



SLOVENSKI STANDARD

SIST EN 1860-2:2005

01-julij-2005

Naprave, trdna goriva in naprave za vžiganje žara - 2. del: Lesno oglje in briketi lesnega oglja za žar - Zahteve in preskusne metode

Appliances, solid fuels and firelighters for barbecuing - Part 2: Barbecue charcoal and barbecue charcoal briquettes - Requirements and test methods

Geräte, feste Brennstoffe und Anzündhilfen zum Grillen - Teil 2: Grill-Holzkohle und Grill-Holzkohlebriketts - Anforderungen und Prüfverfahren

Appareils, combustibles solides et allume-barbecue pour la cuisson au barbecue - Partie 2 : Charbon de bois et briquettes de charbon de bois pour barbecue - Exigences et méthodes d'essai

<https://standards.iteh.ai/catalog/standards/sist/9e4047a4-a58a-4b6a-ac79-2526b04dce56/sist-en-1860-2-2005>

Ta slovenski standard je istoveten z: EN 1860-2:2005

ICS:

75.160.10	Trda goriva	Solid fuels
97.040.20	Štedilniki, delovni pulti, pečice in podobni aparati	Cooking ranges, working tables, ovens and similar appliances

SIST EN 1860-2:2005

en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 1860-2:2005](#)

<https://standards.iteh.ai/catalog/standards/sist/9e4047a4-a58a-4b6a-ac79-2526b04dce56/sist-en-1860-2-2005>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 1860-2

February 2005

ICS 75.160.10; 97.040.20

English version

**Appliances, solid fuels and firelighters for barbecuing - Part 2:
Barbecue charcoal and barbecue charcoal briquettes -
Requirements and test methods**

Appareils, combustibles solides et allume-barbecue pour la cuisson au barbecue - Partie 2 : Charbon de bois et briquettes de charbon de bois pour barbecue - Exigences et méthodes d'essai

Geräte, feste Brennstoffe und Anzündhilfen zum Grillen - Teil 2: Grill-Holzkohle und Grill-Holzkohlebriketts - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 20 October 2004.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword.....	3
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Requirements	6
4.1 General.....	6
4.2 Requirements for barbecue charcoal	7
4.3 Requirements for barbecue charcoal briquettes.....	7
4.4 Inadmissible additions	8
5 Sampling	8
5.1 Sampling for granulometry	8
5.2 Sampling for testing ash, moisture, volatile and microscopic analyses	8
6 Test methods.....	9
6.1 Moisture	9
6.2 Volatiles	10
6.3 Ash	15
6.4 Fixed carbon.....	17
6.5 Test for inadmissible additions (standards.iteh.ai)	17
6.6 Granulometry	18
6.7 Determination of impregnant content.....	18
6.8 Test report	18
7 Marking	18
7.1 Consumer communication on charcoal bags.....	18
7.2 Consumer communication on impregnated charcoal bags	19
Annex A (normative) Determination of the volume of charcoal	21
A.1 General.....	21
A.2 Principle.....	21
A.3 Appliances.....	21
A.4 Sampling.....	21
A.5 Method of operation	21
A.6 Certificate of conformity	21
A.7 Inspection certificate	21
Annex B (normative) Determination of moisture content for impregnated charcoal and for impregnated charcoal briquettes	23
B.1 General.....	23
B.2 Principle.....	23
B.3 Reagents	23
B.4 Apparatus	23
B.5 Preparation of sample	24
B.6 Procedure	24
B.7 Expression of results	25
B.8 Precision of the method	26
B.9 Test report	26
Bibliography.....	27

Foreword

This document (EN 1860-2:2005) has been prepared by CEN /TC 281, "Appliances, solid fuels and firelighters for barbecuing", the secretariat of which is held by AENOR.

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 August 2005, and conflicting national standards shall be withdrawn at the latest by August 2005.

This document on *Appliances, solid fuels and firelighters for barbecuing* consists of the following parts:

Part 1: *Barbecues burning solid fuels - Requirements and test methods.*

Part 2: *Barbecue charcoal and barbecue charcoal briquettes - Requirements and test methods.*

Part 3: *Firelighters for igniting solid fuels for use in barbecue appliances - Requirements and test methods.*

Part 4: *Single use barbecues burning solid fuels - Requirements and test methods.*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

[SIST EN 1860-2:2005](https://standards.iteh.ai/catalog/standards/sist/9e4047a4-a58a-4b6a-ac79-2526b04dce56/sist-en-1860-2-2005)

<https://standards.iteh.ai/catalog/standards/sist/9e4047a4-a58a-4b6a-ac79-2526b04dce56/sist-en-1860-2-2005>

Introduction

This document is part 2 of the documents for appliances, solid fuels and firelighters for barbecuing, which is intended to reduce the risks which can occur during and through barbecuing with solid fuels.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 1860-2:2005](https://standards.iteh.ai/catalog/standards/sist/9e4047a4-a58a-4b6a-ac79-2526b04dce56/sist-en-1860-2-2005)

<https://standards.iteh.ai/catalog/standards/sist/9e4047a4-a58a-4b6a-ac79-2526b04dce56/sist-en-1860-2-2005>

1 Scope

This part of this document specifies the requirements and test methods for charcoal and charcoal briquettes for use in BBQ appliances.

