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Bio-based products - Life Cycle Assessment

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

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Cont	ents	Page
-	ean foreword	
Intro	luction	
1	Scope	6
2	Normative references	<i>6</i>
3	Terms and definitions	<i>6</i>
4	Methodology for LCA of bio-based products	6
4.1	General description of an LCA	<i>6</i>
4.2	General aspects of LCA for bio-based products	
4.3	Goal and Scope of the LCA study	
4.3.1	Goal of the LCA study	
4.3.2	Scope of the LCA study	8
5	LCI - Life Cycle Inventory	10
5.1	General	10
5.2	Sources of data	11
5.2.1	General	
5.2.2	Geographical data	
5.2.3	Temporal data	
5.3	Allocation procedure	
5.4	LCI - Collecting data and modelling	
5.4.1	Considerations for resource use	
5.4.2	Land use	
5.4.3	Water inventory	
5.5 5.6	Inventory of fossil and biogenic carbon flows	
5.6.1	Modelling agricultural systems	
5.6.2	Modelling forestry systems	
5.6.3	Modelling aquaculture systems	
5.6.4	Modelling end-of-life processes in LCAs of bio-based products	
6	LCIA - Life Cycle Impacts Assessment	
6.1 6.1.1	Impact categories and impact indicators	
6.1.1	GeneralSelection of impact categories	
6.1.2	Applicability of methods and data	
6.1.4	Weighting and comparative assertions disclosed to the public	
6.2	Guidelines for specific impact indicators	
6.2.1	Treatment of biogenic and non-biogenic carbon in assessing climate change	
6.2.2	Land use impact on areas of protection	
6.2.3	Impact of water use	
7	Interpretation and reporting of LCA	2 3
7.1	Interpretation	
7.2	Reporting of LCA	
7.3	Critical review	
Annex	x A (informative) Example of allocation on glycerol	25
A.1	Example for the based approach	25

Annex	x B (informative) Examples of fossil and biogenic carbon flows accounting and	
	communication	26
B.1	Example of fossil and biogenic carbon flows accounting	26
B.2	Example of a representation of cradle-to-gate / cradle-to-grave emissions	27
B.3	Temporal accounting	27
B.3.1	ILCD guidance for calculating temporal accounting (CFP = Carbon Footprint)	27
B.3.2	Example of calculation temporal accounting	28
Annex	x C (informative) Examples of impact categories and impact indicators	29
C.1	Indicator of impacts which contribute to Climate change	29
C.2	Indicators of impacts which contribute to the exhaustion of non-renewable resources	29
C.3	Indicators of impacts affecting human health	29
Biblio	graphy	32

European foreword

This document (EN 16760:2015) 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 May 2016, and conflicting national standards shall be withdrawn at the latest by May 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.

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 the 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/492¹, 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.

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 aims to provide specific life cycle assessment requirements and guidance for bio-based products, based on EN ISO 14040 *Environmental management* — *Life cycle assessment* — *Principles and framework* and EN ISO 14044 *Environmental management* — *Life cycle assessment* — *Requirements and guidelines*.

Though the scope of CEN/TC 411 excludes food, feed and energy, life cycle assessment of biomass and bio-based products should follow the same principles irrespective of their use.

This European Standard informs and guides life cycle assessment and applications including for example Product Category Rules (PCR). An LCA assessment carried out according to this standard can be used as a basis to assess certain criteria as laid down in prEN 16751.

 $^{^{1}}$ 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.

1 Scope

This European Standard provides specific life cycle assessment (LCA) requirements and guidance for bio-based products, excluding food, feed and energy, based on EN ISO 14040 and EN ISO 14044.

This European Standard covers bio-based products, derived wholly or partly from biomass.

This European Standard provides guidance and requirements to assess impact over the life cycle of biobased products with the focus on how to handle the specificities of the bio-based part of the product.

The applications of LCA as such are outside the scope of this European Standard. Clarifications, considerations, practices, simplifications and options for the different applications, are also beyond the scope of this European Standard. In addition, this European Standard may be applied in studies that do not cover the whole life cycle, with justification e.g. in the case of business-to-business information, such as cradle-to-gate studies, gate-to-gate studies, and specific parts of the life cycle (e.g. waste management, components of a product).

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

EN ISO 14025, Environmental labels and declarations - Type III environmental declarations - Principles and procedures (ISO 14025)

EN ISO 14040:2006, Environmental management - Life cycle assessment - Principles and framework (ISO 14040:2006)

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

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