
Krožno gospodarstvo - Izmenjava podatkov in informacij o izdelkih vzdolž vrednostnih omrežij

Circular Economy - Product-related data and information sharing along value networks

Circular Economy - Produktbezogener Daten- und Informationsaustausch entlang von Wertschöpfungsnetzen

Économie circulaire - Partage de données et d'informations relatives aux produits dans les réseaux de valeur

Ta slovenski standard je istoveten z: prEN 18364

ICS:

13.020.20

Okoljska ekonomija.
Trajnostnost

Environmental economics.
Sustainability

oSIST prEN 18364:2026

en,fr,de

Sample Document

get full document from standards.iteh.ai

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 18364

August 2026

ICS

English Version

**Circular Economy - Product-related data and information
sharing along value networks**

Économie circulaire - Partage de données et
d'informations relatives aux produits dans les réseaux
de valeur

Circular Economy - Produktbezogener Daten- und
Informationsaustausch entlang von
Wertschöpfungsnetzen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 473.

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

© 2026 CEN All rights of exploitation in any form and by any means reserved
worldwide for CEN national Members.

Ref. No. prEN 18364:2026 E

Contents	Page
European foreword	4
Introduction	5
1 Scope	7
2 Normative references	7
3 Terms, definitions, symbols and abbreviations	7
3.1 Terms and definitions	7
3.2 Symbols and abbreviations	14
4 Framework	14
4.1 Sharing information to facilitate circular economy	14
4.2 Guidance for value network information needs	17
4.2.1 General	17
4.2.2 Information to share regarding materials	18
4.2.3 Information to share for the repairing and maintenance of the product	18
4.2.4 Information to share for the product end of use	18
4.2.5 Information to share for the product end of life	19
5 Circular Economy relevant parameters	21
5.1 General	21
5.2 Environmental impacts	21
5.3 Material efficiency during the use phase	21
5.3.1 Durability and reliability	21
5.3.2 Maintenance and repair	21
5.4 Reused parts	22
5.4.1 General	22
5.4.2 Reliability of re-used, remanufactured or refurbished products	22
5.5 Recycled content	22
5.6 Recycling	23
6 Example of Structure of data entries for Circular Economy relevant parameters	23
6.1 General	23
6.2 Summary of Classes and Properties	23
6.3 Circular Economy Domain	24
6.4 Circular Economy Conditions	25
6.5 Durability	25
6.6 Reliability	26
6.7 Reuseability	27
6.8 Upgradeability	28
6.9 Repairability	28
6.10 Maintainability	29
6.11 Possibility of refurbishment	29
6.12 Presence of substances of concern	30
6.13 Normal energy use	30
6.14 Energy efficiency	31
6.15 Normal water use	31
6.16 Water efficiency	32
6.17 Resource consumption during normal use	32
6.18 Resource efficiency	33
6.19 Recycled content	34
6.20 Pre-consumer recycled material	34
6.21 Post-consumer recycled material	35
6.22 Remanufacturability	35
6.23 Recycability	36
6.24 Recoverability	37
6.25 Carbon footprint	37

6.26 Environmental footprint	38
Annex A (informative) Clarifications on Life cycle impacts	39
Annex B (informative) Clarifications on Common Data Dictionary	40
Bibliography	41

Sample Document

get full document from standards.iteh.ai

prEN 18364 (E)**European foreword**

This document (prEN 18364) has been prepared by Technical Committee CEN/TC 473 “Circular Economy”, the secretariat of which is held by SIS.

This document is currently submitted to the CEN Enquiry.

Sample Document

get full document from standards.iteh.ai

Introduction

0.1 Background

The transition towards a circular economy aims at the efficient use of resources, the minimization of waste, and at the reuse and recycling of materials throughout value networks. One fundamental aspect of a circular economy is the sharing of data about products, materials and resources. Providing decision-makers with circularity related information is often a prerequisite to unlock the circularity potential and minimize individual burdens for suppliers, buyers, and users. By promoting transparency and collaboration, information sharing facilitates the effective management of resource stocks and flows, ensuring materials are used and reused efficiently throughout their life cycles.

To conform to future product, material or resource information requirements contained in regulations such as the Ecodesign for Sustainable Product Regulation (ESPR) [1], sharing data will be indispensable. A harmonized understanding of how to mediate the intent of sustainability or circularity related choices of the design, material or functionality of the product which might not be obviously apparent by data and product appearance by actors in other industries/sectors is needed. This is to strengthen the understanding of meaning, purpose and intent between actors with different roles, perspectives and abilities to act along the value chain of the product.

