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Cookware — Domestic cookware for use on top of a stove, cooker or hob

Part 2: General requirements for ceramic cookware and glass lid

National foreword

This British Standard is the UK implementation of EN 12983-2:2023 and supersedes DD CEN/TS 12983-2:2005, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee CW/29, Tableware.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

Cookware - Domestic cookware for use on top of a stove, cooker or hob - Part 2: General requirements for ceramic cookware and glass lid

Articles culinaires - Articles culinaires à usage domestique pour cuisinières et plaques de cuisson - Partie 2 : Exigences générales pour articles culinaires en céramique et les couvercles en verre

Kochgeschirre - Haushaltskochgeschirre zur Verwendung auf einem Herd oder Kochfeld - Teil 2: Allgemeine Anforderungen an Keramik-Kochgeschirr und Glasdeckel

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European foreword

This document (EN 12983-2:2023) has been prepared by Technical Committee CEN/TC 194 “Utensils in contact with food”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by August 2023, and conflicting national standards shall be withdrawn at the latest by August 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TS 12983-2:2005.

The main changes compared to the previous edition are listed below:

- modification of the status of the document (from technical specification into European standard);
- only requirements for ceramic and glass ceramic cookware are covered (other requirements have been moved to Part 1);
- inclusion of performance test.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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1 Scope

This document specifies safety and performance requirements of domestic ceramic and glass ceramic cookware for use on top of a stove, cooker or hob.

This document envisages that oven top applications for ceramic utensils involve all or specific parts of the cooking operation, for example, the browning of meat, where the remainder of the cooking can be completed in an oven or on top of the stove.

NOTE Requirements for suitability for use with induction hobs are in the process of being compiled.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1183, *Materials and articles in contact with foodstuffs - Test methods for thermal shock and thermal shock endurance*

EN 12980, *Materials and articles in contact with foodstuffs - Non-metallic articles for catering and industrial use - Method of test for the determination of impact resistance*

EN 12983-1:2023, *Cookware - Domestic cookware for use on top of a stove, cooker or hob - Part 1: General requirements*

EN 13834:2020, *Cookware - Ovenware for use in traditional domestic ovens*

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

ceramic

inorganic non-metallic material made by firing a mixture of raw materials at high temperature

Note 1 to entry: The firing temperature is high enough to give the necessary strength to the article, which is already shaped but is lower than the temperature which is necessary to achieve complete fusion of the mixture.

3.2

cookware

utensil, in the form of a hollow container, intended for use in the cooking of food or beverages on top of a stove, cooker or hob, and/or in an oven

3.3

ceramic cookware

cookware utensil constructed from a ceramic material

**3.4
coating**

deposit and/or non-self-supporting layer applied to a substrate to obtain specific performance properties independent of the properties of the substrate

**3.5
non-stick coating**

coating applied to the interior of the cookware to achieve anti-adherent effect during cooking and to facilitate cleaning

**3.6
easy clean coating**

coating applied to the interior of the cookware to facilitate cleaning

**3.7
vitroceramic
glass ceramic**

inorganic non-metallic material produced by complete fusion of a mixture of raw materials at high temperature into a homogenous liquid which is then cooled into a rigid material and heat treated to achieve certain a degree of crystallisation, mainly sub microscopic crystallites

**3.8
glass**

inorganic non-metallic material produced by the complete fusion of raw materials at a high temperature into a homogeneous liquid which is then cooled to a rigid condition essentially without crystallisation

4 Impact resistance

The rim and any attached handles shall withstand an impact of energy greater than 0,05 J when tested as described in EN 12980.

Tests conditions are:

- articles shall be restrained throughout the test;
- for rims, the shock shall be applied to the rim of the article positioned on its base;
- for handles, the shock shall be applied at the mid-point of the handle, with the article positioned on its base.

5 Thermal shock endurance for ceramics or glass ceramics or vitroceramic and glass lid

The body of a utensil shall have a thermal shock endurance of Δt_{50} no less than 180 °C when tested in accordance with EN 1183.

The lid of a utensil shall have a thermal shock endurance of Δt_{50} no less than 150 °C when tested in accordance with EN 1183.

