



**SLOVENSKI STANDARD**  
**SIST EN 425:1999**  
**01-marec-1999**

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Resilient floor coverings - Determination of the effect of a castor chair

Elastische Bodenbeläge - Stuhlrollenversuch

Revetements de sol résilients - Détermination de l'action d'une chaise a roulettes

Ta slovenski standard je istoveten z: **EN 425:1994**

[SIST EN 425:1999](https://standards.iteh.ai/catalog/standards/sist/72e9c588-0ab7-4d87-86ee-6c5f2f3dc590/sist-en-425-1999)

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**ICS:**

97.150      Netekstilne talne obloge      Non-textile floor coverings

**SIST EN 425:1999**

**en**

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EUROPEAN STANDARD

EN 425

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English version

## Resilient floor coverings - Determination of the effect of a castor chair

### iTeh STANDARD PREVIEW

Revêtements de sol résilients - Détermination de l'action d'une chaise à roulettes (standards.iteh.ai) Elastische Bodenbeläge - Stuhlrollenversuch

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REPUBLIKA SLOVENIJA  
MINISTRSTVO ZA ZNANOST IN TEHNOLOGIJO  
Urad RS za standardizacijo in meroslovje  
LJUBLJANA

SIST.....EN.....425.....

PREVZET PO METODI RAZGLASITVE

83-1999

This European Standard was approved by CEN on 1994-08-22. 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.

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## CEN

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

### Foreword

This European Standard was prepared by the Technical Committee CEN/TC 134 "Resilient and textile floorcoverings" of which the secretariat is held by BSI.

This document was submitted to the formal vote and approved.

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of an identical text or by endorsement, at the latest by February 1995, and conflicting national standards shall be withdrawn at the latest by February 1995.

In accordance with the CEN/CENELEC Internal Regulations, following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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## 1 Scope

This European Standard specifies a method for determining the change of appearance and stability of a resilient floor covering, including joints, under the movement of a castor chair.

## 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 revision 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.

EN 423 Résilient floor coverings - Determination of the effect of stains

prEN 684 Resilient floor coverings - Determination of seam strength

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## 3 Principle

A resilient floor covering including one or more joints, treated or welded where necessary, is subjected to the simulated movement of a castor chair. The castors move in epicycloidal paths with multiple changes of direction, stops and starts, and the frequency of passage varies from area to area.

## 4 Apparatus and materials

### 4.1 Apparatus

#### 4.1.1 Castor chair apparatus comprising the following (see figure 1):

- a) a circular plate, diameter  $(800 \pm 5)$  mm, which rotates at a speed of 20 0 r/min.

-1

The direction of rotation shall be reversed every 60 r, with a pause of 5 s before restarting.

- b) a triangular mobile platform, rotating in the same direction as the circular plate, at a faster nominal speed of 50 r/min. The platform shall be in contact with the test piece via a load exerted by a mass of 90 kg (including the mass of the components) equally distributed between three castors;

- c) three single-wheel castors, made of polyamide, having a Shore A hardness of  $(95 \pm 5)$  (see figure 2). The surfaces of the castors shall be smooth, without any deep scoring or hard encrusted particles;

NOTE 1: The path taken by each castor is shown in figure 3.

NOTE 2: Type W castors currently being specified by CMA-EIA European Standard Group 1 are also permitted.

d) suction device, with the height of its nozzles being adjustable;

e) a base for the test piece consisting of either an 8 mm plywood board or a 6 mm fibre cement board or an 8 mm acrylic glass.

