

# Appliances, solid fuels and firelighters for barbecueing —

## Part 4: Single use barbecues burning solid fuels — Requirements and test methods

The European Standard EN 1860-4:2004 has the status of a  
British Standard

ICS 75.160.10; 97.040.20

# National foreword

This British Standard is the official English language version of EN 1860-4:2004.

The UK participation in its preparation was entrusted by Technical Committee RHE/28, Domestic solid mineral fuel appliances, to Subcommittee RHE/28/1, Appliances, solid fuels and firestarters for barbecuing, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

## Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

**Compliance with a British Standard does not of itself confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 17 January 2005

## Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 12, an inside back cover and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

## Amendments issued since publication

Amd. No.	Date	Comments

English version

**Appliances, solid fuels and firelighters for barbecuing - Part 4:  
Single use barbecues burning solid fuels - Requirements and  
test methods**

Appareils, combustibles solides et allume-feux pour la  
cuisson au barbecue - Partie 4: Barbecues à usage unique  
utilisant les combustibles solides - Exigences et méthodes  
d'essais

Geräte, feste Brennstoffe und Anzündhilfen zum Grillen -  
Teil 4: Grillgeräte für Einmalanwendung (Einweggrills) bei  
der Verwendung fester Brennstoffe - Anforderungen und  
Prüfverfahren

This European Standard was approved by CEN on 12 November 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
Introduction .....	4
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions .....	5
4 Requirements .....	6
4.1 General requirements.....	6
4.2 Requirements for parts .....	7
4.2.1 Cooking grid.....	7
4.2.2 Fuel compartment.....	8
4.2.3 Stand .....	8
4.2.4 Grate.....	8
4.2.5 Starting the barbecue.....	8
4.2.6 Cooking.....	8
5 Test methods.....	9
5.1 General.....	9
5.2 Thermal test.....	9
5.3 Combustibility .....	9
5.4 Stability .....	9
5.5 Cooking grid.....	9
5.6 Dynamic test.....	9
6 Marking .....	10
7 Instructions for use .....	11
Bibliography .....	12

## Foreword

This document (EN 1860-4:2004) has been prepared by Technical Committee 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 June 2005, and conflicting national standards shall be withdrawn at the latest by June 2005.

This European Standard with the general title *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.

## Introduction

This document is Part 4 of the European Standard for appliances, solid fuels and firelighters for barbecuing EN 1860, which is intended to reduce the risks which may occur during and through barbecuing with solid fuels.

This part should be read in conjunction with Part 1, Part 2 and Part 3.

## 1 Scope

This document is applicable to single use barbecues which burn solid fuels.

This document specifies requirements for materials, construction, design and test methods to ensure safe use and satisfactory performance.

## 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 1860-2, *Appliances, solid fuels and firelighters for barbecuing – Part 2 : Barbecue charcoal and barbecue charcoal briquettes - Requirements and test methods.*

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

## 3 Terms and definitions

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

### 3.1

#### **barbecue**

appliance designed for cooking in the open air by means of radiant and possible convection heat and consisting at least of a fuel compartment and a cooking grid and/or a rotating spit

### 3.2

#### **single use barbecue**

barbecue designed in such a way that it cannot be used more than once and having been used once is no longer suitable for use and shall be disposed of safely

### 3.3

#### **fuel compartment**

part of the barbecue where the fuel is burnt; it may have, or be a grate

### 3.4

#### **grate**

perforated part of the barbecue on which the fuel is placed

### 3.5

#### **ash compartment or catcher**

parts of the barbecue intended to catch any ash or embers which may fall from the fuel compartment or grate

### 3.6

#### **usable area**

any area of a barbecue component and accessories intended to come into contact with the food to be barbecued during cooking is regarded as being usable

### 3.7

#### **stand**

support structure of a barbecue onto which the functional parts of the barbecue are located

- 3.8**  
**cooking grid**  
part of the barbecue on which the food to be cooked is placed
- 3.9**  
**silk paper**  
thin, soft, relatively hard to tear paper with a mass between 12g/m<sup>2</sup> and 25g/m<sup>2</sup> usually used to wrap delicate objects (see ISO 4046)

## 4 Requirements

### 4.1 General requirements

Coatings shall withstand the test as described in 5.2.

**NOTE** For surfaces of, and coatings on parts of the barbecue coming into contact with the food to be barbecued, cooking grid, spit, meat forks and gravy trays, see Directive 89/109/EEC (see Bibliography). Differing legal requirements may exist in non-EU-countries.

When operating and manipulating the single use barbecue, accessible edges and corners shall be free from burr. Rough surfaces, sharp edges and corners which may cause injury are not allowed.