6 Oven top use

A ceramic utensil shall be deemed fit for oven top use which survives the test conditions specified in Annex A and meets the following requirement.

If suitability for a gas hob or for use on a solid plate or glass ceramic hobs with radiant or halogen heater is claimed, the requirements of EN 12983-1:2023, 6.1.1 and 6.2.6 shall apply.

7 Non-stick coatings

Any surfaces which are claimed by the manufacturer or supplier to be non-stick shall meet the requirements specified in EN 13834:2020, 8.2.

If priority use is for use on top of a stove or hob, the requirements of EN 12983-1 shall apply.

8 Easy clean coatings

Any surfaces which are claimed by the manufacturer or supplier to be easy clean shall meet the requirements EN 13834:2020, 8.8.

9 Product information

9.1 Point of sale information

All products or their packaging shall be labelled with the following information so that it is visible at the point of sale:

- a) an indication as to the type, material and size of the product;
- b) a listing of the heating source types for which the product is suitable. This may be achieved by the use of generally accepted symbols. Suitable symbols are under consideration;
- c) the name of the manufacturer, importer or retailer and reference of the product.

9.2 Care, safety and use instructions – General instructions

All products shall be accompanied by appropriate care, safety and use instructions including the following:

- a) advice on preparation before first use;
- b) advice on cleaning after use;
- c) advice on care of furniture;
- d) advice on obtaining optimum energy efficiency;
- e) general safety advice (see also EN 12983-1:2023, 7.12); pre heating, dry heating, ventilation, attendance;
- f) specific advice on the care of non-stick surfaces, if appropriate;
- g) specific safety instructions and warnings on the inherent dangers if the product is to be used for deep frying. In particular, a specified fill level which should not be exceeded;
- h) advice on what to do if the product proves to be unsatisfactory;
- i) name and contact address of manufacturer, importer or retailer.

Annex A (normative)

Performance test for ceramic cookware intended for use on top of a stove, cooker or hob

A.1 Apparatus

- A.1.1** A domestic gas hob, meeting the specification given in EN 12983-1:2023, Annex Q.
- A.1.2** A solid plate electrical hob and/or ceramic hobs with either radiant or halogen heating, which meets the specification given in EN 12983-1:2023, Annex Q.
- A.1.3** Gas or fan assisted electric oven capable of heating to 240 °C.
- A.1.4** 500g of minced beef, per utensil to be tested, of fat content no greater than 20 %.
- A.1.5** Top loading balance, accurate to ± 1 g.
- A.1.6** Sunflower oil, smoke point higher than 200 °C.
- A.1.7** 10 ml calibrated glass measuring cylinder, accurate to $\pm 0,1$ ml.
- A.1.8** Stopwatch, accurate to ± 1 s.
- A.1.9** Wooden spatula.
- A.1.10** Heat resistant gloves.

A.2 Procedure

- A.2.1** Select two utensils for testing per heating source which are free from cracks and chipping damage and subject them to the following test procedure.
- A.2.2** Handwash in warm domestic detergent solution and rinse thoroughly in running water at ambient temperature and dry with a suitable paper towel.
- A.2.3** Turn the heat source to the medium heat setting (gas and electric) and place the utensil onto the heat source, allow to heat for 1 min.
- A.2.4** Pour into the utensil 10 ml of sunflower oil and allow to heat for 1 min.
- A.2.5** Add 500 g of minced beef to the utensil and cook for 10 min. Occasionally stir the minced beef in the sunflower oil using a wooden spatula.
- A.2.6** Place the utensil plus contents into a 200 °C preheated oven (gas or electric) for 60 min.
- A.2.7** Remove the utensil plus contents from the oven, place on an insulated surface and allow to cool to ambient temperature.
- A.2.8** Remove the contents, hand wash in warm domestic detergent solution, rinse thoroughly in running water at ambient temperature, dry with suitable paper towel and inspect for any form of damage that has occurred during the test. Report the heat source applied and any damage on the utensils.

Bibliography

- [1] EN 1900, *Materials and articles in contact with foodstuffs - Non-metallic tableware - Terminology*

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