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 1860-3:2003, *Appliances, solid fuels and firelighters for barbecuing - Part 3: Firelighters for igniting solid fuels for use in barbecue appliances - Requirements and test methods*

ISO 562, *Hard coal and coke — Determination of volatile matter*

ISO 579, *Coke — Determination of total moisture*

ISO 975, *Brown coals and lignites — Determination of yield of benzene-soluble extract — Semi-automatic method*

ISO 1171, *Solid mineral fuels — Determination of ash*

ISO 1953, *Hard coal — Size analysis by sieving*

ISO 1988, *Hard coal — Sampling*

ISO 5069-2:1983, *Brown coals and lignites - Principles of sampling — Part 2: Sample preparation for determination of moisture content and for general analysis.*

ISO 7404-2, *Methods for the petrographic analysis of bituminous coal and anthracite — Part 2: Preparation of coal samples*

ISO 7404-3, *Methods for the petrographic analysis of bituminous coal and anthracite — Part 3: Method of determining maceral group composition*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply

3.1

barbecue charcoal

solid remainder of carbonization of wood or other vegetable matter that does not spit/spark abnormally when burning and has not been artificially chemically treated or artificially chemically prepared whereby the main constituent is carbon and the ash content is minimal

3.2

barbecue charcoal briquette

barbecue charcoal briquettes are produced by compressing barbecue charcoal particles together with a suitable binder

3.3

impregnated barbecue charcoal and impregnated barbecue charcoal briquette

EN 1860-2:2005 (E)

barbecue charcoal and barbecue charcoal briquettes prepared for lighting by addition of a lighting agent

3.4**fixed carbon**

carbon remaining after the removal of volatile carbon matter and ash from dry charcoal

3.5**volatile matter**

determined as the loss in mass less that due to moisture, when charcoal or charcoal briquettes is heated out of contact with air under standardised conditions

3.6**ash**

residue after charcoal or charcoal briquettes are incinerated in air

3.7**total moisture****3.7.1****total moisture of barbecue charcoal and barbecue charcoal briquettes**

water contained in the barbecue charcoal and the barbecue charcoal briquettes which is driven off at 105°C

3.7.2**total moisture of impregnated barbecue charcoal and impregnated barbecue charcoal briquettes**

water contained in the impregnated barbecue charcoal and the impregnated barbecue charcoal briquettes which is removed by distillation with toluene

3.8**granulation**

percentage by weight of charcoal which has been screened between two specific sizes

3.9**binder**

product which when added to charcoal granules holds the particles together in a permanent solid mass

3.10**chemical sustainers**

chemicals such as nitrates and nitrites added as oxidising agents to sustain burning

3.11**repeatability**

results of duplicate determinations, carried out at different times in the same laboratory by the same operator using the same apparatus on duplicate samples taken from the same gross sample at the last stage of sample preparation, should not differ by more than the values indicated in 6.1.6, 6.2.6 and 6.3.6

3.12**reproducibility**

means of the results of duplicate determinations, carried out in each of two different laboratories on representative portions taken from the same gross sample at the final stage of sample preparation, should not differ by more than the values indicated in 6.1.6, 6.2.6 and 6.3.6

4 Requirements**4.1 General**

Impregnated barbecue charcoal and impregnated barbecue charcoal briquettes shall fulfil the requirements for barbecue charcoal and barbecue charcoal briquettes together with the requirements of EN 1860-3.

4.2 Requirements for barbecue charcoal

4.2.1 Fixed carbon

The fixed carbon in the dry charcoal shall be minimum of 75% by mass, calculated in accordance with 6.4.

4.2.2 Ash

The ash content in the dry charcoal shall not exceed 8%, when tested according to 6.3.

4.2.3 Total moisture

The total moisture content shall not exceed 8%, when tested according to 6.1.

4.2.4 Granulation

The particle size for the barbecue charcoal shall be 0 mm to 150 mm:

- No more than 10% may exceed 80 mm in size.
- At least 80% shall be greater than 20 mm.
- 0 mm- 10 mm shall not exceed 7%.

testing in accordance with 6.6.

4.2.5 Volatiles

The volatiles must be carried out to allow determination of fixed carbon but no limits are set as maximum or minimum.

4.2.6 Bulk density

The bulk density must be at least 130 kg/m³.

