



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 17225-1:2014

# Solid biofuels - Fuel specifications and classes - Part 1: General requirements (ISO 17225-1:2014)

## I.S. EN ISO 17225-1:2014

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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*This document is based on:*

EN ISO 17225-1:2014

*Published:*

2014-05-07

*This document was published under the authority of the NSAI and comes into effect on:*

2014-05-17

ICS number:

27.190

75.160.10

NOTE: If blank see CEN/CENELEC cover page

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN ISO 17225-1**

May 2014

ICS 27.190; 75.160.10

Supersedes EN 14961-1:2010

English Version

## Solid biofuels - Fuel specifications and classes - Part 1: General requirements (ISO 17225-1:2014)

Biocombustibles solides - Classes et spécifications des combustibles - Partie 1: Exigences générales (ISO 17225-1:2014)

Feste Biobrennstoffe - Brennstoffspezifikationen und -klassen - Teil 1: Allgemeine Anforderungen (ISO 17225-1:2014)

This European Standard was approved by CEN on 3 April 2014.

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**EN ISO 17225-1:2014 (E)**

<b>Contents</b>	<b>Page</b>
<b>Foreword.....</b>	<b>3</b>

## **Foreword**

This document (EN ISO 17225-1:2014) has been prepared by Technical Committee ISO/TC 238 “Solid biofuels” in collaboration with Technical Committee CEN/TC 335 “Solid biofuels” the secretariat of which is held by SIS.

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of an identical text or by endorsement, at the latest by November 2014, and conflicting national standards shall be withdrawn at the latest by November 2014.

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 supersedes EN 14961-1:2010.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

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.

### **Endorsement notice**

The text of ISO 17225-1:2014 has been approved by CEN as EN ISO 17225-1:2014 without any modification.

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# INTERNATIONAL STANDARD

# ISO 17225-1

First edition  
2014-05-01

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## **Solid biofuels — Fuel specifications and classes —**

### **Part 1: General requirements**

*Biocombustibles solides — Classes et spécifications des  
combustibles —*

*Partie 1: Exigences générales*



Reference number  
ISO 17225-1:2014(E)

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**ISO 17225-1:2014(E)**



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Published in Switzerland



# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Symbols and abbreviated terms</b> .....	<b>3</b>
<b>5 Principle</b> .....	<b>3</b>
<b>6 Classification of origin and sources of solid biofuels</b> .....	<b>4</b>
6.1 General.....	4
6.2 Woody biomass.....	9
6.3 Herbaceous biomass.....	9
6.4 Fruit biomass.....	9
6.5 Aquatic biomass.....	10
6.6 Biomass blends and mixtures.....	10
<b>7 Specification of solid biofuels based on traded forms and properties</b> .....	<b>10</b>
7.1 Traded forms of solid biofuels.....	10
7.2 Specification of properties of solid biofuels.....	11
<b>Annex A (informative) Illustrations of typical forms of wood fuels</b> .....	<b>37</b>
<b>Annex B (informative) Typical values of solid biomass fuels</b> .....	<b>39</b>
<b>Annex C (informative) Examples of possible causes for deviant levels for different properties and of consequences of handling and treatments for the properties of biomass</b> .....	<b>49</b>
<b>Annex D (informative) Calculation of the net calorific value at different bases and energy density as received</b> .....	<b>51</b>
<b>Annex E (informative) Comparison of moisture content as received and dry basis</b> .....	<b>54</b>
<b>Bibliography</b> .....	<b>56</b>

## ISO 17225-1:2014(E)

### Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 238, *Solid biofuels*.

ISO 17225 consists of the following parts, under the general title *Solid biofuels — Fuel specifications and classes*:

- *Part 1: General requirements*
- *Part 2: Graded wood pellets*
- *Part 3: Graded wood briquettes*
- *Part 4: Graded wood chips*
- *Part 5: Graded firewood*
- *Part 6: Graded non-woody pellets*
- *Part 7: Graded non-woody briquettes*