Sharing information helps to trace – and thereby take responsibility for – resources, to provide sufficiently detailed information enabling resource recovery, and to give guidance on how to retain or add to the value of resources.

The information needed to support circular actions, includes guidance on how to establish and maintain a circular flow of resources, closing, slowing, or narrowing resource flows, which are key strategies for reducing waste and extending the life of resources. Furthermore, sharing information is needed to ensure resources meet demand, to inform users on how to extend product lifespans, to add considerations to the design phase regarding material selection and resource-efficient design, and to facilitate resource recovery by manufacturers, recyclers, and other stakeholders.

A common framework enables organizations to effectively communicate, exchange, and utilize information to support circular actions. Standardized information sharing promotes transparency and trust among stakeholders, ensuring that shared information is accurate, reliable, and relevant. It fosters confidence in decision-making and strengthens long-term partnerships. Operating in line with this framework empowers organizations to identify gaps, track progress, and uncover opportunities for innovation in circular actions, ultimately accelerating the transition toward a circular economy, by optimizing circular practices, mitigating waste, and enhancing resource efficiency.

Within the European legislative framework, the ESPR [1] promotes sustainable product design, lifecycle management, and a standardized framework for information exchange to facilitate compliance by enabling organizations to share and access critical product information. One of the key features of the ESPR [1] is the introduction of the requirement for the development and operation of an information system for the concept Digital Product Passport (DPP) to various stakeholders throughout a product's lifecycle on its various aspects, including its durability, reusability, upgradability, reparability, and the presence of substances that inhibit circularity.

Other regulations such as the Toy Safety [2] and Detergents Regulations [3] demand precise documentation of product safety, chemical composition, and compliance measures. The Critical Raw Materials Act [4] emphasizes sustainable sourcing and recycling of critical raw materials. The Packaging and Packaging Waste Regulation [5] mandates transparency in packaging design, recycling, and disposal. Similarly, the Construction Products Regulation [6] requires consistent and transparent information about the environmental and safety performance of construction materials. All these regulations represent the need for standardized information sharing to facilitate compliance and enhance trust among stakeholders.

To fulfil the upcoming legal requirements and avoid an increase in costs and efforts for value network actors and to contribute to the alignment of different application fields in their transition to a circular economy beyond pure data exchange, a harmonized view on information sharing is crucial. By aligning

prEN 18364 (E)

with these EU regulations, this document not only supports compliance but also positions organizations to proactively address emerging sustainability challenges as it supports stakeholders to efficiently share and utilize information critical to achieving the regulatory goals of environmental protection, resource efficiency, and circular economy advancement.

It covers both, data of products and information for stakeholders within the value networks and structures those along the life cycle of a product.

0.2 Relationship between this document and other relevant standards

Harmonized data require a common understanding what the content is, e.g. how is a specific parameter measured. Common understanding and harmonized data can be achieved by leveraging existing standards as a reference for specific parameters, e.g. [EN IEC 63000 \[7\]](#) for hazardous substances and [EN IEC 82474-1 \[8\]](#). A harmonized structure also ensures machine readability and interoperability between different information sharing systems. This will be ensured by following the common data dictionary approach of [EN 61360-1 \[9\]](#).

NOTE The EN 61360 series of standards is being worked on in the ISO/TC 184/SC 4/JWG 24 Joint ISO/TC 184/SC 4 - IEC SC3D WG: Use of IEC CDD for ISO data dictionaries and ontologies.

The parameters provided in this document include all product parameters listed in Article 5 of the ESPR [\[1\]](#) and are product agnostic. The parameters will be provided in the form of modules to be easily included in [EN IEC 82474-1 \[8\]](#), at a later stage. The product parameters will follow the structure provided in [EN IEC 63000 \[7\]](#) to allow for interoperability with various systems.

Once introduced in the Common Data Dictionary (CDD), the parameters provided in this document complement the implementation of [ISO 59040 \[10\]](#), by allowing information exchange required in [ISO 59040 \[10\]](#) in an interoperable and machine-readable form.

[ISO 59014 \[11\]](#) expects actors at the end of product life to correctly understand how the product should be handled and further treated. To enable appropriate actions when entering the secondary part – the “return section” – of the value network, guidance for different types of general dismantling and material handling operators are formulated and mediated in a way that ensures correct interpretation. This guidance should be free of technical jargon specific to the sector(s) that produced the product, its components, and its material.

