (informative) Example methods to calculate delayed emissions resulting from temporary carbon storage ... 36
Bibliography ... 40

Documents
Document Sharing Hub
Full document details: 23/30467033 DC

European foreword

This document (prEN 16485:2023) has been prepared by Technical Committee CEN/TC 175 “Round and sawn timber”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 16485:2014.

The main changes compared to the previous edition are listed below:

— New figures and examples for the systems boundaries in the calculation rules for the LCA (6.3.5);

— Proposal for co-product allocation (6.4.3.2);

— Add of new chapter Additional environmental information (7.6);

— Add of two informative annexes.

Documents
Document Sharing Hub

Full document details: 23/30467033 DC

Introduction

EN 15804 provides core product category rules for all construction products and services. It provides a structure to ensure that all Environmental Product Declarations (EPD) of construction products, construction services and construction processes are derived, verified and presented in a harmonized way.

This document provides rules for Environmental Product Declarations (EPD) specifically for wood and wood-based products. It complements the core product category rules for all construction products and services as established in EN 15804.

An EPD communicates verifiable, accurate, non-misleading environmental information for products and their applications, thereby supporting scientifically based, fair choices and stimulating the potential for market-driven continuous environmental improvement.

The standardization process has taken place in accordance with EN ISO 14025. All common issues are covered horizontally for all product types in order to minimize vertical (branch specific) deviations. All common issues are covered horizontally for all wood and wood-based products in order to minimize intra-sectoral deviations.

EPD information is expressed in information modules as defined in EN 15804, which allow easy organization and expression of data packages throughout the life cycle of wood and wood-based products. The approach requires that the underlying data should be consistent, reproducible and comparable.

In line with EN 15804, the EPD is expressed in a form that allows aggregation (addition) to provide complete information for buildings and other construction works. This document does not deal with aggregation at the building level nor does this standard describe the rules for applying EPD in a building assessment.

The document deals with a limited number of quantifiable parameters as predefined in EN 15804. Future revisions of EN 15804 may lead to the incorporation of additional predetermined parameters.

This document provides the means for developing a Type III environmental declaration of wood and wood-based construction products in the context of the suite of standards that are intended to assess the sustainability of construction works.

This suite of standards includes:

EN 15643, *Sustainability of construction works - Framework for assessment of buildings and civil engineering works "*

EN 15978, *Sustainability of construction works — Assessment of environmental performance of buildings — Calculation method*

EN 15804:2012+A2:2019~~,~~ *Sustainability of construction works — Environmental product declarations — Core rules for the product category of construction products*

CEN/TR 15941, *Sustainability of construction works — Environmental product declarations — Methodology for selection and use of generic data*

EN 15942, *Sustainability of construction works — Environmental product declarations — Communication format business to business*

Documents
Document Sharing Hub

Full document details: 23/30467033 DC

1 Scope

This document provides general Product Category Rules (PCR) for Type III environmental declarations for wood and wood-based products for use in construction and related construction and in-service processes.

This document complements the core rules for the product category of construction products as defined in EN 15804 and is intended to be used in conjunction with EN 15804.

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

The core PCR:

— define the parameters to be declared and the way in which they are collated and reported;

— describe which stages of a product's life cycle are considered in the EPD and which processes are to be included in the life cycle stages;

—define rules for the development of scenarios;

—include the rules for calculating the Life Cycle Inventory and the Life Cycle Impact Assessment underlying the EPD, including the specification of the data quality to be applied;

— include the rules for reporting predetermined, environmental and health information, that is not covered by LCA for a product, construction process and construction service where necessary;

— define the conditions under which construction products can be compared based on the information provided by EPD.

For the EPD of construction services, the same rules and requirements apply as for the EPD of construction products.

Additionally, to the common parts of EN 15804, this document for wood and wood-based products:

— defines the system boundaries;

— defines the rules for modelling and assessment of material-specific characteristics such as carbon storage and energy content of wood;

— defines allocation procedures for multi-output processes along the wood chain;

— defines allocation procedures for reuse, recycling and energy recovery;

— includes the rules for calculating the Life Cycle Inventory and the Life Cycle Impact Assessment underlying the EPD, including the assessment of carbon and energy content of wood;

—provides guidance/specific rules for the determination of the Reference Service Life (RSL).

This document is intended to be used for cradle to gate or cradle to grave assessment, provided the intention is properly stated in the system boundary description.

AVA Documents
Document Sharing Hub

Full document details: 23/30467033 DC

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.

EN ISO 14044:2006, *Environmental management - Life cycle assessment - Requirements and guidelines (ISO 14044:2006)*

EN 15804:2012+A2:2019, *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 EN 15804:2012+A2:2019 and the following apply.

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

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

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

3.1
co-product
any of two or more marketable materials, products, or fuels from the same unit process, but which is not the object of the assessment

[SOURCE: EN 15804:2012+A2:2019, 3.7]

Note 1 to entry Co-product, by-product and product have the same status and are used for identification of several distinguished flows of products from the same unit process. From co-product, by-product and product, waste is the only output to be distinguished as a non-product.