All accessible parts of the barbecue components made of sheet or tube of thickness less than 0,7 mm without coating shall be as shown in Figures 1, 2, 3 and 4:

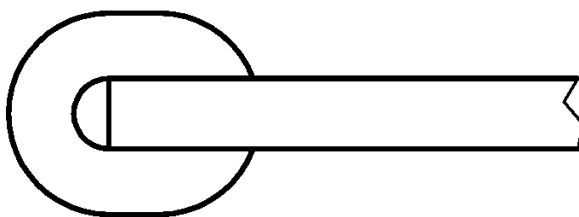


Figure 1 — Fully edged

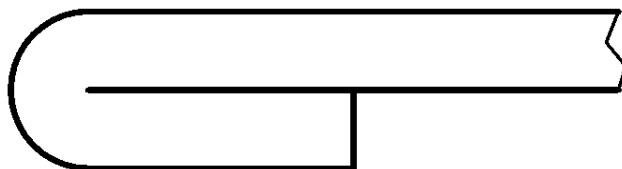


Figure 2 — Folded and flattened



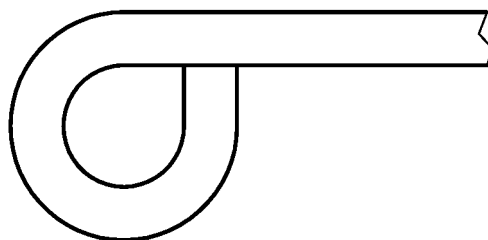


Figure 3 — Rolled and closed

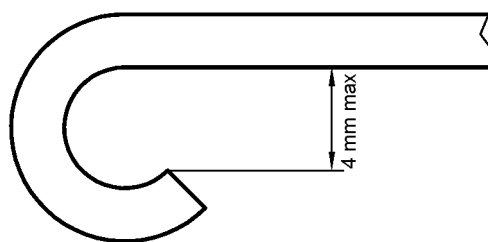


Figure 4 — Rolled and half closed

After testing in accordance with 5.2 to 5.6 a single use barbecue fails if:

- a) any dimension of any component distorts more than 5 %;
- b) any component cracks and/or fractures appear;
- c) any component falls off;
- d) the temperature of the base on which the barbecue is placed has exceeded 70°C during the test.

The single use barbecue shall consist of at least a fuel compartment, grid, stand, solid fuel and firelighter. It must be designed for one use only and safe disposal.

The fuel shall conform to the requirements of prEN 1860-2. The firelighter shall conform to the requirements of EN 1860-3.

To avoid any additional use of the single barbecue the grid shall not be removable without making the single use of the barbecue unusable. The grid shall be fixed to the fuel compartment in such a way that its removal can only be done by deliberate action of the operator making the single use barbecue unusable.

The single use barbecue shall be sold with an extinguishing material, or with an incombustible packaging to avoid risks of fire after using.

Single use barbecues shall withstand the thermal test in 5.2 and the dynamic test in 5.6.

## 4.2 Requirements for parts

### 4.2.1 Cooking grid

The clear distance between the bars of the cooking grid shall not exceed 20 mm before, during and after testing according to 5.2 and 5.5. This requirement relates to the usable area of the grid, which shall be at least 80 % of the horizontal area of the fuel compartment, vertically projected.

If the cooking grid has the function of a grate, the clear distance between the bars of the grate and between the grate and the edges of the fuel container in the horizontal position shall not exceed 15 mm and in the vertical position shall not exceed 20 mm before, during and after testing according to 5.2 and 5.5.

The permanent deformation of the cooking grid when tested according to 5.2 shall not exceed 5 % relative to the length of the grid.

There shall be no cracking of the grid following the thermal test.

## 4.2.2 Fuel compartment

### 4.2.2.1 General

The fuel compartment shall withstand the thermal test without cracking or melting.

### 4.2.2.2 Ash catcher

The single use barbecue shall be equipped with an ash catcher or shall be designed so that it is not possible for any embers or fuel to fall out. This shall be verified during testing.

### 4.2.2.3 Depth of the fuel compartment

The minimum depth of the fuel compartment shall be as indicated in Table 1. The minimum depth shall be available over 80 % of the usable area of the fuel compartment.

**Table 1 — Minimum depth of the fuel compartment**

Grid size diameter or longest side measurement	Minimum depth of fuel compartment
≤ 400 mm	50 mm
> 400 mm	60 mm

If the fuel compartment is a grate, Table 1 shall not be taken into account but the grate shall have an ash catcher.

## 4.2.3 Stand

A means shall be provided to prevent accidental movement of the stand or barbecue during normal use.

A locking and/or unlocking device shall not operate unintentionally.

