



# SLOVENSKI STANDARD

## SIST EN 16751:2016

01-junij-2016

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### Bioizdelki - Merila trajnostnosti

Bio-based products - Sustainability criteria

Biobasierte Produkte - Nachhaltigkeitskriterien

Produits biosourcés - Critères de durabilité

Ta slovenski standard je istoveten z: **EN 16751:2016**

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EUROPEAN STANDARD

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## Bio-based products - Sustainability criteria

Produits biosourcés - Critères de durabilité

Biobasierte Produkte - Nachhaltigkeitskriterien

This European Standard was approved by CEN on 15 January 2016.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists 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.

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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EN 16751:2016 (E)

## European foreword

This document (EN 16751:2016) has been prepared by Technical Committee CEN/TC 411 “Bio-based products”, the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2016, and conflicting national standards shall be withdrawn at the latest by October 2016.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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## Introduction

Bio-based products from forestry and agriculture have a long history of application, such as paper, board and various chemicals and materials. The last decades have seen the emergence of new bio-based products in the market. Some of the reasons for this increased interest lie in the bio-based products' benefits in relation to the depletion of fossil resources and climate change. Bio-based products may also provide additional product functionalities. This has triggered a wave of innovation with the development of knowledge and technologies allowing new transformation processes and product development.

Acknowledging the need for common standards for bio-based products, the European Commission issued mandate M/492<sup>1)</sup>, resulting in a series of standards developed by CEN/TC 411, with a focus on bio-based products other than food, feed and biomass for energy applications.

The standards of CEN/TC 411 "Bio-based products" provide a common basis on the following aspects:

- Common terminology;
- Bio-based content determination;
- Life Cycle Assessment (LCA);
- Sustainability aspects;
- Declaration tools.

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It is important to understand what the term bio-based product covers and how it is being used. The term 'bio-based' means 'derived from biomass'. Bio-based products (bottles, insulation materials, wood and wood products, paper, solvents, chemical intermediates, composite materials, et cetera) are products which are wholly or partly derived from biomass. It is essential to characterize the amount of biomass contained in the product by for instance its bio-based content or bio-based carbon content.

The bio-based content of a product does not provide information on its environmental impact or sustainability, which may be assessed through LCA and sustainability criteria. In addition, transparent and unambiguous communication within bio-based value chains is facilitated by a harmonized framework for certification and declaration.

This European Standard has been developed with the aim to identify sustainability aspects applicable to all bio-based products, covering all three pillars of sustainability (environmental, social and economic). Though the scope of CEN/TC 411 excludes food, feed and energy, sustainability of biomass and bio-based products should follow the same principles irrespective of their use. All LCA-related topics are covered by EN 16760 *Bio-based products - Life Cycle Assessment*.

The concept of Sustainable Development expresses the shared concerns about the state and sustainability of environmental, economic and social dimensions of today and tomorrow's world. The journey towards sustainability finds sustainable production and consumption at its very heart. It also relates to the social responsibility of organizations and the objective to improve social and environmental performances along with sustained economic profitability – all in the perspective to contribute notably to greater human well-being.

The criteria of this European Standard can either be directly used by an operator or can be used in proprietary schemes and standards which cover sustainability aspects.

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<sup>1)</sup> A Mandate is a standardization task embedded in European trade laws. M/492 Mandate is addressed to the European Standardization bodies, CEN, CENELEC and ETSI, for the development of horizontal European Standards for bio-based products.

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By defining a common framework, this European Standard will allow the provision of information on sustainability aspects for the following uses:

- for an economic operator to communicate along the supply chain on the sustainability aspects of the biomass used as input to the bio-based product;
- for an economic operator to assess and manage sustainability aspects of its operation, and to report in a consistent manner along the supply chain;
- for economic operators in a supply chain (see Figure 1 below) to exchange and share information on the sustainability aspects of the processes and bio-based products with a common framework and understanding (B2B communication); and
- for a programme operator to develop certification schemes to assess the sustainability of the biomass used as input to the bio-based products or of the bio-based part of the bio-based product.

NOTE This European Standard refers to the bio-based part of products only. Without the use of relevant product standards it is not possible to make a claim for the whole product.

The way indicators are addressed will differ according to the use.

Figure 1 illustrates the scope of this European Standard.

