

ICS 75.160.10

English Version

Solid biofuels - Fuel quality assurance

Biocombustibles solides - Assurance qualité du
combustible

Feste Biobrennstoffe - Qualitätssicherung von Brennstoffen

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Foreword

This Technical Specification (CEN/TS 15234:2006) has been prepared by Technical Committee CEN/TC 335 "Solid biofuels", the secretariat of which is held by SIS.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

The overall aim of this Technical Specification is to guarantee the solid biofuel quality through the whole supply chain, from the origin to the delivery of the solid biofuel and provide adequate confidence that specified quality requirements are fulfilled.

The solid biofuel supply chain usually consists of the main stages described in Figure 1.

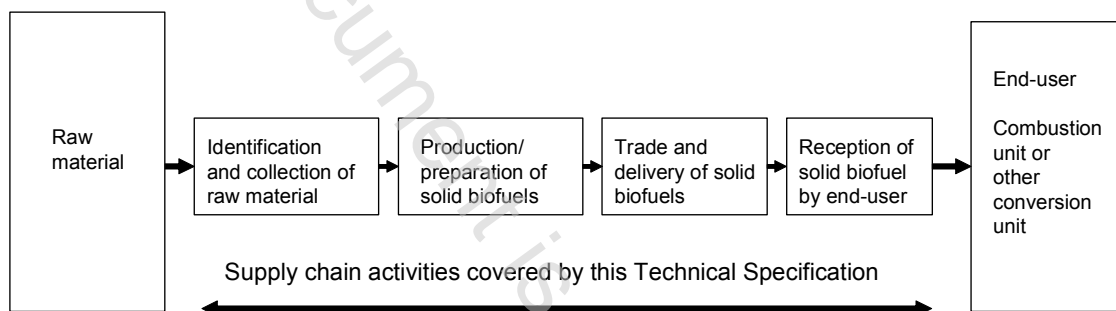


Figure 1—Solid biofuel supply chain

The objective of this Technical Specification is to serve as a tool to enable the efficient trading of biofuels. Thereby:

- [1] the end-user can find a biofuel that corresponds to his needs;
- [2] the producer/supplier can produce a biofuel with defined and consistent properties and describe the biofuel to the customers.

Quality assurance measures should establish confidence in the biofuel through systems that are simple to operate and do not cause undue bureaucracy.

Solid biofuels are specified according to CEN/TS 14961—Solid Biofuels, Fuel Specification and Classes. Each property specification requirement refers to a CEN Standard or a CEN Technical Specification. With a proper quality assurance procedure and specification of origin and source (i.e. kind of biofuel) in the whole production chain, it is possible to reduce or eliminate the parameters that need analysing.

According to the terminology of EN ISO 9001^[1] a Quality Management system generally consist of Quality Planning, Quality Control, Quality Assurance and Quality Improvement. This Technical Specification covers Fuel Quality Assurance and Quality Control.

The users of this Technical Specification may integrate the CEN—Solid biofuels, Fuel Quality Assurance Technical Specification in their general quality assurance scheme, e.g. the EN ISO 9000 series^[1, 2, 3]. If the company does not have a quality management system, this Technical Specification can be used on it's own to help the supplier in documenting fuel quality and creating adequate confidence between the supplier and the end-user.

In parallel to the preparation of this Technical Specification a Guide for Quality Assurance of Solid Biofuels has produced as a CEN Technical Report^[8].

This Technical Specification for Fuel Quality Assurance is only concerned with the fuel part. To ensure the efficient use of solid biofuels, the relationship between the fuel and the combustion unit is also important to consider. It is recommended that the end-users ensure that the combustion technology used and the solid biofuels are compatible to achieve an optimised burning process. In addition to high efficiency, the environmental impact is reduced when the combustion process is optimised (e.g. unburnt carbon in the ash will be reduced; the emissions from the flue gases are reduced, etc.).

1 Scope

This Technical Specification defines the procedures to fulfil the quality requirements and describes measures to ensure adequate confidence that the biofuel specification is fulfilled. This Technical Specification covers the whole chain, from supply of raw materials to point of delivery to the end-user.

According to the mandate given for the standardisation work, the scope of the Technical Committee (TC 335) only includes solid biofuels originating from the following sources:

- products from agriculture and forestry;
- vegetable waste from agriculture and forestry;
- vegetable waste from the food processing industry;
- wood waste, with the exception of wood waste which may contain halogenated organic compounds or heavy metal as a result of treatment with wood preservatives or coating, and which includes in particular such wood waste originated from construction and demolition waste;
- fibrous vegetable waste from virgin pulp production and from the production of paper from pulp, if it is co-incinerated at the place of production and heat generated is recovered;
- cork waste.

NOTE 1: The quality assurance systems applied to the operation of conversion plants fuelled by solid biofuels are outside the scope of this Technical Specification.

NOTE 2: Health, safety and environmental issues for solid biofuels are important and need special attention, however are outside the scope of this Technical Specification.

NOTE 3: For the avoidance of doubt, demolition wood is not included in the scope of this Technical Specification. Demolition wood is defined as "used wood arising from demolition of buildings or civil engineering installations" (CEN/TS 14588).

2 Normative references

The following referenced documents are indispensable for the application 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.

CEN/TS 14588:2003 *Solid biofuels – Terminology, definitions and descriptions*

CEN/TS 14961:2005 *Solid biofuels – Fuel Specifications and classes*

NOTE: In the CEN/TS 14961 there is a list (Table 3) of the CEN Technical Specifications for sampling, sample reduction and determination of biofuel properties.

3 Terms and definitions

For the purposes of this Technical Specification, the terms and definitions given in the CEN /TS14588:2003 and the following apply.