[ISO 59010 \[12\]](#) aims to ensure that all actors within the entire value network share a common understanding of a product and its circular design idea throughout its lifetime. It also emphasizes the need to mediate non-obvious risks, opportunities, and intentions behind circular product design decisions to later actors in the value network to establish actionable circularity principles across the entire value network.

[ISO 59020 \[13\]](#) gives guidance to organizations for measuring and assessing a defined economic system to determine their circularity performance at a specific time. Measurement and assessment are performed by the collection and calculation of data with the help of mandatory and optional circularity indicators.

Although relevant circular economy terms are defined in [ISO 59004:2024 \[14\]](#) and [ISO 59040 \[10\]](#), this document does not use them as a primary source for definitions, as, at the time of writing, revision of those ISO documents is about to commence.

Besides the content, i.e. the specific parameter to be shared, there is also a need for a harmonized, aligned system enabling data to be shared. This system is being developed by CEN/CLC/JTC 24 for the Digital Product Passport at the same time this document is being developed. It covers, amongst others, the topics of unique identifiers, data persistence, data security, data reliability and interoperability.

1 Scope

This document provides guidance to support information sharing on circular economy aspects throughout value networks by providing product-group agnostic data entries in a common data dictionary.

This document provides a framework to guide organizations of all types and sizes.

This document complements content-related aspects addressed in other standards or applications for data or information sharing through a Digital Product Passport (DPP) and does not overlap with the DPP framework and system developed by CEN/CLC/JTC 24.

This document is intended to help to set a framework for how to support information sharing on circular economy aspects throughout value networks but is not foreseen to be used for conformity assessment with regulations.

2 Normative references

There are no normative references in this document.

3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

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

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

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

3.1.1

circularity data

data relevant to describe a circularity aspect

3.1.2

circularity information

information relevant for circular economy related decision making

3.1.3

circularity aspect

element of an organization's activities or solutions that interacts with the circular economy

[SOURCE: [ISO 59004:2024 \[14\]](#), 3.6.1]

3.1.4

circular economy

economic system that uses a systemic approach to circulate products and materials at their highest value for as long as possible, aiming to eliminate waste and pollution, while contributing to sustainable development and giving the opportunity for natural systems to regenerate themselves

Note 1 to entry: The inflow of primary materials is kept as low as possible.

[SOURCE: [IEC 60050-193:2026 \[15\]](#), IEV 193-01-01]

prEN 18364 (E)**3.1.5****data traceability**

ability of data to be tracked to original and verifiable sources

Note 1 to entry: Including calculations and operations performed on the data.

Note 2 to entry: [ISO 14033:2019 \[16\]](#) provides a framework both for how to achieve data traceability as well as to audit and verify the level to which data traceability has been achieved.

Note 3 to entry: Data can be quantitative or qualitative.

[SOURCE: [ISO 59004:2024 \[14\]](#), 3.3.16]

3.1.6**organization**

person or group of people that has its own functions with responsibilities, authorities, and relationships to achieve its objectives

Note 1 to entry: The concept of organization includes, but is not limited to sole-trader, company, corporation, firm, enterprise, authority, partnership, charity or institution, or part or combination thereof, whether incorporated or not, public or private (e.g. foundation, union, association, agency, municipality, region, country, intergovernmental agencies).

Note 2 to entry: A group of organizations can also be considered as an organization that has, alone or collectively, their own objectives.

[SOURCE: [ISO 59004:2024 \[14\]](#), 3.4.1]

3.1.7**interested party / stakeholder**

person or organization that can affect, be affected by, or perceive itself to be affected by a decision or activity

Note 1 to entry: To “perceive itself to be affected” means the perception has been made known to the organization.

[SOURCE: [ISO 59004:2024 \[14\]](#), 3.4.2]

3.1.8**customer**

organization or individual member of the general public purchasing a solution for commercial, private or public purposes

[SOURCE: [ISO 59004:2024 \[14\]](#), 3.4.3]

3.1.9**user**

organization or individual member of the general public using a solution for commercial, private or public purposes

[SOURCE: [ISO 26000:2010 \[17\]](#), 2.3, modified — “user” replaced “customer” as the preferred term. “using a solution” replaced “purchasing property, products or services”.]

