
**Solid biofuels — Particle size
distribution of disintegrated pellets**

*Biocombustibles solides — Détermination de la distribution
granulométrique des granulés désintégrés*



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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).

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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*.

Introduction

In power plants with powder fuel burners for energy production, the operators need information about the particle size distribution of the fuel for optimising particle burnout during combustion. Fuel preparation equipment, such as pulverizers, are used for crushing pellets into the original particle sizes before the material was pressed into pellets. The method described in this International Standard is intended to characterize particle size distribution of the material contained within fuel pellets and also allows for a relative comparison of pellets of different manufacturing.

This method is based on experience with pellets made from sawdust, wood shavings and milled wood, as well as straw. The method may also be applicable for pellets produced from other solid biofuel materials provided that they can be dissolved into its constituents in water.

Pellets that are engineered to resist water, e.g. pellets from materials which have undergone some thermal treatments, cannot be characterised by this method.

Solid biofuels — Particle size distribution of disintegrated pellets

1 Scope

This International Standard aims to define the requirements and method used to determine particle size distribution of disintegrated pellets. It is applicable for pellets that fully disintegrate in hot water.

2 Normative references

The following 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.

ISO 16559, *Solid biofuels — Terminology, definitions and descriptions*

ISO 17827-2¹⁾, *Solid biofuels — Determination of particle size distribution for uncompressed fuels — Part 2: Vibrating screen using sieves for classification of samples with apertures of 3,15 mm and below*

ISO 18134-1, *Solid biofuels — Determination of moisture content — Oven dry method — Part 1: Total moisture — Reference method*

EN 14778, *Solid biofuels — Sampling*

EN 14780, *Solid biofuels — Sample preparation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 16559 and the following apply.

3.1

sieve fraction

material collected on a sieve

4 Principle

The particle size distribution is determined after the sample pellets have been disintegrated in hot deionised water and dried in a drying cabinet or oven. The determination is performed by sieving the dried material in accordance with ISO 17827-2.

5 Reagents

Deionised water.

1) To be published.