SLOVENSKI STANDARD
SIST EN 1860-3:2004

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Naprave, trdna goriva in naprave za vžiganje žara - 3. del: Vžigalna naprava za žar z lesnim ogljem in briketi lesnega oglja - Zahteve in preskusne metode

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

Geräte, feste Brennstoffe und Anzündhilfen zum Grillen - Teil 3: Anzündhilfen für Grill-Holzkohle und Grillkohlebriketts - Anforderungen und Prüfverfahren

Appareils, combustibles solides et allume-barbecue pour la cuisson au barbecue - Partie 3: Allume-feu pour l'allumage des combustibles solides dans les appareils de cuisson au barbecue - Exigences et méthodes d'essai

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This European Standard was approved by CEN on 27 June 2003.

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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 Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Foreword

This document (EN 1860-3:2003) 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of an identical text or by endorsement, at the latest by February 2004, and conflicting national standards shall be withdrawn at the latest by February 2004.

Annexes A, B, C, D, and E are normative.

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

Introduction

This European Standard, EN 1860, 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: Solid fuels for use in barbecue appliances. 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.

This standard is Part 3 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 4.

1 Scope

This European standard specifies the safety, performance, packaging and marking requirements including the test methods for firelighters used to light solid fuels in barbecue and grill appliances. The standard covers firelighters supplied as either solid, liquid, thickened liquid or gel formulations. However the use of highly flammable liquids (except in stabilised formulations) is specifically excluded from the scope of this standard as their use as barbecue firelighters is regarded as highly dangerous.

2 Normative References

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 24260	Petroleum products and hydrocarbons - Determination of sulfur content - Wickbold combustion method (ISO 4260:1987)
EN 28317	Child-resistant packaging - Requirements and testing procedure for reclosable packages (ISO 8317:1989)
EN ISO 1516	Determination of flash/no flash - Closed cup equilibrium method (ISO 1516:2002)
EN ISO 1523	Determination of flash point - Closed cup equilibrium method (ISO 1523:2002)
EN ISO 2555	Plastics - Resins in the liquid state or as emulsions or dispersions - Determination of apparent viscosity by the Brookfield Test method (ISO 2555:1989)

EN ISO 3104	Petroleum products - Transparent and opaque liquids - Determination of kinematic viscosity and calculation of dynamic viscosity (ISO 3104:1994)
EN ISO 3219	Plastics - Polymers/resins in the liquid state or as emulsions or dispersions - Determination of viscosity using a rotational viscometer with defined shear rate (ISO 3219:1993)
EN ISO 12058-1	Plastics - Determination of viscosity using a falling-ball viscometer - Part 1: Inclined-tube method (ISO 12058-1:1997)
ISO 567	Coke - Determination of bulk density in a small container
ISO 1013	Coke - Determination of bulk density in a large container
ISO 3105	Glass capillary kinematic viscometers - Specifications and operating instructions
ISO 3679	Paints, varnishes, petroleum and related products - Determination of flashpoint - Rapid equilibrium method
ISO 3680	Paints, varnishes, petroleum and related products - Flash/no flash test - Rapid equilibrium method
ISO 3837	Liquid petroleum products - Determination of hydrocarbon types - Fluorescent indicator adsorption method
ISO/DIS 12058-2	Plastics - Determination of viscosity using a falling-ball viscometer - Part 2: Free falling-ball method

3 Terms and definitions

For the purposes of this standard, the following terms and definitions apply:

3.1
solid firelighter
solid substance or preparation, which is readily ignitable by the application of a naked flame and which can be used to ignite solid barbecue fuels in barbecue and grill appliances.

3.2
liquid, thickened liquid or gel firelighter
liquid, thickened liquid or gel substances or preparations, which are readily ignitable by the application of a naked flame and which, when supported on a solid substrate, can be used to ignite solid barbecue fuel used in barbecue and grill appliances.

3.3
barbecue fuel
barbecue charcoal, barbecue charcoal briquettes and other briquetted solid fuels.

3.4
consumer package
individual packaging unit, as purchased by the consumer at a retail store.