Note 2 to entry When further used as a material or fuel, according to COM (2007)59, (Communication from the Commission to the Council and the European Parliament on the Interpretative Communication on waste and by-products) Annex I, sawdust, wood chips and off-cuts from untreated wood as generated at saw mills or at secondary operation such as the manufacturing of furniture or pallets and packaging and customarily referred to as by-products are, for the purpose of this document, considered co-products. Materials of this type fall outside the definition of waste. However, where material of this kind requires a full recycling or recovery operation or contains contaminants that need to be removed before it can be further used or processed, this would indicate that the material is a waste until the recycling or recovery operation is completed.

3.2
biogenic carbon
carbon derived from/contained in biomass

3.3
biomass
material of biological origin excluding material embedded in geological formations and material transformed to fossilised material

3.4
biogenic carbon neutrality
balance of biogenic carbon uptake during growth of biomass and release during natural decay or incineration

Documents
Document Sharing Hub

Full document details: 23/30467033 DC

3.5
carbon storage
biogenic carbon stored over a specific period of time

3.6
direct land use change
change in human use or management of land at the location of the production, use or disposal of raw materials (ISO 14050:2020, 6.12), intermediate products (ISO 14050:2020, 6.2.1) and final products (3.4.1) or wastes (ISO 14050:2020, 3.12) in the product system being assessed

3.7
forest carbon pools
compartments storing biogenic carbon in the forest: above-ground biomass, below-ground biomass, litter, dead wood and soil organic carbon

[SOURCE: IPCC 2006, Table 1.1]

3.8
fossil carbon
carbon which is contained in fossilised material

Note 1 to entry Examples of fossilised material are coal, oil and natural gas.

3.9
recovered wood
all kind of wood material which, at the end of its life cycle in wooden products, is made available for re-use, recycling or energy recovery

4 4 Abbreviations

EPD	Environmental Product Declaration
PCR	Product Category Rules
LCA	Life Cycle Assessment
LCI	Life Cycle Inventory analysis
LCIA	Life Cycle Impact Assessment
RSL	Reference Service Life
GWP	Global Warming Potential
GHG	Greenhouse Gas
CHP	Combined Heat and Power

Documents
Document Sharing Hub
Full document details: 23/30467033 DC

5 General aspects

5.1 Objective of this general PCR for wood and wood-based construction products

An EPD according to this standard provides quantified environmental information for wood and wood-based construction product or related service on a harmonized and scientific basis. It also provides information on health related emissions to indoor air, soil and water during the use stage of the building. The purpose of an EPD in the construction sector is to provide the basis for assessing buildings and other construction works and identifying those which cause less stress to the environment.

Thus, the objective of this general PCR for wood and wood-based products is to ensure:

— the provision of verifiable and consistent data for an EPD, based on LCA

— the provision of verifiable and consistent product related technical data or scenarios for the assessment of the environmental performance of buildings;

— the provision of verifiable and consistent product related technical data or scenarios potentially related to the health of users for the assessment of the performance of buildings;

— that comparisons between construction products are carried out in the context of their application in the building;

—the communication of the environmental information of construction products from business to business;

— the basis, subject to additional requirements, for the communication of the environmental information of construction products to consumers.

Declarations based on this standard are not comparative assertions.

NOTE See definition 3.4 of EN 15804:2012+A2:2019 and EN ISO 14044:2006, 5.1 for more information concerning LCA used for comparative assertion.

5.2 Types of EPD with respect to life cycle stages covered

As in EN 15804.

5.3 Comparability of EPD for construction products

As in EN 15804.

5.4 Additional environmental information

As in EN 15804.

5.5 Ownership, responsibility and liability for the EPD

As in EN 15804.

5.6 Communication formats

As in EN 15804.

Documents
Document Sharing Hub

Full document details: 23/30467033 DC

6 Product Category Rules for LCA

6.1 Product category

The product category referred to in this standard includes all wood and wood-based construction products as well as related construction services for buildings and other construction works.

6.2 Life cycle stages and their information modules to be included

6.2.1 General

As in EN 15804.

6.2.2 A1-A3, Product stage, information modules

As in EN 15804.

6.2.3 A4-A5, Construction process stage, information modules

As in EN 15804.

6.2.4 B1-B5, Use stage, information modules related to the building fabric

As in EN 15804.

6.2.5 B6-B7, use stage, information modules related to the operation of the building

As in EN 15804.

6.2.6 C1-C4 End-of-life stage, information modules

As in EN 15804.

6.2.7 D, Benefits and loads beyond the system boundary, information module

As in EN 15804.

6.3 Calculation rules for the LCA

6.3.1 Functional or declared unit

As in EN 15804.

6.3.2 Functional unit

6.3.2.1 General

As in EN 15804 with the following addition:

— When communicating the functional unit of an EPD, the apparent density and moisture content of wood and wood-based products shall be provided as complementary information.

— Values for apparent density and moisture content can be taken from product or application standards and should reflect the respective values underlying the LCA calculations.