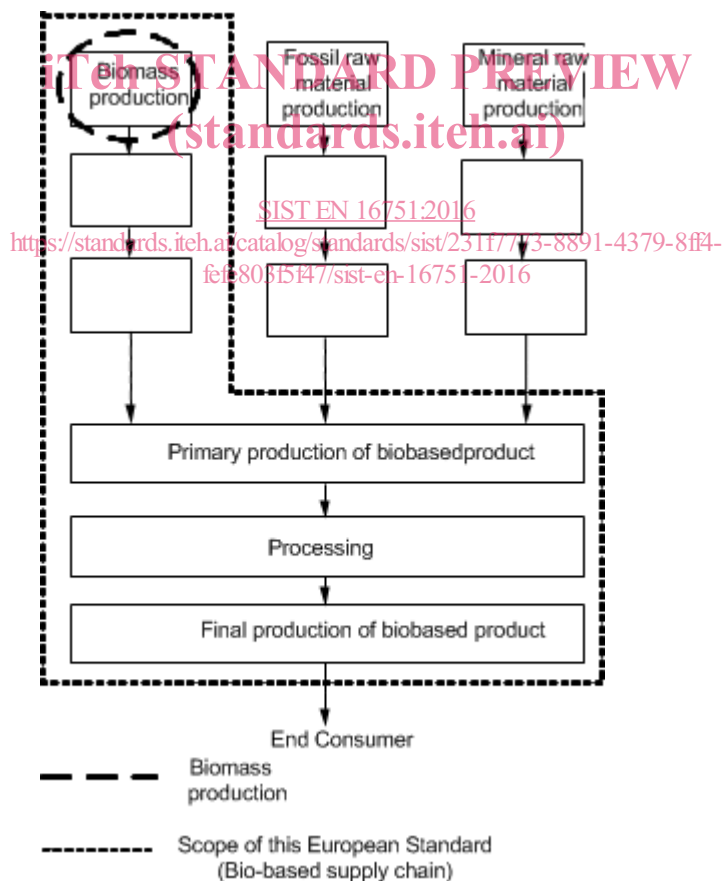


Figure 1 — Illustration of the scope of this European Standard



## 1 Scope

This European Standard sets horizontal sustainability criteria applicable to the bio-based part of all bio-based products, excluding food, feed and energy, covering all three pillars of sustainability; environmental, social and economic aspects. If the product is partly bio-based, this European Standard can only be used for the bio-based part since it does not address non-bio-based (fossil, mineral) parts of a product.

This European Standard can be used for two applications; either to provide sustainability information about the biomass production only or to provide sustainability information in the supply chain for the bio-based part of the bio-based product.

This European Standard sets a framework to provide information on management of sustainability aspects.

This European Standard cannot be used to make claims that operations or products are sustainable since it does not establish thresholds or limits.

This European Standard can however be used for business-to-business (B2B) communication or for developing product specific standards and certification schemes.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 16575 *Bio-based products - Vocabulary*

## 3 Terms and definitions

[SIST EN 16751:2016](https://standards.iteh.ai/catalog/standards/sist/231f7773-8891-4379-8ff4-)

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For the purposes of this document, the terms and definitions given in EN 16575 and the following apply.

### 3.1

#### **activity under direct control**

activity conducted by or subcontracted by the economic operator

### 3.2

#### **biodiversity**

##### **biological diversity**

variability among living organisms from all sources, including, inter alia, terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems

[SOURCE: Convention on Biological Diversity (CBD), United Nations (1992)]

### 3.3

#### **chain-of-custody**

system by which a connection is made between information or claims concerning raw materials or intermediate products and claims concerning final products, including all the stages from the raw material production up until the release of the final product for consumption

[SOURCE: EN 16214-1:2012, 2.16]

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### 3.4 child labour

work that deprives children of their childhood, their potential and their dignity, and that is harmful to their physical and mental development

Note 1 to entry: It refers to work that:

- is mentally, physically, socially or morally dangerous and harmful to children; and
- interferes with their schooling by:
  - depriving them of the opportunity to attend school;
  - obliging them to leave school prematurely; or
  - requiring them to attempt to combine school attendance with excessively long and heavy work.

[SOURCE: International Labour Organization]

### 3.5 criterion

requirement that describes what is to be assessed

Note 1 to entry: A criterion adds meaning and operability to a principle without itself being a direct measure of performance.

Note 2 to entry: A criterion is characterized by a set of related indicators.