4 Requirements

4.1 Safety

4.1.1 Firelighter composition

4.1.1.1 The firelighter shall not contain any substance or preparation classified as very toxic, toxic, corrosive, explosive, oxidising, sensitising or class 1 or 2 carcinogen.

NOTE Classification is in accordance with the Classification Packaging & Labelling of Dangerous Preparations Directive 88/379/EEC of 7th June 1988.

4.1.1.2 The properties of any raw material fuel constituent of a solid firelighter shall comply with the following:

a) Aromatic content ≤ 2,0 % (m/m). This property shall be determined in accordance with the test method detailed in ISO 3837.

b) Sulfur content ≤ 0,05 % (m/m). This property shall be determined in accordance with the test method detailed in EN 24260.

4.1.2 Flashpoint of liquid firelighters

The flashpoint of any liquid firelighter shall be greater than or equal to 55°C when determined in accordance with the test method as detailed in either EN ISO 1516, EN ISO 1523, ISO 3679 or ISO 3680.

4.1.3 Viscosity of thickened liquid or gel firelighters

The dynamic viscosity of any thickened liquid or gel firelighter shall be greater than or equal to 250 mPa s at 20°C when determined in accordance with the test method as detailed in either EN ISO 2555, EN ISO 3104, ISO 3105, EN ISO 3219, EN ISO 12058-1 or ISO/DIS 12058-2.

4.1.4 Safety in use of thickened liquid or gel firelighters

When tested in accordance with the test procedures described in A.4.1 and A.4.2, the firelighter shall ignite readily and shall burn steadily, without flaring, sudden deflagrations, sparking, spitting, popping, dripping or explosion, from ignition until it has burned to extinction. When applied to a naked flame using the test procedure described in A.4.3, the firelighter shall not flare or flash back or ignite into the bottle.

4.1.5 Consistency of thickened liquid or gel firelighters

Any separation of free liquid occurring in a bottle of thickened liquid or gel firelighter shall be reversed and the thickened liquid or gel shall be reconstituted by shaking the bottle and allowing the contents to settle.

4.2 Performance

4.2.1 Burning characteristics

4.2.1.1 Solid firelighters

When tested in accordance with the test procedure described in B.3.1, the firelighter shall ignite readily and shall burn steadily, without flaring, sudden deflagrations, sparking, spitting, popping, dripping, explosion or loss of integrity until the firelighter is totally consumed.

4.2.1.2 Liquid, thickened liquid or gel firelighters

When tested in accordance with the test procedure described in B.3.2, the firelighter shall ignite readily and shall burn steadily, without flaring, sudden deflagrations, sparking, spitting, popping, dripping, explosion or loss of integrity until the firelighter is totally consumed.

4.2.2 Ignition time

When tested in accordance with the test method described in Annex C, the mean time taken from initial ignition of the firelighter to achieving a radiation intensity of 500 W/m^2 from the fire shall not exceed 25 min.

4.3 Consumer packaging

4.3.1 General

The firelighter shall be packaged in such a way as to contain the product, protect the consumer, prevent environmental pollution and facilitate safe handling, storage and transportation.

4.3.2 Solid firelighters

When tested in accordance with the test method described in Annex D, the consumer package shall maintain its integrity, quality of sealing, freedom from stains and dryness.

4.3.3 Liquid, thickened liquid or gel firelighters

4.3.3.1 A child-resistant closure shall be fitted and it shall be tested by the method specified in EN 28317.

4.3.3.2 The consumer package shall have a dosing device that shall be firmly attached to the package. The dosing device shall not detach from the package when a vertical pulling force is applied to the outlet plug of the dosing device in accordance with the test procedure described in E.2.4.

4.3.3.3 The consumer package shall have a protective device to prevent contents from running out when the package is open and horizontally orientated in such a way as to allow contents to escape. The maximum emission shall not exceed 10 ml.

4.3.3.4 The consumer package shall withstand being dropped from a height of 1 m onto a concrete floor such that the package is not damaged to an extent that its contents can leak out.

