

Tahkejäätmekütused. Spetsifikatsioonid ja klassid

Solid recovered fuels - Specifications and classes

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English Version

Solid recovered fuels - Specifications and classes

Combustibles solides de récupération - Spécification et classes

Feste Sekundärbrennstoffe - Spezifikationen und Klassen

This European Standard was approved by CEN on 19 October 2011.

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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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Foreword

This document (EN 15359:2011) has been prepared by Technical Committee CEN/TC 343 “Solid recovered fuels”, the secretariat of which is held by SFS.

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of an identical text or by endorsement, at the latest by May 2012, and conflicting national standards shall be withdrawn at the latest by May 2012.

This document supersedes CEN/TS 15359:2006.

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

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 differs from CEN/TS 15359:2006 mainly as follows:

- a) it has been clarified that SRF still is a waste destined to be incinerated in combustion and co-combustion plants covered by the Directive 2000/76/EC on waste incineration (WID);
- b) in the scope NOTE 1 concerning solid biofuels has been modified;
- c) the references to community legislation have been updated;
- d) the terminology has been brought into line with EN 15357;
- e) the classification system in Clause 7 has been furnished with clarifying examples and notes – so also the compliance rules in Clause 8;
- f) the period of which a laboratory sample shall be kept has been expressed more precisely;
- g) a way to calculate the emission factor has been added in 9.3 (Properties non-obligatory to specify);
- h) a new Annex D (informative) has been added in which is demonstrated how to calculate the statistical means for different production volumes;
- i) the whole document has been editorially revised.

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, 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 objective of this document is to provide unambiguous and clear classification and specification principles for solid recovered fuels (SRF). The document aims at serving as a tool to enable efficient trading of SRF, promoting their acceptability on the fuel market and increasing the public trust. The document will facilitate a good understanding between seller and buyer, facilitate purchase, transborder movements, use and supervision as well as a good communication with equipment manufacturers. It will also facilitate authority permission procedures and ease the reporting on the use of fuels from renewable energy sources and on other environmental issues.

SRF are produced from non hazardous waste. The input waste can be production specific waste, municipal solid waste, industrial waste, commercial waste, construction and demolition waste, sewage sludge etc. It is thus obvious that SRF are a heterogeneous group of fuels. A well defined system for classification and specification is therefore of great importance to reach the above mentioned objectives and intentions.

This document covers all types of SRF and will thus have a wide field of application. The purpose of producing a solid recovered fuel is to use it for energy generation at the highest possible energy efficiency. SRF can according to Article 6 of the Waste Framework Directive (2008/98/EC) cease to be waste at Community or national level if certain criteria are fulfilled. Until such legal decisions are taken SRF can be used in plants covered by the Directive 2000/76/EC.

This document describes the compliance rules which SRF has to meet to be classified according to the classification system. It also describes how the supplier can establish a declaration of conformity to the different EN standards for SRF.

Figure 1 illustrates a simplified flow chain for SRF, from input of waste to end use of SRF. This document has an interface to all the stages in the chain, but SRF classification and specification are applicable at the point of delivery as shown in the figure. Requirements for how the input waste is collected and how to use the fuel are not part of this document.