4.3 Requirements for barbecue charcoal briquettes

4.3.1 Fixed carbon

The fixed carbon of dry barbecue charcoal briquettes shall be minimum 60%, calculated in accordance with 6.4.

4.3.2 Ash

The ash content of dry barbecue charcoal briquettes shall be maximum 18%, when tested in accordance with 6.3.

4.3.3 Moisture

The moisture content of barbecue charcoal briquettes shall not be above 8%, when tested in accordance with 6.1.

STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 1860-2:2005
<https://standards.iteh.ai/catalog/standards/sist/9e4047a4-a58a-4b6a-ac79-2526b04dce56/sist-en-1860-2-2005>

EN 1860-2:2005 (E)**4.3.4 Granulation**

The form and size of barbecue charcoal briquettes shall be suitable for use with barbecue equipment complying with EN 1860- 1. The granules less than 20 mm shall not exceed 10%, when tested in accordance with 6.6.

4.3.5 Binder

The binder must cause no health hazards when its combustion gases come into contact with food and the binder itself must be food grade quality.

4.4 Inadmissible additions**4.4.1 Microscopic analysis**

Microscopic analysis in accordance with 6.5 should not detect more than 10 particles in 1 000 particles of any substance which is not normally found after the distillation of wood to produce wood charcoal or in permissible binder in wood charcoal briquettes.

The following inclusions are examples of inadmissible substances.

Organic: such as all fossil coals and derivatives thereof, petroleum, coke, pitch, plastic, etc.

Inorganic: such as glass, slag, rust, splinters of metal, stone powder, etc.

The total of all detected inadmissible additions should not exceed 1% by volume, when tested in accordance with 6.5.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

4.4.2 Chemical burning sustainers, shall not be permitted.

<https://standards.iteh.ai/catalog/standards/sist/9e4047a4-a58a-4b6a-ac79-2526b04dce56/sist-en-1860-2-2005>

5 Sampling**5.1 Sampling for granulometry**

The granulation test must be carried out using randomly selected bags on general sale using a minimum total sample weight of 40 kg.

Take the whole of each package and combine it to form the sample for granulometry analysis.

5.2 Sampling for testing ash, moisture, volatile and microscopic analyses**5.2.1 Preparation**

Take the whole of the sample used to test granulometry and crush until 100% of the whole sample is less than 20 mm.

The samples for individual analysis are obtained from this < 20 mm sample by the quartering method.

5.2.2 Materials for use in the quartering method

A suitable sized sheet of glazed paper or plastic.

A cardboard or wooden board of suitable dimensions.

5.2.3 Quartering method

Place a clean dry sheet on the floor or alternatively in a box of suitable dimensions if preferred.

Pour the complete < 20 mm sample onto the sheet or in the box to form a cone or pyramid.

Divide the cone or pyramid into four parts in two operations using a cardboard or wooden board. The height and width of the board used must be greater than the height and width of the cone or pyramid formed by the sample on the sheet.

Select one of the four parts and repeat the process until approximately a 2 kg sample remains.

Take two of the final quarters, i.e. 2 x approximately 500 g samples, and seal in airtight jars for moisture testing.

Take a further quarter (approximately 500 g) for ash, volatile and microscopic analysis.

Take the final quarter for volatile testing and seal in an airtight jar and retain as a reference sample.

This whole process of granulometry testing, reducing sample to < 20 mm and subsequent quartering procedure must be undertaken at one time and as quickly as possible in order to minimise possible moisture loss from the bulk sample.

6 Test methods

iTeh STANDARD PREVIEW
(standards.iteh.ai)

6.1 Moisture

6.1.1 Principle

SIST EN 1860-2:2005

By modifying ISO 579 a sample is heated in air at 105°C - 110°C and maintained at this temperature until constant mass is obtained. The percentage moisture content is calculated from the loss in mass of the sample. Charcoal and charcoal briquettes are not liable to significant oxidation under the conditions stated.

For impregnated charcoal and impregnated charcoal briquettes the impregnant must be extracted before carrying out the test. The moisture test shall be done in accordance with Annex B.

6.1.2 Apparatus

6.1.2.1 Air oven capable of maintaining a substantially uniform temperature zone at 105° C - 110°C and in which the rate of atmosphere change is sufficiently rapid for the test.

6.1.2.2 Tray approximately 0,1 m² in area and 25 mm deep made of non-corrodible material such as stainless steel, tinned steel or aluminium.

6.1.2.3 Balance accurate to 1 g.

6.1.3 Sample

The sample shall consist of 500 g of charcoal or charcoal briquettes prepared in accordance with the rules prescribed in sampling.

6.1.4 Procedure

Weigh, to the nearest 0,1%, the sample and container as received. Weigh the dry, empty tray, transfer the sample as completely as possible to the tray and spread evenly. Place the charged tray in the oven at the