6.3.2.2 Performance in a functional unit

As in EN 15804.

Documents
Document Sharing Hub

Full document details: 23/30467033 DC

6.3.3 Declared unit

As in EN 15804 with the following addition:

The declared unit is used instead of the functional unit when the precise function of the product or scenarios at the building level is not stated or is unknown. The declared unit shall be applied when an EPD covers one or more life cycle stages as information modules, i.e. in the case of a "cradle to gate" EPD and "cradle to gate with options" EPD and when the EPD is not based on a full "cradle to grave" LCA. The declared unit provides a reference by means of which the material flows of the information module of a construction product are normalized (in a mathematical sense) to produce data, expressed on a common basis. It provides the reference for combining material flows attributed to the construction product and for combining environmental impacts for the selected stages of the construction product's incomplete life cycle (see 7.5). The declared unit shall relate to the typical applications of products.

The declared unit in the EPD shall be one of the unit types listed below. A different unit may be declared for reasons that shall be explained and in such cases information shall be provided on how to convert this unit to one or more of the required unit types:

— an item, an assemblage of items, e.g. 1 wood window;

— Volume (m^3), e.g. 1 m^3 of sawn timber;

— Mass (kg), e.g. wood chips, recovered wood;

—Length (m), e.g. 1 m of wood moulding;

— Area (m^2), e.g. 1m^2 of wall elements; 1 m^2 of wood flooring; 1 m^2 of wood-based panel.

If the declared unit is not expressed in mass, then a conversion factor, e.g. to 1 kg of material shall be provided.

For the development of, for example, transport and disposal scenarios, conversion factors to mass per declared unit shall be provided.

For the development of, e.g. transport and disposal scenarios, the apparent density and moisture content shall be part of the declared unit provided.

NOTE 1 Reasons for declaring units other than those listed include the need to use units normally used for design, planning, procurement and sale.

NOTE 2 CEN Technical Committees for product standards are expected to harmonize the declared unit to be used for their product families.

6.3.4 Reference service life (RSL) (valid for cradle to gate with options and cradle to grave EPDs)

6.3.4.1 General

As in EN 15804.

6.3.4.2 Scenarios for RSL and functional unit

As in EN 15804.

Documents
Document Sharing Hub

Full document details: 23/30467033 DC

6.3.5 System boundaries

6.3.5.1 General

As in EN 15804 with the addition under 6.3.5.1.1.

6.3.5.1.1 Carbon fluxes over the life cycle

Carbon fluxes within the system boundary with nature is set to include those technical processes that provide the material and energy inputs into the system and the following manufacturing (module A1 to A3), as well as the processing of any waste arising from those processes, and construction processes (module A5) and end-of-life modules C3 and C4 as well as benefits and loads beyond the system boundary (module D).

Natural growth and decay processes including natural disturbances etc. shall not be attributed to the production function of forests and therefore shall not be considered in the LCA.

Resulting from the fundamental principle of sustainable forest management to preserve the production function of forest, total forest carbon pools shall be considered stable (or increasing) under sustainable forest management. This is due to the fact that temporal decreases of forest carbon pools resulting from harvesting on one site are compensated by increases of carbon pools on the other sites, forming together the forest area under sustainable forest management.

Effects on forest carbon pools related to the extraction of slash, litter or roots shall not be attributed to the material use of wood and are therefore not considered in this document.

NOTE 1 In accordance with European policies forests are understood as a natural system with multiple functions, the production function of timber being one of them. The existence of forests as natural systems is protected by European and national legislation.

NOTE 2 Harvesting operations lead to temporal decreases in forest carbon pools in the respective stand. Impacts on forest carbon pools resulting from the sustainable or unsustainable management of forests, however, cannot be defined or assessed on stand level but requires the consideration of carbon pool changes on landscape level, i.e. the level based on which management decisions are made.

NOTE 3 It is acknowledged that excessive extraction of slash, litter or roots for the purpose of bioenergy generation can lead to decreases in forest carbon pools. These activities, however, are not causally linked to the extraction of timber for the material use of wood.

In order to reflect the biogenic nature of wood, its renewability and its potential carbon neutrality, the system boundary between nature and the product system under study is defined as follows:

— Wood entering the product system from nature accounts for the energy content and the biogenic carbon content as material inherent properties.

— All technical processes related to forestry operations intended to produce timber, (e.g. stand establishment, tending, thinning(s), harvesting, establishment and maintenance of forest roads) are considered within the system boundary and are subject to co-product allocations as outlined in 6.4.3.2.

— Potential implications due to the unknown origin of wood or unsustainably produced timber are considered.

— Human induced impacts on forest carbon pools resulting deforestation are accounted in the impact category Global Warming Potential land use and land use change (GWP-luluc).

GWP-luluc is 0 for countries that have decided to account for Art. 3.4 of the Kyoto Protocol or for wood originating from forests which are operating under established certification schemes for sustainable forest management.

Documents
Document Sharing Hub
Full document details: 23/30467033 DC