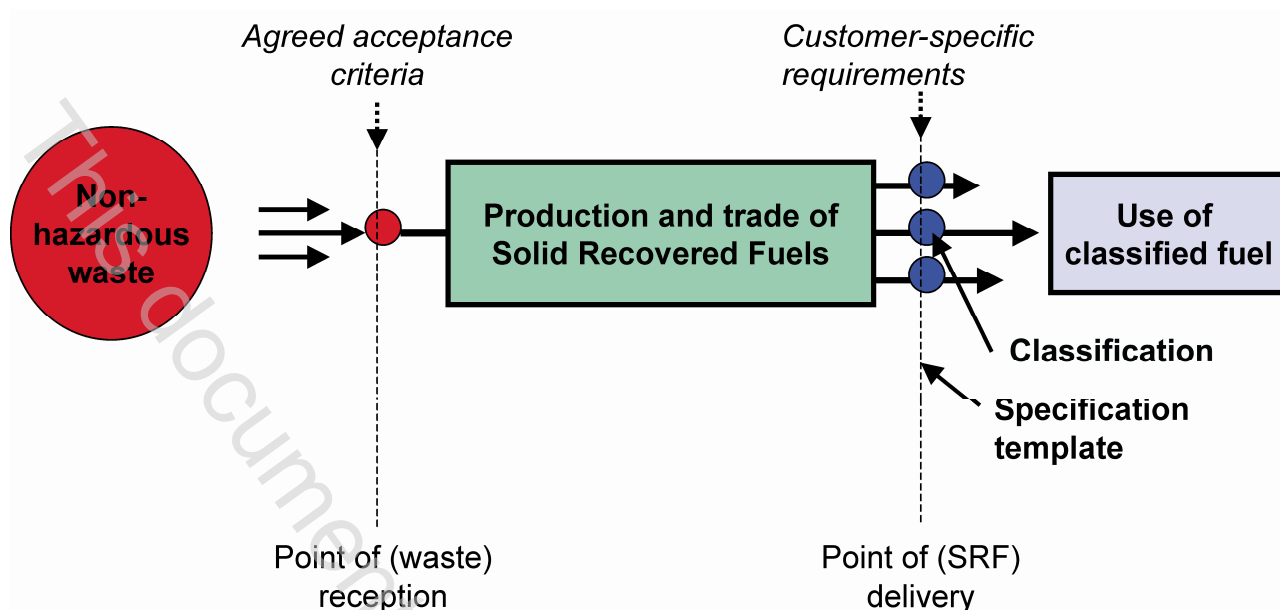


Figure 1 — Solid recovered fuels chain — The EN Standard on specifications and classes is applicable at the point of delivery

1 Scope

This document specifies a classification system for solid recovered fuels (SRF) and a template for the specification of their properties.

SRF are produced from non-hazardous waste.

NOTE 1 Waste referred to in article 2(2)(a), points (i)-(v) of the Waste Incineration Directive (2000/76/EC) is not included in the scope of this document. This is covered by CEN/TC 335 "Solid biofuels". Waste wood from demolition of buildings and civil engineering installations is, however, included in the scope.

NOTE 2 Untreated municipal solid waste is not included in the scope of this document.

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.

EN 15357:2011, *Solid recovered fuels — Terminology, definitions and descriptions*

EN 15400, *Solid recovered fuels — Determination of calorific value*

EN 15403, *Solid recovered fuels — Determination of ash content*

EN 15408, *Solid recovered fuels — Methods for the determination of sulphur (S), chlorine (Cl), fluorine (F) and bromine (Br) content*

EN 15411, *Solid recovered fuels — Methods for the determination of the content of trace elements (As, Ba, Be, Cd, Co, Cr, Cu, Hg, Mo, Mn, Ni, Pb, Sb, Se, Ti, V and Zn)*

CEN/TS 15414-1:2010, *Solid recovered fuels — Determination of moisture content using the oven dry method — Part 1: Determination of total moisture by a reference method*

CEN/TS 15414-2:2010, *Solid recovered fuels — Determination of moisture content using the oven dry method — Part 2: Determination of total moisture by a simplified method*

EN 15414-3, *Solid recovered fuels — Determination of moisture content using the oven dry method — Part 3: Moisture in general analysis sample*

EN 15415-1, *Solid recovered fuels — Determination of particle size distribution — Part 1: Screen method for small dimension particles*

EN 15442, *Solid recovered fuels — Methods for sampling*

3 Terms and definitions

For the purpose of this document, the terms and definitions given in EN 15357:2011 and the following apply.

NOTE The terms and definitions 3.1 to 3.16 are identical with the ones given in EN 15357.

3.1 classification

grouping of solid recovered fuels into classes

NOTE The classes are defined by boundary values for chosen fuel characteristics to be used for trading as well as for information of permitting authorities and other interested parties.

3.2 combined sample

sample consisting of all the increments taken from a lot

NOTE The increments may be reduced by division before being added to the combined sample.

3.3 component

part of portion of a solid recovered fuel that can be separated by hand or by using simple physical means

3.4 composition

break down of a solid recovered fuel by types of components e.g. wood, paper, board, textiles, plastics, rubber

3.5 delivery agreement

contract for fuel trade, which specifies e.g. origin and source, quality and quantity of the fuel, as well as delivery terms

3.6 increment

portion of fuel extracted in a single operation of the sampling device

[ISO 13909:2001]