#### 4.1.2 Vacuum cleaner.

#### 4.1.3 Illumination device as specified in EN 423.

#### 4.1.4 Rotary viewing table as specified in EN 423.

### 4.2 Materials

#### 4.2.1 White cotton in pad or cloth form.

#### 4.2.2 Adhesive or double-sided adhesive tape.

#### 4.2.3 Denatured ethanol.

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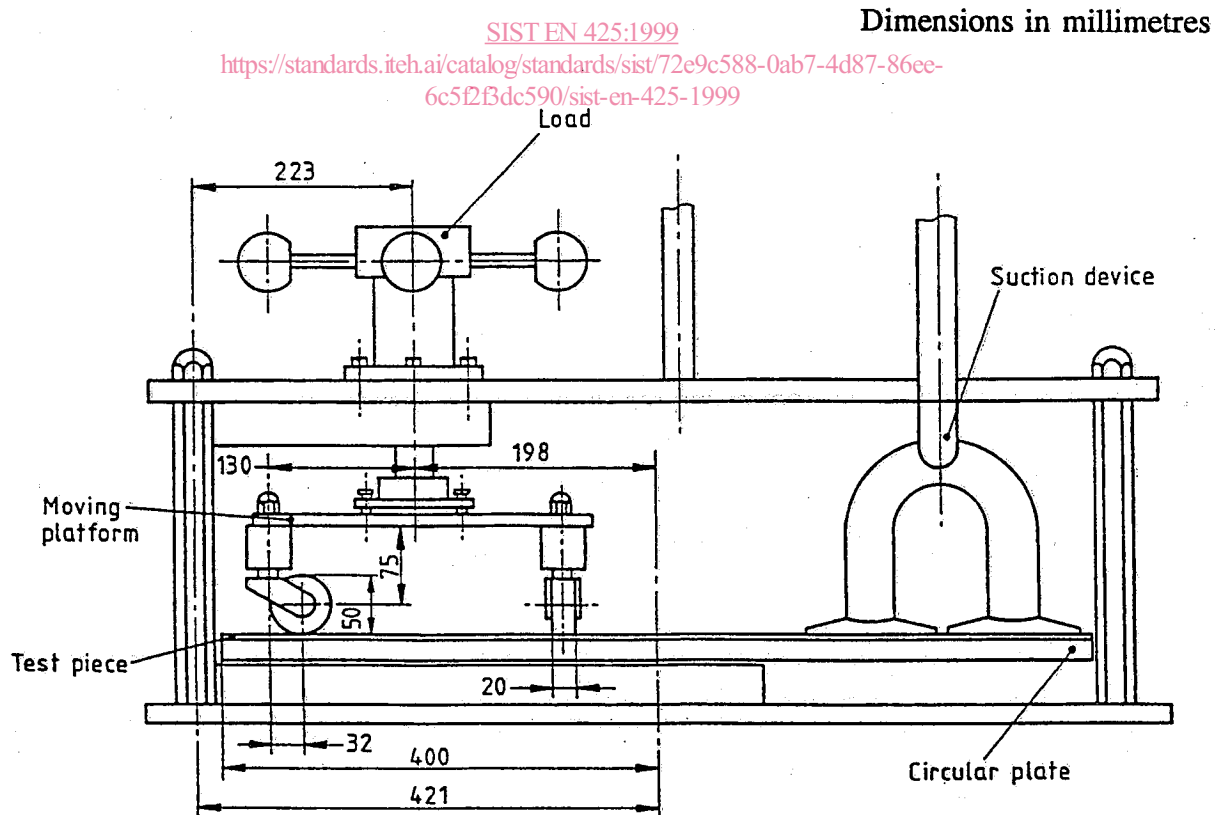


