

---

---

**Solid biofuels — Determination of  
mechanical durability of pellets and  
briquettes —**

Part 2:  
**Briquettes**

*Biocombustibles solides — Détermination de la résistance mécanique  
des granulés et des briquettes —*

*Partie 2: Briquettes*



This document is a preview generated by EMS



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

# 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>1</b>
<b>4 Principle</b> .....	<b>1</b>
<b>5 Apparatus</b> .....	<b>2</b>
5.1 Briquette tester.....	2
5.2 Sieve.....	3
5.3 Balance.....	3
<b>6 Test sample preparation</b> .....	<b>3</b>
<b>7 Procedure</b> .....	<b>4</b>
7.1 Tumbling procedure.....	4
7.2 Sieving procedure.....	4
<b>8 Calculation of the mechanical durability</b> .....	<b>5</b>
<b>9 Performance characteristics</b> .....	<b>5</b>
<b>10 Test report</b> .....	<b>5</b>
<b>Bibliography</b> .....	<b>6</b>

## 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 17831 consists of the following parts under the general title *Solid Biofuels — Determination of mechanical durability of pellets and briquettes*:

- *Part 1: Pellets*
- *Part 2: Briquettes*

## Introduction

Compressed solid biomass fuel is usually assigned to either pellets or briquettes, of which pellets usually have a diameter below 25 mm, while for briquettes, the diameter is higher (see ISO 17225-1). To account for the different particle dimensions, it was necessary to define different test apparatuses.



# Solid biofuels — Determination of mechanical durability of pellets and briquettes —

## Part 2: Briquettes

### 1 Scope

This part of ISO 17831 defines a method for determining the mechanical durability of briquettes. The mechanical durability is a measure of the resistance of compressed fuels towards shocks and/or abrasion as a consequence of handling and transportation.

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

ISO 14780, *Solid biofuels — Sample preparation*<sup>1)</sup>

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

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

ISO 18134-2, *Solid biofuels — Determination of moisture content — Oven dry method — Part 2: Total moisture — Simplified method*

ISO 18135, *Solid Biofuels — Sampling*<sup>1)</sup>

### 3 Terms and definitions

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

### 4 Principle

The test portion is subjected to controlled shocks by collision of briquettes against each other and against the walls of a specified rotating test chamber. The durability is calculated from the mass of the sample remaining after separation of abraded and fine broken particles.

---

1) In preparation.