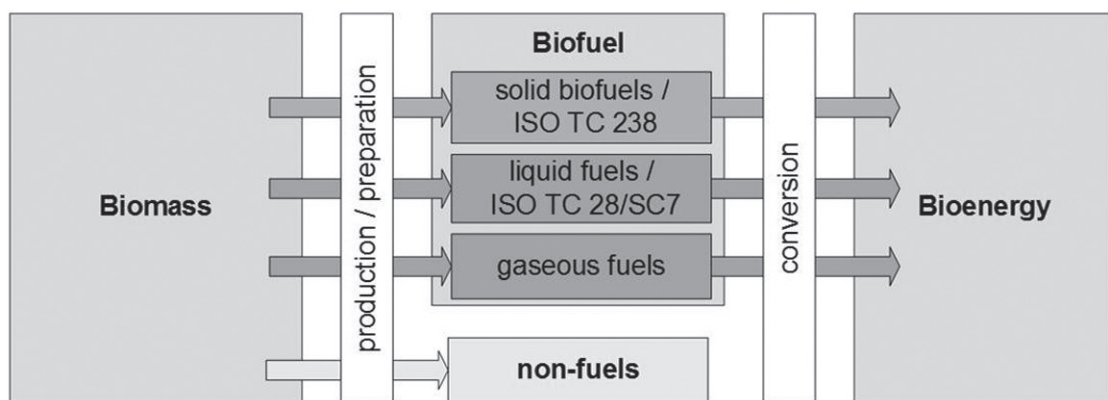
## Introduction

The objective of the ISO 17225 series is to provide unambiguous and clear classification principles for solid biofuels and to serve as a tool to enable efficient trading of biofuels and to enable good understanding between seller and buyer as well as a tool for communication with equipment manufacturers. It will also facilitate authority permission procedures and reporting.

The ISO 17225 series is made for all stakeholders.

Solid biomass covers organic, non-fossil material of biological origin which may be used as fuel for heat and electrical generation.

[Figure 1](#) describes the bioenergy utilization chain from sources of biomass, to biofuel production to final use of bioenergy. Although biomass can be used for energy generation it has many other primary uses (non-fuels) as a raw material for construction, furniture, packaging, paper products, etc.



**Figure 1 — ISO TC 238 within the biomass — Biofuel — Bioenergy field**

The classifications given in this International Standard are provided with the objective of using biomass as a solid biofuel and therefore do not deal with all other uses.

Although these product standards may be obtained separately, they require a general understanding of the standards based on and supporting ISO 17225-1. It is recommended to obtain and use ISO 17225-1 in conjunction with these standards.

In these product standards, graded means that solid biofuel is used either in commercial applications, such as in households and small commercial and public sector buildings or industrial applications, which demand the use of fuels with specified quality (properties) expressed by quality classes like A1, A2 or B.



# Solid biofuels — Fuel specifications and classes —

## Part 1: General requirements

### 1 Scope

This part of ISO 17225 determines the fuel quality classes and specifications for solid biofuels of raw and processed materials originating from

- a) forestry and arboriculture;
- b) agriculture and horticulture;
- c) aquaculture.

Chemically treated material may not include halogenated organic compounds or heavy metals at levels higher than those in typical virgin material values (see [Annex B](#)) or higher than typical values of the country of origin.

NOTE Raw and processed material includes woody, herbaceous, fruit, aquatic biomass and biodegradable waste originating from above sectors.

### 2 Normative references

The following referenced 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.

NOTE ISO standards describing methods for analysis of fuel properties listed in the Bibliography, will become normative references when they are published.

ISO 16559, *Solid biofuels — Terminology, definitions and descriptions*<sup>1)</sup>

ISO 16948, *Solid biofuels — Determination of total content of carbon, hydrogen and nitrogen*<sup>2)</sup>

ISO 16967, *Solid biofuels — Determination of major elements*<sup>3)</sup>

ISO 16968, *Solid biofuels — Determination of minor elements*<sup>4)</sup>

ISO 16993, *Solid biofuels — Conversion of analytical results from one basis to another*<sup>5)</sup>

ISO 16994, *Solid biofuels — Determination of total content of sulfur and chlorine*<sup>6)</sup>

ISO 17828, *Solid biofuels — Determination of bulk density*<sup>7)</sup>

- 1) To be published.
- 2) To be published.
- 3) To be published.
- 4) To be published.
- 5) To be published.
- 6) To be published.
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