



SLOVENSKI STANDARD
SIST EN ISO 19712-3:2014

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Polimerni materiali - Dekorativni trdni površinski materiali - 3. del: Ugotavljanje lastnosti - Oblika (ISO 19712-3:2007)

Plastics - Decorative solid surfacing materials - Part 3: Determination of properties - Solid surface shapes (ISO 19712-3:2007)

Kunststoffe - Dekorative Mineralwerkstoffe - Teil 3: Prüfverfahren - Formteile (ISO 19712-3:2007)

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Plastiques - Matériaux décoratifs massifs de revêtement de surface - Partie 3: Détermination des propriétés - Produits mis en forme (ISO 19712-3:2007)

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ICS:

83.140.20 Laminatne plošče Laminated sheets

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 19712-3

January 2013

ICS 83.140.20

English Version

**Plastics - Decorative solid surfacing materials - Part 3:
Determination of properties - Solid surface shapes (ISO 19712-3:2007)**

Plastiques - Matériaux décoratifs massifs de revêtement de surface - Partie 3: Détermination des propriétés - Produits mis en forme (ISO 19712-3:2007)

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Foreword

The text of ISO 19712-3:2007 has been prepared by Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 19712-3:2013 by Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by July 2013, and conflicting national standards shall be withdrawn at the latest by July 2013.

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

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INTERNATIONAL
STANDARD

ISO
19712-3

First edition
2007-12-15

**Plastics — Decorative solid surfacing
materials —**

Part 3:
**Determination of properties — Solid
surface shapes**

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Plastiques — Matériaux décoratifs massifs de revêtement de surface —
(standards.iteh.ai) Partie 3: Détermination des propriétés — Produits mis en forme

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ISO 19712-3:2007(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 19712-3 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products*.

ISO 19712 consists of the following parts, under the general title *Plastics — Decorative solid surfacing materials*:

— *Part 1: Classification and specifications*

— *Part 2: Determination of properties — Sheet goods*

— *Part 3: Determination of properties — Solid surface shapes*

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Introduction

This part of ISO 19712 is intended for use by manufacturers, installers and specifiers of solid surfacing materials.

The test methods and minimum performance values presented have been related as closely as possible to end-use applications. The fabrication techniques employed may, however, have a bearing on product performance and service.

The performance requirements include impact resistance, structure, renewability, colourfastness, cleanability, stain resistance, water resistance, chemical resistance, bacterial and fungal resistance, and other significant properties.

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Plastics — Decorative solid surfacing materials —

Part 3:

Determination of properties — Solid surface shapes

SAFETY STATEMENT — Persons using this document should be familiar with normal laboratory practice, if applicable. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any regulatory conditions.

1 Scope

This part of ISO 19712 specifies the methods of test for determination of the properties of solid surfacing materials, as defined in Clause 3, in the form of shaped products. These methods are primarily intended for testing the materials specified in ISO 19712-1.

The tests may be carried out on finished products, but are generally carried out on test panels of a size sufficient to meet the requirements of the test, and of the same material and finish as the finished product.

2 Normative references

[SIST EN ISO 19712-3:2014](https://standards.iteh.ai/catalog/standards/sist/40053915-f37c-41a3-88bc-98f3bafedfd1/iso-19712-3-2014)

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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.

ISO 105-A02, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ISO 105-B02, *Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test*

ISO 209:2007, *Aluminium and aluminium alloys — Chemical composition*

ISO 1770, *Solid-stem general purpose thermometers*

ISO 2039-1, *Plastics — Determination of hardness — Part 1: Ball indentation method*

ISO 2039-2, *Plastics — Determination of hardness — Part 2: Rockwell hardness*

ISO 3668, *Paints and varnishes — Visual comparison of the colour of paints*

ISO 4211:1979, *Furniture — Assessment of surface resistance to cold liquids*

ISO 4892:1981, *Plastics — Methods of exposure to laboratory light sources*¹⁾

ISO 4892-1, *Plastics — Methods of exposure to laboratory light sources — Part 1: General guidance*

ISO 4892-2:2006, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc sources*

1) Withdrawn, but still used in certain Asian countries.