3.1.10**holder**

organization, customer or some other type of individual that possesses, carries or legally owns the object of consideration

[SOURCE: [ISO 59004:2024 \[14\]](#), 3.4.4]

3.1.11**value network**

network of interlinked value chains and interested parties

[SOURCE: [ISO 59004:2024 \[14\]](#), 3.5.3]

3.1.12**material recovery**

controlled processing of end-of-life products or waste to produce material

Note 1 to entry: Processes for material recovery can include dismantling, depollution, grinding, shredding, milling, concentration, homogenization, refining, etc.

Note 2 to entry: The result of the material recovery is either alternate material or material that will be further processed in material recycling.

Note 3 to entry: Material recovery results in circular material, i.e. material that can be recovered again.

[SOURCE: [IEC 60050-193:2026 \[15\]](#), IEC 193-04-07, modified — Note 4 to entry and the Figure have been removed.]

3.1.13**product category rules**

PCR

set of specific rules, requirements and guidelines for sustainability assessments based on LCA (3.3.2) for one or more product categories (3.2.5)

[SOURCE: [prEN ISO 14025 \[18\]](#), 3.3.3 modified, reference to developing EPD (3.2.2) has been deleted]

3.1.14**durability**

ability to function as required, under specified conditions of use, maintenance and repair, until the technical end of life

Note 1 to entry: Technical end of life refers to when primary, secondary or tertiary functions cannot be delivered.

Note 2 to entry: The criteria for transition from non-functional state to end of life should be specified. The criteria are based on predictable aspects (e.g. technical aspects) so that the durability can be estimated.

Note 3 to entry: Durability can be expressed in units appropriate to the part or product concerned, e.g. calendar time, operating cycles, distance run, etc.

Note 4 to entry: Maintenance can include software updates.

Note 5 to entry: The term durability is also defined in the context 'of an item' in dependability (IEV 192-01-21).

[SOURCE: [EN 45552:2020 \[19\]](#), 3.1.1.1, modified — In the definition the term 'defined' was replaced by 'specified', the term 'limiting state' was replaced by 'technical end of life' and the term 'is reached' was deleted. Note 1 to entry was deleted and replaced by new note, note 2 to entry was modified and the last sentence of note 3 to entry was deleted. Additionally, the figure and notes 4 and 5 to entry were added.]

3.1.15**reliability**

probability that a product functions as required under given conditions, including maintenance, for a given duration without limiting event

Note 1 to entry: The intended function(s) and given conditions are described in the information for use provided with the product.

Note 2 to entry: Duration can be expressed in units appropriate to the part or product concerned, e.g. calendar time, operating cycles, distance run, etc. The units should always be clearly stated.

[SOURCE: [EN 45552:2020 \[19\]](#), 3.1.1.]

prEN 18364 (E)**3.1.16****limiting event**

occurrence which results in a primary or secondary function no longer being delivered

[SOURCE: [EN 45552:2020 \[19\]](#), 3.1.1.3]

3.1.17**reuseability**

ability of a product or part to be reused

[SOURCE: [IEC 60050-193:2026 \[15\]](#), IEV 193-06-02]

3.1.18**reuse**

operation by which a product or part having reached the end of use is used again

Note 1 to entry: Reuse for another purpose is called repurpose.

Note 2 to entry: Normal, regular or sporadic use is not considered as reuse.

[SOURCE: [IEC 60050-193:2026 \[15\]](#), IEV 193-06-01, modified note 3 to entry deleted]

3.1.19**upgradeability**

ability of a product or part to be upgraded

[SOURCE: [IEC 60050-193:2026 \[15\]](#), IEV 193-06-15]

3.1.20**upgrade**

process to enhance the functionality, aesthetics or performance of a product or service

Note 1 to entry: An upgrade to a product can involve changes to its software, firmware or hardware (e.g. adding memory or software functionality).

Note 2 to entry: Upgrade takes without significantly altering the original design of the product. Upgrade does not lead to a repurpose of a product.

[SOURCE: [IEC 60050-193:2026 \[15\]](#), IEV 193-06-14]

3.1.21**repairability**

ability of a product or part to be repaired

[SOURCE: [IEC 60050-193 \[20\]](#) FDIS:2026, IEV 193-06-13]

3.1.22**repair**

direct action taken to effect restoration of a function of a product under specific use

Note 1 to entry: Repair includes fault localization, fault diagnosis, fault correction and function checkout.

[SOURCE: [IEC 60050-193:2026 \[15\]](#), IEV 193-06-12, modified, text revised and Note 2 to entry deleted.]