[SOURCE: ISO 13065:2015, 3.11, modified: Note 3 deleted]

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### 3.6 direct effects

measurable environmental, social and economic effects under the direct control of the economic operator and caused by the process being analysed

Note 1 to entry: Direct effects applicable in this European Standard are included under the criteria and indicators.

Note 2 to entry: Other potential effects may be added to the consideration when an international consensus standard is established for the effect.

[SOURCE: ISO 13065:2015, 3.12, modified: Notes 1, 2 and 4 deleted and in Note 1 *within the scope of this International Standard are considered* replaced by *applicable in this European Standard are included*]

### 3.7 economic operator

individual or organization that has ownership or control of one or more processes of the supply chain for the bio-based product

[SOURCE: ISO 13065:2015, 3.13, modified: *bioenergy supply chain* replaced by *supply chain for the bio-based product*]

**3.8****ecosystem**

system of complex interactions between communities of plants, animals, microorganisms and their environment, which functions as a unit

[SOURCE: ISO 13065:2015, 3.14]

**3.9****ecosystem services**

benefits that people and other living organisms obtain from ecosystems, including provisioning, regulating, supporting, and cultural services

[SOURCE: Millennium Ecosystem Assessment, 2005. Ecosystems and Human Well-being: Synthesis. Island Press, Washington, DC, modified: *and other living organisms* added.]

**3.10****environment**

surroundings in which an organization operates, including air, water, land, natural resources (including biotic and abiotic resources), flora, fauna, humans and their interrelation

[SOURCE: EN ISO 14001:2004, 3.5, modified – (*including biotic and abiotic resources*) added and Note 1 to entry deleted]

**3.11****food security**

physical and economic access, at all times, to sufficient, safe and nutritious food to meet dietary needs and food preferences for an active and healthy life

[SOURCE: FAO Glossary *Water for Food and Ecosystems 2005*] -8891-4379-8ff4-  
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**3.12****forced or compulsory labour**

work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily

[SOURCE: International Labour Organization]

**3.13****greenhouse gas****GHG**

gaseous constituent of the atmosphere, both natural and anthropogenic, that absorbs and emits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the earth's surface, the atmosphere, and clouds

Note 1 to entry: A list of greenhouse gases with their recognized global warming potentials is provided in Annex A of ISO/TS 14067:2013.

Note 2 to entry: Water vapour and ozone are anthropogenic as well as natural greenhouse gases but are not included as recognized greenhouse gases due to difficulties, in most cases, in isolating the human-induced component of global warming attributable to their presence in the atmosphere.

[SOURCE: ISO/TS 14067, 3.1.3.1, modified: Note 1 to entry has been modified]

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**3.14****greenhouse gas emission**  
**GHG emission**

release of a greenhouse gas to the atmosphere

Note 1 to entry: The common phrase “over a specified time period” has been omitted because the time period for a Carbon Footprint of a Product (CFP) is determined by the life cycle of the product; the term “total” has been omitted because a CFP allows for the quantification of emissions relevant to footprint calculation.

[SOURCE: ISO/TS 14067:2013, 3.1.3.5, modified – *released* moved to the subject as *release* to replace *mass*.]

**3.15****indicator**

quantitative, qualitative or binary variable that can be measured or described to assess an aspect of a defined criterion

[SOURCE: ISO 13065:2015, 3.27, modified: *in response to* replaced by *to assess an aspect of*.]

**3.16****intermediate product**  
**intermediate**

output from a unit process that is input to other unit processes that require further transformation within the system

[SOURCE: EN ISO 14040:2006, 2.23]

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**3.17****land use**

total arrangements, activities and inputs undertaken in a certain land cover type

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Note 1 to entry: The term land use is also used in the sense of the social and economic purposes for which land is managed (e.g. grazing, timber extraction and conservation).

[SOURCE: IPCC Fourth Assessment Report (2007)]

**3.18****land use change**

change in the use or management of land by humans, which may lead to a change in land cover

[SOURCE: IPCC Fourth Assessment Report (2007), modified: Note 1 to Entry deleted.]

**3.19****land use rights**

form of land tenure, whether formal or informal, including customary rights or traditions

Note 1 to entry: There is great variability in land use rights in different parts of the world as they relate to systems of ownership and property rights.

[SOURCE: ISO 13065:2015, 3.29]

**3.20****life cycle**

consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal

[SOURCE: EN ISO 14040:2006, 3.1]