4.3.3.5 When tested in accordance with the test method described in Annex E, it shall be verified that the consumer package maintains its integrity and that the requirements given in 4.3.3.1 to 4.3.3.4 are met.

5 Marking and instructions for use

The consumer packaging shall be clearly marked, in the official language of the country of intended sale, with at least the following:

a) the number and date of this European Standard;

b) the name and address of the manufacturer or supplier;

c) the product designation (see NOTE 1);

d) instructions for use;

e) risk and safety phrases in accordance with European legislation (see NOTE 2);

f) warnings and hazard symbols in accordance with European legislation (see NOTE 2);

g) product coding, indicating traceability of goods e.g. batch number;

h) an indication that, before any food is cooked, the firelighter must be completely burned and the barbecue fuel must be ashed over;

i) the words “Keep out of the reach of children”.

NOTE 1 The designation of a firelighter in accordance with this standard should be marked “Barbecue firelighter in accordance with EN 1860-3.”

NOTE 2 Where any national or local legislation in the country of intended sale requires additional marking then this will also need to be complied with.

6 Test report

The test report, each page of which shall be consecutively numbered, shall specify the results of the test and any other additional information and shall contain at least the following details concerning the test undertaken on the firelighter:

a) the name and address of the firelighter manufacturer or supplier;

b) all necessary details for the complete identification and designation of the firelighter tested;

c) a reference to the test methods applied in accordance with this standard;

d) all conditions detailed in the test procedure as described in this standard or considered optional which have influenced the result;

e) a statement describing whether the safety, performance and consumer packaging requirements of clause 4 are met or failed, supported by the detailed test results obtained;

f) a copy of the marking information and instructions for use given with/on the firelighter, and a statement indicating that the marking information conforms with the requirements specified in clause 5;

g) the name and address of the test authority;

h) a unique serial number for the report;

i) the date of issue of the report;

j) signature and legible name of the person taking responsibility for the content of the report.

Annex A
(normative)
Method of test for safety in use of a thickened liquid or gel firelighter

A.1 Purpose

The purpose of the test is to establish the safety in use of the firelighter. The test assesses the behaviour of the firelighter during ignition, the combustion behaviour of the firelighter and its behaviour when the firelighter is applied onto an open flame.

A.2 Test apparatus

The following test apparatus is required:

a) a laboratory fume cupboard which is operated at the minimum extraction rate necessary to just safely evacuate the products of combustion produced by the burning firelighter and charcoal;

b) an aluminium fireproof bowl of dimensions approximately 200 mm x 125 mm x 35 mm;

c) a gas ignition flame;

d) a calibrated balance to weigh the firelighter accurately;

e) a stopwatch calibrated in seconds.

NOTE In the interest of safety it is recommended that the face and hands of the tester are adequately protected at all times when undertaking this test.

A.3 Test charcoal

The test charcoal used shall be barbecue stick charcoal produced from eucalyptus wood and shall comply with the following specification:

Length:	20 mm to 80 mm
Fixed carbon:	75 % w/w to 80 % w/w
Moisture content:	3 % w/w to 5 % w/w
Ash content:	3 % w/w to 6 % w/w

A.4 Test procedure

A.4.1 Test procedure to assess the ignition behaviour of the firelighter

The test shall be carried out in a laboratory where the ambient air temperature is maintained at (20 ± 5)°C.

Switch on the extractor fan of the fume cupboard and operate at the minimum extraction rate necessary to just safely evacuate the products of combustion produced by the burning charcoal and firelighter.

Fill the aluminium bowl with 100 g of the test charcoal. The charcoal shall not contain undersize pieces. Heat the bowl and its contents to a temperature of 40°C. Select one individual container of firelighter from a newly opened outer case and pre-heat the firelighter to a temperature of 40°C for a period of not less than 15 min. When the bowl and its contents reach 40°C place them on an isolating pad inside the fume cupboard.

Immediately apply 25 g of the heated firelighter to the charcoal. Start the stopwatch simultaneously with the first application of the firelighter.