## 4.2.4 Grate

The maximum opening in the grate shall not exceed 15 mm.

## 4.2.5 Starting the barbecue

A safe and easy method to start the single use barbecue shall be included in the instructions supplied with the product.

## 4.2.6 Cooking

A single use barbecue shall provide at least 45 min cooking time once the flames and smoke from the firelighter have ceased and ash appears.

## 5 Test methods

### 5.1 General

The requirements given in Clause 4 shall be verified by visual examination, linear measurement, function testing and/or calculation, unless otherwise specified.

Testing shall be carried out at an ambient temperature of  $20\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$ , in still air (airspeed less than 0,5 m/s).

For testing purposes each individual mass shall not exceed 0,5 kg and 100 mm in any dimension.

### 5.2 Thermal test

The single use barbecue is placed on a horizontal plane made of plywood approximately 25 mm thick with a matt black painted surface.

The firelighter is lit, the single use barbecue operated, and the surface temperature of the plywood is constantly measured for as long as it takes for the charcoal to burn completely.

### 5.3 Combustibility

The single use barbecue is placed loaded and operated as described in 5.2 except the plywood is of natural colour and additionally covered with white silk paper in accordance with 3.9.

The size of the test area shall correspond to the single use barbecue installation area, plus a margin of 250 mm all round. During the test the paper shall not burn and the plywood shall not become singed.

### 5.4 Stability

The single use barbecue is placed on a plane made of plywood at an angle of  $10^{\circ}$  to the horizontal. To prevent the single use barbecue from slipping or rotating, it may be stopped at the contact points without restricting the possibility of tipping over. The single use barbecue must not tip over in any of the most unfavourable positions and conditions for use.

Then the single use barbecue shall be placed on a horizontal plane loaded with  $1\text{ kg/dm}^2$  of the usable area of the grid uniformly distributed.

During these two tests the requirements of 4.1 a, b and c shall be verified by visual examination and linear measurement.

### 5.5 Cooking grid

The single use barbecue is placed as described in 5.2. The cooking grid is loaded with  $0,5\text{ kg/dm}^2$  of the usable area.

The load shall be removed after one minute.

The permanent deformation of the cooking grid shall be measured and shall not exceed 5 % of its longest size.

### 5.6 Dynamic test

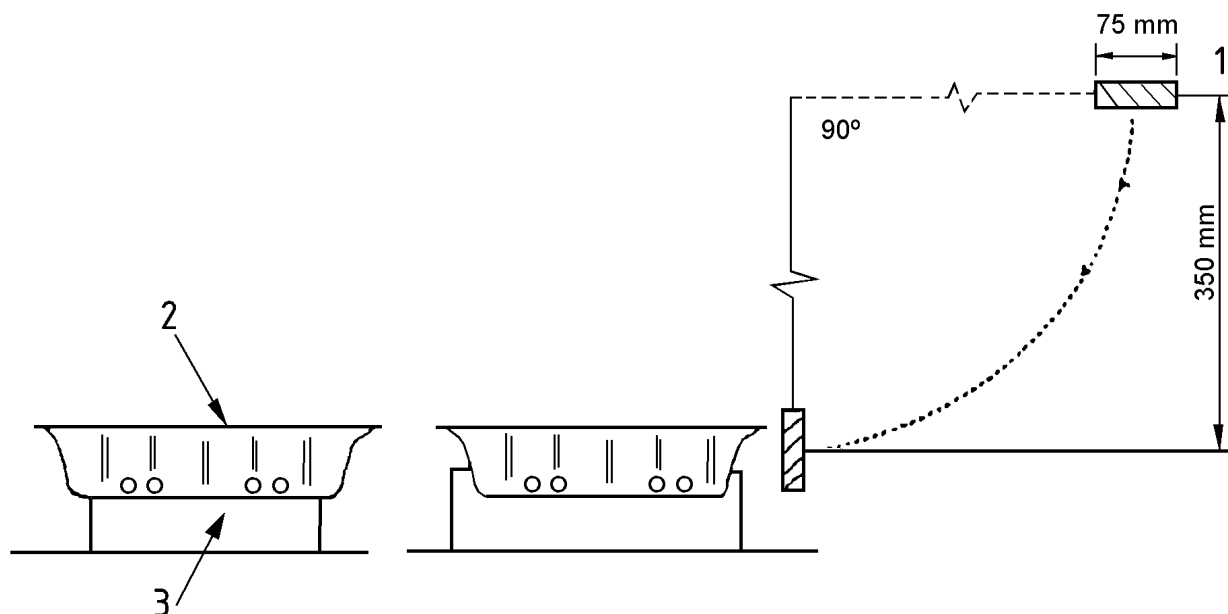
The single use barbecue is placed as described in 5.2.

