



SLOVENSKI STANDARD
SIST-TS CEN/TS 12983-3:2008
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Cookware - Domestic cookware for use on top of a stove, cooker or hob - Part 3:
Cookware for use on induction heating sources

Kochutensilien - Haushaltskochgeschirre zur Verwendung auf einem Ofen, Herd oder
Kochmulde - Teil 3: Kochgeschirre zur Verwendung auf Induktionsheizquellen

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Articles culinaires - Articles culinaires a usage domestique pour cuisinieres et plaques de
cuisson - Partie 3: Articles culinaires pour plaques a induction

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Ta slovenski standard je istoveten z: **CEN/TS 12983-3:2007**

ICS:

97.040.60	Kuhinjska posoda, jedilni servisi in jedilni pribor	Cookware, cutlery and flatware
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ICS 97.060

English Version

**Cookware - Domestic cookware for use on top of a stove,
cooker or hob - Part 3: Cookware for use on induction heating
sources**

Articles culinaires - Articles culinaires à usage domestique
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auf einem Ofen, Herd oder Kochmulde - Teil 3:
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This Technical Specification (CEN/TS) was approved by CEN on 13 August 2007 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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

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Foreword

This document (CEN/TS 12983-3:2007) has been prepared by Technical Committee CEN/TC 194 “Utensils in contact with food”, the secretariat of which is held by BSI.

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

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1 Scope

This Technical Specification specifies safety and performance requirements for items of domestic cookware for use on induction heating sources (top of a stove, cooker or hob) and is applicable to all cookware regardless of material or method of manufacture. It covers products intended for use both "on top" and "in oven".

This Technical Specification is complementary to EN 12983-1 and CEN/TS 12983-2.

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 12983-1:2000, *Cookware — Domestic cookware for use on top of a stove, cooker or hob — Part 1: General requirements*

CEN/TS 12983-2:2005, *Cookware — Domestic cookware for use on top of a stove, cooker or hob — Part 2: Further general requirements and specific requirements for ceramic, glass and glass ceramic cookware*

3 Terms and definitions

STANDARD PREVIEW

For the purposes of this Technical Specification the terms and definitions given in EN 12983-1:2000 and the following apply.

3.1 sandwich base
high thermal conductivity material such as aluminium or copper applied to the exterior base of a piece of cookware made of low thermal conductivity material, such as stainless steel, covered by another disc of stainless steel

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NOTE The edge of the high thermal conductivity material will be visible between the base of the cookware and the outer disc.

3.2 encapsulated base
type of sandwich base in which the high thermal conductivity base is completely covered by an outer skin of a low thermal conductivity material, such as stainless steel

3.3 sound
resonance between the piece of cookware and the inductor resulting in noise at audible frequencies

3.4 active base diameter
diameter of the pan base which interacts with the inductor

3.5 pan detection mechanism
device incorporated in a hob element that prevents its operation unless an appropriate piece of cookware is placed on the hob element

4 Performance – Suitability for use on an induction heat source

4.1 General suitability

Annex A has been established to assess the suitability of cookware when used with an induction heat source.

NOTE Due to a lack of experience, limiting values could not be established so far and are still under consideration.

4.2 Noise level

NOTE The committee responsible for this European Standard has considered the problem of noise due to resonance between individual heat sources and items of cookware, but was unable to establish a procedure for avoiding this phenomenon. The subject will remain under consideration until a suitable approach has been found.

4.3 Base stability

When tested as described in Annex B, the base shall not become convex.

4.4 Heat distribution

The results of the icing sugar test (CEN/TS 12983-2:2005, Annex D) can be used as the basis of information on whether the temperature distribution properties of a piece of cookware mean that it is suitable for induction.

NOTE It should be noted that no direct proportionality can be expected.

5 Design

5.1 General

The design of cookware shall not affect the safety systems of the induction hobs.

5.2 External coating

Organic coatings shall not be applied to the exterior base of the pan.

5.3 Take up of water by the base

When tested as described in Annex C, no more than 1 g of water shall be taken up at a base diameter of 180 mm. For other diameters, the take up shall be limited to $1 \text{ g} \times \text{actual diameter in millimetres}/180$.

This test applies only to cookware with a sandwich or encapsulated base.

5.4 Internal non stick coating

When tested as described in Annex D, the value of any temperature reading shall not exceed 320 °C.

6 Care and use instructions

6.1 General

The information required in 6.2 to 6.6 shall be incorporated into the care and use instructions.

6.2 Dry heating

The information for the consumer shall contain an instruction that, due to the rapid speed of heating of induction cookers, care should be taken if pre-heating the cookware to prevent overheating. Pre-heating is not advised for non-stick cookware.

6.3 Overheating of coated pans

If overheating of a coated pan has occurred which has led to disintegration of the coating, thorough venting of the room shall be carried out.

6.4 Noise

Under certain circumstances noise may occur, which is due to the electromagnetic properties of the heat source and the cooking utensil.

6.5 Placing the pan on top of the heat source

The utensil shall be placed centrally on the indicated induction hob area.

6.6 Active base diameter

The manufacturer shall state the active base diameter in centimetres.

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Annex A (normative)

Conditions for deciding suitability for use with induction heat sources

A.1 Apparatus

A.1.1 Induction hobs

The induction hob shall be chosen according to the base diameter of the test pan as follows:

- Ø 145 mm or 160 mm: induction hob shall operate at constant current of 11 A in the coil at 20 kHz to 80 kHz;
- Ø 180 mm: induction hob shall operate at constant current of 14 A in the coil at 20 kHz to 80 kHz;
- Ø 210 mm: induction hob shall operate at constant current of 17,5 A in the coil at 20 kHz to 80 kHz.

The pan detection mechanism shall not limit the operation.

The fan shall be set to permanent operation.

NOTE This does not cover all possible types of induction heat sources.

A.1.2 Power meter

Power meter, class 1.

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A.1.3 Reference pan

The reference pan shall be in accordance with Figure A.1 and shall cover the coil of the cooking zone. The pan shall be made of low carbon steel having a maximum carbon content of 0,08 %. It shall be cylindrical without metallic handles or protrusions. The diameter of the flat area of the base of the vessel shall be at least the diameter of the cooking zone. The maximum concavity of the base of the vessel shall be 0,006 d. The base of the pan shall not be convex.