Figure 1: Castor chair test apparatus

Dimensions in millimetres

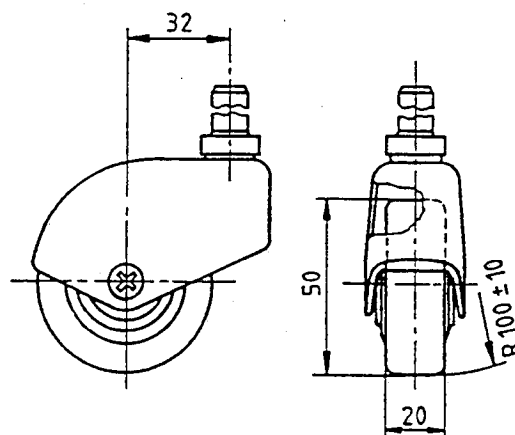


Figure 2: Details of castors

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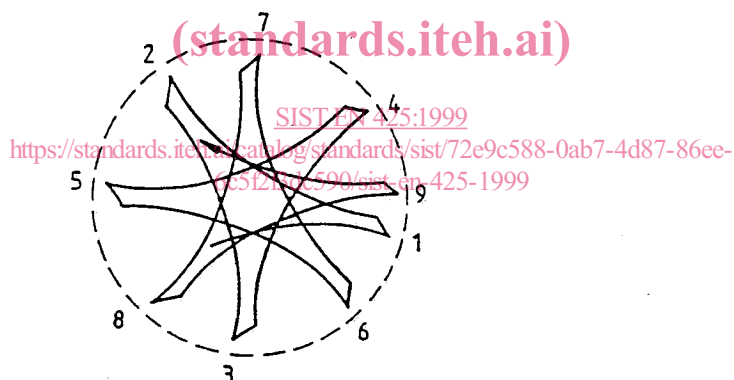


Figure 3: Path of castors

### 5 Sampling and preparation of test pieces

Take a representative sample from the available material.

Take one test piece which shall be installed using either double-sided adhesive tape or with adhesive in accordance with the manufacturer's instructions. The diameter of the test piece shall be at least 750 mm.

**NOTE:** Where necessary, joints should be treated in accordance with the manufacturer's instructions. A position of the joint(s) is as shown in figure 4.

## 6 Conditioning

Condition the test piece at a temperature of  $(23 \pm 2) ^\circ\text{C}$  and relative humidity of  $(50 \pm 5) \%$  for a minimum of 24 h.

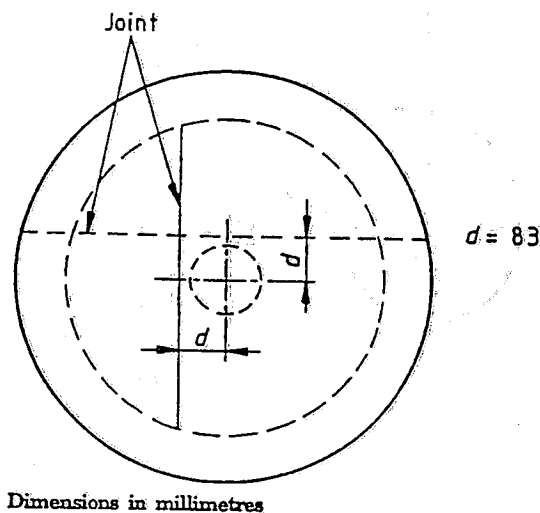


Figure 4: Position of joint(s)

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## 7 Procedure

Inspect the surface of the castors, and, if necessary, clean them with a cotton pad impregnated with denatured ethanol, and dry. Pre-clean the test piece with a vacuum cleaner.

Fix the base for the test piece on the circular plate, and lower the triangular platform to allow the castors to come into contact with the test piece. Preset the counter for 25 000 revolutions of the plate and set the apparatus in motion with the suction nozzle being operated continuously.

Carry out the test within the temperature range of  $18 ^\circ\text{C}$  to  $25 ^\circ\text{C}$ .

**NOTE:** The duration of the test is approximately 24 h.

At the end of the test, examine the test piece for appearance change from a distance of approximately 800 mm at an approximate angle of  $45^\circ$  and from all directions by slowly rotating the viewing table. Record any damage caused by detachment of layers, opening of joints, or crazing. Ignore any flattening or change in appearance, e.g. change in gloss.

If it is intended to carry out tensile tests on the treated or welded joints, cut out a strip with the joint in the centre. Separate the test piece slowly from the base by rolling it on a mandrel of approximate diameter 50 mm. Carry out the test in accordance with EN 684.