Irish Standard
I.S. EN 15149-1:2010

Solid biofuels - Determination of particle size distribution - Part 1: Oscillating screen method using sieve apertures of 1 mm and above

I.S. EN 15149-1:2010

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie

W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

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English Version

Solid biofuels - Determination of particle size distribution - Part 1: Oscillating screen method using sieve apertures of 1 mm and above

Biocombustibles solides - Détermination de la distribution granulométrique - Partie 1: Méthode au tamis oscillant d'ouverture de maille égale ou supérieure à 1 mm

Feste Biobrennstoffe - Bestimmung der Partikelgrößenverteilung - Teil 1: Rüttelsiebverfahren mit Sieb-Lochgrößen von 1 mm und darüber

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN 15149-1:2010) has been prepared by 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of an identical text or by endorsement, at the latest by April 2011, and conflicting national standards shall be withdrawn at the latest by April 2011.

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 CEN/TS 15149-1:2006.

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

EN 15149, *Solid biofuels — Determination of particle size distribution*, consists of the following parts:

— *Part 1: Oscillating screen method using sieve apertures of 1 mm and above*;

— *Part 2: Vibrating screen method using sieve apertures of 3,15 mm and below*.

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 the United Kingdom.

Introduction

Part 1 describes the reference method for size classification of samples with a nominal top size of 1 mm and above.

Part 2 describes the reference method for size classification of samples with a nominal top size below 3,15 mm.

Manual sieving is not included in this standard, as no data is available which supports that manual sieving operations are comparable to the here described mechanical sieving operations.

1 Scope

This European Standard specifies a method for the determination of the size distribution of particulate biofuels by the horizontally oscillating screen method. It applies to particulate uncompressed fuels with a nominal top size of 1 mm and above as e.g. wood chips, hog fuel, olive stones, etc.

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 14588:2010, *Solid biofuels — Terminology, definitions and descriptions*

EN 14774-1:2009, *Solid biofuels — Determination of moisture content — Oven dry method — Part 1: Total moisture — Reference method*

EN 14774-2:2009, *Solid biofuels — Determination of moisture content — Oven dry method — Part 2: Total moisture — Simplified method*

prEN 14778, *Solid biofuels — Sampling*

prEN 14780, *Solid biofuels — Sample preparation*

EN 14961-1, *Solid biofuels — Fuel specifications and classes — Part 1: General requirements*

EN 15149-2, *Solid biofuels — Determination of particle size distribution — Part 2: Vibrating screen method using sieve apertures of 3,15 mm and below*

ISO 3310-1, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

ISO 3310-2, *Test sieves — Technical requirements and testing — Part 2: Test sieves of perforated metal plate*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14588:2010 and the following apply.

3.1
median value of the size distribution
value [d50] that separates a distribution into two equal parts and that is graphically the intercept point of the cumulative size distribution curve with the 50 %-horizontal line

4 Principle

A sample is subjected to sieving through horizontally oscillating sieves, sorting the particles in decreasing size classes by mechanical means.

5 Apparatus

5.1 Sieves.

For the test an appropriate number of either circular or rectangular sieves with a minimum effective sieve area of 1 200 cm^2 is required. The geometry of the apertures shall be in accordance with the requirements of ISO 3310-1 and -2, respectively. The frame of the sieves shall have a height that enables the sieves to contain the sample and allows a free movement of the sample during the sieving process.