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Solid biofuels — Fuel specifications and classes —

Part 6: Graded non-woody pellets

Biocombustibles solides — Classes et spécifications des combustibles —

Partie 6: Classes de granulés d'origine agricole

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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).

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).

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.

This part of ISO 17225 supports the use of graded non-woody pellets for residential, small commercial and public buildings as well as industrial energy generation applications, which require classified pellet quality.

The residential, small commercial and public building applications require higher quality fuel for the following reasons:

- Small-scale equipment does not usually have advanced controls and flue gas cleaning
- Appliances are not generally managed by professional heating engineers
- Appliances are often located in residential and populated districts

Non-woody pellets have high ash, chlorine, nitrogen and sulfur content and major element contents, so non-woody pellets are recommended to be used in appliances, which are specially designed or adjusted for this kind of pellet.

NOTE 1 Pellets produced according to this part of ISO 17225 may be used in pellet burners tested according to EN 15270[1] and pellet boilers or integrated-pellet burner systems tested according to EN 303–5[2].

NOTE 2 When using non-woody materials for combustion special attention should be paid to the risk of corrosion in small and medium scale boilers and flue gas systems. Be aware that herbaceous or fruit biomass may influence the fuel ash composition differently depending on growth and soil conditions. The content of chlorine, phosphate and potassium in the material may form chlorides and phosphates and other chemical compounds resulting in high hydrochloric emissions and chemically active ash with low melting temperature causing corrosion.

NOTE 3 In general non-woody biomass materials have higher content of ash forming elements and produces ashes with lower melting temperature compared to most woody biomass. This may result in fouling, slagging and corrosion inside boilers. These problems are especially related to materials that contain high content of potassium (K) and silicate (Si) and low content of calcium (Ca).

NOTE 4 For individual contracts ISO 17225-1 can be used.

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