



Standardization on bio-based products

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- CEN and main principles of European Standardization
- Mandates on bio-based products
- CEN/TC 411 “Bio-based products” and its standardization activities
 - Vocabulary
 - Methods and techniques for the determination of the bio-based content of products
 - Sustainability aspects and LCA
 - Certification schemes

Main principles of European Standardization



→ Voluntary

- standards are voluntary in application

→ Openness and transparency

- open to participation of all interested parties and broad consultation

→ Consensus

- we build European consensus among all stakeholders

→ National commitment

- NSBs to implement European standards as identical national standards and withdraw conflicting national standards

→ Market relevance

- reflect market needs

→ Correct integration with international work

- Cooperation with ISO (Vienna agreement)

Mandates on bio-based products



- Mandate: request from EC to develop specific standards or study feasibility and propose standardization programme in specific field

- Within framework of Lead Market Initiative

- Mandates in the field of bio-based products:
 - [M/429](#) on the elaboration of a standardization programme for bio-based products
 - [M/430](#) on bio-polymers and bio-lubricants
 - [M/491](#) on bio-solvents and bio-surfactants
 - [M/492](#) for the development of horizontal standards for bio-based products

Bio-based products: CEN Technical Bodies



CEN Technical Board



M/429

BTWG 209 Bio-based products*

CEN/TC 19

Gaseous and liquid fuels, lubricants and related products of petroleum, synthetic and biological origin

M/430

CEN/TC 249
Plastics

M/430

CEN/TC 276
Surface Active Agents

M/491

CEN/TC 411
Bio-based products

M/491
M/492

* Work ended in August 2010

CEN/TC 411 “Bio-based products”



→ Created in May 2011

→ 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

→ Focus on bio-based products, other than food & feed and bio-mass for energy

→ Also development of standards for bio-solvents according to M/491

CEN/TC 411 structure



CEN/TC 411
Chairman: F. Petit
Secretariat: NEN

WG 1 Terminology
Convenor: H. Omloo

WG 2 Bio-solvents
Convenor: A. Brossier

WG 3 Bio-based content
Convenor: F. Bakker

WG 4 Sustainability criteria, life cycle analysis and related issues
Convenor: S. Eriksson

WG 5 Certification and declaration tools
Convenor: H. Vooijs



WG 1 Terminology

→ *Standardization of general terminology applicable to bio-based products*

- Convenor

- Huub Omloo (DSM);

- Workitem

- FprEN 16575 *Bio-based products – Vocabulary*

- Planning

- FV started, ends May 20th
- Publication expected August 20th



WG 2 Bio-solvents

→ *Developing CEN Deliverables for product characteristics of bio-solvents, based on the conduction of a review of already existing standards for bio-solvents, including assessment of the need for their revision, including functionality and biodegradability.*

- **Convenor**

- Antoine Brossier (CEFIC/ESIG)

- **Workitem**

- prCEN/TS ### *Bio-based products - Bio-based solvents - Requirements, application classes and test methods*

- **Planning**

- Submission to FV scheduled May 2014
- Publication expected March 2015



WG 3 Bio-based content

→ *Standardization of a method determining the bio-based carbon content of products and standardization of a method determining the bio-based content of products, other than bio-based carbon content*

•Convenor

- Frits Bakker (ECN);

•Workitems

- prCEN/TR 16721 *Bio-based products — Overview of methods to determine the bio-based content*
- prCEN/TR ##### *Bio-based products — Overview of mass balance and book & claim methods for the allocation and calculation of biomass in addition to analytical bio-based content methods*
- FprCEN/TS 16640 *Bio-based products — Determination of the bio based carbon content of products using the radiocarbon method*
- prEN ### *Bio-based products - bio-based content – Part #: Determination of the bio based carbon content of products using the radiocarbon method*
- prEN ### *Bio-based products — Determination of the bio-based content - Method based on the 14C content and elemental analysis*
- prEN ##### *Bio-based products — Determination of the bio-based content using material balance method*
- ... other methods for the determination of the bio based content
- ... other methods for biomass allocation

WG 4 Sustainability criteria, life cycle analysis and related issues



→ *Standardization of sustainability criteria applicable to bio-based products and Standardization of life cycle analysis guidance applicable to bio-based products*

- Convenor

- Mrs Solveig Eriksson (SCA);

- Workitems

- prEN 16751 Bio-based products - Sustainability criteria
- prEN ### Bio-based products - Life Cycle Assessment
- prCEN/TR ### Bio-based products – End of life

- Planning

- Submission to Enquiry April 2014
- Enquiry: June – November 2014, followed by rework and Formal Vote
- Publication deadline: January 2016

Sustainability standard

- Applicable to all bio-based products, excluding food, feed and energy

- All three pillars of sustainability:
 - environmental;
 - social; and
 - economic aspects.

- Framework to provide information on management of sustainability aspects

- No thresholds or limits; therefore no claims regarding sustainability based on the standard alone



Possible uses sustainability standard

- Can be directly used by an operator; or
- Can be used to qualify proprietary schemes and standards which cover sustainability aspects.

- By defining a common framework, the is standard will allow the provision of information on sustainability aspects for the following uses:
 - for an operator to assess and manage sustainability aspects of its operation, and to report in a consistent manner
 - for operators in a value chain to exchange and share information with a common framework and understanding

Life Cycle Assessment (LCA) standard

- Specific LCA requirements and guidance for bio-based products, excluding food, feed and energy
- 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
- Assesses impact over the life cycle of bio-based products
- Can 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)

Possible uses LCA standard

- Informs and guides life cycle assessment and applications including for example Product Category Rules (PCR) development for bio-based products.
- Can be used as a basis to assess certain criteria in the sustainability standard.
- However, the focus of this European Standard will only be on how to handle the specificities of the bio-based part.

WG 5 Certification and declaration tools



→ *Standardization of declaration and certification tools applicable to bio-based products*

- Convenor

- Henk Vooijs (Novamont);

- Workitems

- prEN ### Bio-based products — Reporting and communication of characteristics for Business to Business market
- Business to Consumer communication

- Planning

- Publication deadline September 2016

NTA 8080 sustainable biomass



- Sustainability standard (Netherlands Technical Agreement)
- And a certification scheme (NTA 8081)
- Basis for NTA 8080 certificate





NTA 8080 Sustainability criteria for biomass for energy purposes

- Developed with a diverse group of stakeholders, including several NGOs
- For international application
- For all types of biomass
- Harmonized with CEN and ISO standards
- Approved as a voluntary scheme for RED
- Accredited by RvA, an EA and IAF member
- **Now being updated and extended to bio-based products**
- **Pilots on bio-based products in cooperation with Dutch Green Deal and INRO**

WWW.NTA8080.ORG

Thank you for your attention

For more information visit:

- www.biobasedeconomy.eu
- www.cen.eu - work area bio-based
- www.cen.eu - CEN/TC 411 Bio-based products