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NSAI Standards

Standard Recommendation
S.R. CEN/TS 15401:2010

Solid recovered fuels - Determination of bulk density

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S.R. CEN/TS 15401:2010

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S.R. CEN/TS 15401:2010

TECHNICAL SPECIFICATION

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CEN/TS 15401

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ICS 75.160.10

Supersedes CEN/TS 15401:2006

English Version

Solid recovered fuels - Determination of bulk density

Combustibles solides de récupération - Méthode de détermination de la densité apparente

Feste Sekundärbrennstoffe - Bestimmung der Schüttdichte

This Technical Specification (CEN/TS) was approved by CEN on 27 March 2010 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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Contents

Page

Foreword 3

Introduction 4

1 Scope 4

2 Normative references 4

3 Terms and definitions 4

4 Symbols and units 5

5 Principle 5

6 Apparatus 5

7 Sampling and sample preparation 6

8 Procedure 7

9 Calculation 8

10 Precision 8

11 Test report 9

Annex A (informative) Results of interlaboratory test 10

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Foreword

This document (CEN/TS 15401:2010) has been prepared by Technical Committee CEN/TC 343 “Solid recovered fuels”, the secretariat of which is held by SFS.

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 15401:2006 mainly as follows:

a) results of interlaboratory tests supplemented as an informative Annex A;

b) whole document editorially revised.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: 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.

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Introduction

Bulk density is one of the main quality parameters of solid recovered fuels (SRF). It is needed e.g. in a sampling process (volume of sampling tools, volume primary sample), in assessing transport capacity or storage space required or energy density (MWh/m^3) of SRF. Bulk density is not an absolute value, therefore conditions for its determination should be standardised in order to gain comparative measuring results. This Technical Specification specifies the determination of bulk density of solid recovered fuels which can be conveyed in a continuous material flow.

For practical reasons, two standard measuring containers with a volume of 5 l or 50 l are selectable for the determination.

The method specified in this Technical Specification is based on EN 15103 [1].

1 Scope

This Technical Specification specifies a method for the determination of bulk density of solid recovered fuels using a standard measuring container. This method is applicable to all solid recovered fuels with a nominal top size of maximal 100 mm.

NOTE 1 The reason for the limitation to maximal 100 mm is the practical maximum volume of a measurement container and thus dimensions of the aperture of the container. Particle dimension should not exceed 1/3 of this value.

NOTE 2 Bulk density of solid recovered fuels is subject to variation due to several impacts such as vibration, shock, pressure, biodegradation, drying and wetting. Measured bulk density can therefore deviate from practice conditions during transportation, storage or transhipment.

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.

prEN 15357:2008, *Solid recovered fuels — Terminology, definitions and descriptions*

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

prEN 15443, *Solid recovered fuels — Methods for laboratory sample preparation*

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

CEN/TS 15415, *Solid recovered fuels — Determination of particle size distribution by screen method*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in prEN 15357:2008 apply.

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