



**National Standards Authority of Ireland**

IRISH STANDARD

**I.S. EN 1416:1998**

ICS 61.040

**TOUCH AND CLOSE FASTENERS -  
DETERMINATION OF CURVATURE**

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EUROPEAN STANDARD

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Descriptors: haberdashery, tapes, touch and close fasteners, bend tests, measurements, bending

*English version*

## **Touch and close fasteners - Determination of curvature**

Fermetures auto-agrippantes - Détermination du cintrage

Haftverschlüsse - Bestimmung der Bogigkeit

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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**

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## **Foreword**

This European Standard has been prepared by Technical Committee CEN/TC 248 "Textiles and textile products", the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by May 1997, and conflicting national standards shall be withdrawn at the latest by May 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the 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 the United Kingdom.

## 1 Scope

This European Standard specifies a method for measuring the curvature of each of the male and female tapes making up a touch and close fastener.

## 2 Normative reference

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.

EN 20139 Textiles - Standard atmospheres for conditioning and testing (ISO 139 . 1973).

## 3 Definition

For the purposes of this standard, the following definition applies:

**3.1 Curvature** · The curved deformation of a tape lying flat.

## 4 Principle

The curvature of a male or female tape of a touch and close fastener is measured.

## 5 Apparatus

5.1 A test board measuring  $(1200^{+10}_0)$  mm x  $(200^{+5}_0)$  mm with its median longitudinal axis traced and incorporating locating pins (see figure 1).

5.2 A polycarbonate transparent plastic sheet measuring  $(1200^{+10}_0)$  mm x  $(200^{+5}_0)$  mm of thickness  $(2 \pm 0,1)$  mm and of density  $1,20 \text{ kg/m}^3$  with locating notches (see figure 2).

5.3 A rule of minimum length of 1000 mm, capable of measuring to within 1 mm.

5.4 A set square of dimensions (100 x 150) mm with a scale accurate to the nearest 1 mm on its long side (see figure 3).

## 6 Test specimens

Cut three test specimens approximately the length of the test board 1200 mm in length from a tape.

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## **7 Conditioning**

Condition the test specimens for at least 24 h in accordance with the standard atmosphere for testing as specified in EN 20139. The test shall be carried out in this atmosphere.

## **8 Procedure**

Lay one test specimen on the test board approximately along the median longitudinal axis

Take the sheet of transparent plastic by its ends and lay it on the test specimen using the pins and notches so that it is fitted initially to the middle of the test specimen.

Place the rule on the transparent plastic sheet and line up the 0 mm and 1000 mm graduations with the inside edge of the tape as shown in figure 3.

Place the set square on the rule and measure the maximum distance in millimetres between the inside edge of the test specimen and rule (see figure 4)

Repeat this process for the other two test specimens.

## **9 Expression of results**

Indicate each individual value to the nearest millimetre

## **10 Test report**

Report the following information :

- reference to this European Standard,
- identification of the touch and close fastener tapes;
- date of the test;
- each individual value;
- any deviation from this European Standard and any incident likely to have affected the result.

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