The impactor will consist of a pendulum having a total mass of 50 % of the mass of the single use barbecue.

Place the pendulum in relation to the single use barbecue unit as shown in Figure 5. The test shall be carried out at three positions on the unit, two adjacent sides and a corner, whilst the single use barbecue is not fixed to the surface on which it is standing.

A separate single use barbecue shall be used for each position.

The single use barbecue shall not fall off its stand, the stand shall not collapse and the fuel compartment shall not fracture.



#### Key

- 1 Mass
- 2 Single use barbecue
- 3 Stand

Figure 5 — Dynamic test single use barbecue

## 6 Marking

Markings shall be visible, easily legible, indelible and at least in the national language(s) of the country of sale.

The single use barbecue shall be marked with the following information:

- a) Name or trademark of the manufacturer or distributor. This shall be fitted on the single use barbecue by casting, stamping, enamelling or labelling.
- b) Model or type designation. This marking may be on the packaging only.
- c) The label and/or packaging shall be marked with the following warning information:

**"DO NOT REFILL! THIS BARBECUE IS FOR SINGLE USE ONLY! "**

**"CAUTION! DO NOT USE SPIRIT, PETROL OR COMPARABLE FLUIDS FOR LIGHTING OR RE-LIGHTING"**

## 7 Instructions for use

The instructions for use shall be given at least in the national language(s) of the country of sale. They shall contain at least the following information and shall be supplied with each single use barbecue:

- a) the model or type designation including exploded view and parts list as applicable;
- b) the statement that the single use barbecue has to be installed on a secure level base prior to use;
- c) the method of correct assembly, possibly using illustrations;
- d) advice on the safe operation of the single use barbecue;
- e) the fuel used;
- f) the correct lighting procedures including the statement "do not cook before the fuel has a coating of ash";
- g) the precautions to take to remove the foods that would be stuck on the grid to avoid the barbecue tipping over;
- h) do not use in prohibited areas;
- i) do not use on flammable surfaces or surfaces likely to be damaged;
- j) if water is used to extinguish the single use barbecue the water in the container provided shall be drinking water;
- k) the following warning notices:

**"ATTENTION! This single use barbecue will become very hot, do not move it during operation";**

**"Do not use indoors";**

**"CAUTION! Do not use spirit, petrol or comparable fluids for lighting or re-lighting! ";**

**"WARNING! Keep children and pets away".**

**"DO NOT REFILL! THIS BARBECUE IS FOR SINGLE USE ONLY. DO NOT DISPOSE OF UNTIL COMPLETELY EXTINGUISHED AND COLD (USING EITHER WATER OR INCOMBUSTIBLE PACKAGING IF PROVIDED)".**

## Bibliography

- [1] EN 563, *Safety of machinery - Temperature of touchable surfaces - Ergonomics data to establish temperature limit values for hot surfaces*
- [2] ISO 4046-4, *Paper, board, pulps, and related terms – Vocabulary – Paper and board grades and converted products*
- [3] Directive 89/109/EEC, European Council, Council Directive of 21 December 1988 on the approximation of the Directive 89/109/EEC laws of the Member States relating to materials and articles intended to come into contact with foodstuff



# BSI — British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

## Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover.  
Tel: +44 (0)20 8996 9000. Fax: +44 (0)20 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

## Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: +44 (0)20 8996 9001.  
Fax: +44 (0)20 8996 7001. Email: [orders@bsi-global.com](mailto:orders@bsi-global.com). Standards are also available from the BSI website at <http://www.bsi-global.com>.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

## Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre.  
Tel: +44 (0)20 8996 7111. Fax: +44 (0)20 8996 7048. Email: [info@bsi-global.com](mailto:info@bsi-global.com).

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration.  
Tel: +44 (0)20 8996 7002. Fax: +44 (0)20 8996 7001.  
Email: [membership@bsi-global.com](mailto:membership@bsi-global.com).

Information regarding online access to British Standards via British Standards Online can be found at <http://www.bsi-global.com/bsonline>.

Further information about BSI is available on the BSI website at <http://www.bsi-global.com>.

## Copyright

Copyright subsists in all BSI publications. BSI also holds the copyright, in the UK, of the publications of the international standardization bodies. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI.

This does not preclude the free use, in the course of implementing the standard, of necessary details such as symbols, and size, type or grade designations. If these details are to be used for any other purpose than implementation then the prior written permission of BSI must be obtained.

Details and advice can be obtained from the Copyright & Licensing Manager.  
Tel: +44 (0)20 8996 7070. Fax: +44 (0)20 8996 7553.  
Email: [copyright@bsi-global.com](mailto:copyright@bsi-global.com).