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ISO 9370, *Plastics — Instrumental determination of radiant exposure in weathering tests — General guidance and basic test method*

CIE Publication No. 85:1989, *Solar spectral irradiance*

ASTM D 2244, *Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates*

ASTM D 2583, *Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor*

3 Terms and definitions

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

3.1
solid surfacing material
SSM
material, composed of polymeric materials together with pigments and fillers, intended to be cast into sheets or shaped products

NOTE 1 The material is of the same composition throughout the whole thickness of the sheet or product.

NOTE 2 Sheets and products made from SSMs are repairable and renewable to the original finish.

NOTE 3 SSMs can also be fabricated into continuous sheets with inconspicuous seams.

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4 Cleaning the test specimen surface**4.1 General**

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The surface to be tested shall be prepared prior to testing using the procedure specified in 4.3.

4.2 Materials

4.2.1 Cellulose sponge.

4.2.2 Non-abrasive cleanser, containing a bleaching agent.

4.2.3 Water.

4.2.4 Clean, absorbent, lint-free material.

4.3 Procedure

Clean the surface using a damp sponge and non-abrasive cleanser containing a bleaching agent, scrubbing the surface with light hand pressure for up to 1,0 min/m². Rinse the prepared surface with water and dry with clean, absorbent, lint-free material.

5 Surface defects**5.1 Procedure**

The entire finished surface of the shaped product under test shall be rubbed with a sponge and a 50 % solution of tap water and water-soluble black or blue-black ink after the surface has been washed and dried as described in 4.3. When inspecting coloured sheets, contrasting-coloured ink shall be used. The ink shall be wiped from the surface with a damp cloth and the surface dried before inspection.

5.2 Method of inspection of surface

After being inked in accordance with 5.1, the surface of the shaped product shall be inspected with the unaided eye for defects and blemishes from a distance of between 305 mm and 610 mm, using a light source giving an illumination intensity of $(1\,615 \pm 540)$ lx near the surface to be inspected.

5.3 Performance requirements

The finished surfaces of shaped products shall be free from cracks, chipped areas, pinholes and blisters.

Spots, dirt and similar surface blemishes are admissible provided the total area covered by such blemishes is not more than $1,0 \text{ mm}^2/\text{m}^2$ of the surface of the shaped product. The blemishes may be concentrated in one place or scattered over the product.

5.4 Test report

The test report shall include the following information:

- a) a reference to this part of ISO 19712;
- b) the name and type of product;
- c) whether the surface was free from cracks, chipped areas, etc.;
- d) whether the area covered by spots, dirt, etc., was more than $1,0 \text{ mm}^2/\text{m}^2$ of sheet surface;
- e) any deviation from the method specified;
- f) the date of the test.

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6 Resistance to impact by large-diameter ball

6.1 Principle

While this test method can be used for any shaped product of suitable size and shape, it is intended principally for sinks and is therefore written for that particular product.

A sink made of solid surface material is covered with a sheet of carbon paper and subjected to the impact of a steel ball which is allowed to fall from a known height. The impact resistance is expressed as the maximum drop height which does not incur visible surface cracking or chipping.

6.2 Test specimen

Sinks to be tested shall be taken from the finished-goods inventory.

6.3 Procedure

A 38,1-mm-diameter, 0,225 kg steel ball shall be dropped from a height of 610 mm to impact once on each of four different areas in each sink compartment.

Two of these areas shall be on the flat area of the sink bottom, and the other two points shall be on the convex rim radius.

Service sinks without rolled rims, and other cast products, shall be impacted only on the compartment bottom. Impact locations for typical sink configurations shall be as shown in Figure 1.