



SLOVENSKI STANDARD

SIST EN 1238:2000

01-maj-2000

Adhezivi - Določitev točkov mehkanja termoplastičnih adhezivov (obroč in krogla)

Adhesives - Determination of the softening point of thermoplastic adhesives (ring and ball)

Klebstoffe - Bestimmung des Erweichungspunktes von thermoplastischen Klebstoffen (Ring und Kugel)

Adhésifs - Détermination du point de ramollissement des adhésifs thermoplastiques (méthode bille et anneau)

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Ta slovenski standard je istoveten z:

EN 1238:1999

ICS:

83.180

Lepila

Adhesives

SIST EN 1238:2000

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 1238

April 1999

ICS 83.180

English version

Adhesives - Determination of the softening point of
thermoplastic adhesives (ring and ball)

Adhésifs - Détermination du point de ramollissement des
adhésifs thermoplastiques (méthode bille et anneau)

Klebstoffe - Bestimmung des Erweichungspunktes von
thermoplastischen Klebstoffen (Ring und Kugel)

This European Standard was approved by CEN on 24 January 1998.

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.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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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 has been prepared by Technical Committee CEN/TC 193 "Adhesives", the secretariat of which is held by AENOR.

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 October 1999, and conflicting national standards shall be withdrawn at the latest by October 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This European Standard includes Annex A, normative "Thermometer specification".

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STANDARD PREVIEW
SIST EN 1238:2000
ADHESIVES
THERMOMETER SPECIFICATION
Annex A
Normative
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Introduction

Thermoplastic adhesives do not change from the solid to the liquid state at a fixed temperature, but their viscosity decreases progressively as the temperature rises. For this reason, the determination of the softening point shall be carried out by defined methods to obtain comparable results.

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1 Scope

This European Standard specifies a method for the determination of the softening point of hot-melt adhesives.

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 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 923, *Adhesives — Terms and definitions*.

EN 1066, *Adhesives — Sampling*.

EN 1067, *Adhesives — Examination and preparation of samples for testing*.

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3 Definition

For the purposes of this standard the definitions in accordance with EN 923 and the following definition apply:

3.1 softening point

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the temperature at which the adhesive under test attains a degree of softness under the specified conditions.

4 Principle

A steel ball of a specified mass is placed on a sample of adhesive contained on a metal ring of specified dimensions. The apparatus is heated at a constant defined rate. The temperature at which the sample is sufficiently soft to allow the ball to pass through the ring by a fixed distance is taken as the "softening point".

5 Safety

Persons using this standard shall be familiar with normal laboratory practice.

This standard does not purport to address all the safety problems, if any, associated with its use.

It is responsibility of user to establish appropriate safety and health practices and to ensure compliance with any European or national regulatory conditions.

6 Apparatus

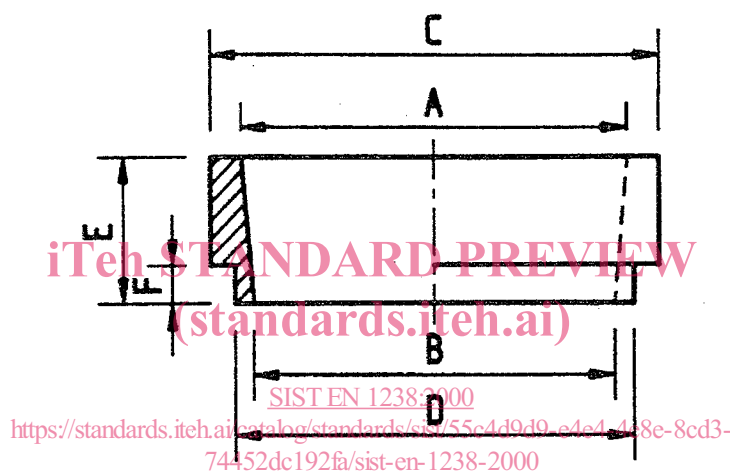
6.1 Ball: Two steel balls, $(9,53 \pm 0,02)$ mm in diameter, each having a mass of $(3,50 \pm 0,05)$ g.

6.2 Ring: Tapered brass ring to the dimensions of figure 1

NOTE As alternative the following can be used:

- shouldered brass ring to the dimensions of figure 2
- a straight-sided cylindrical ring with the following
 - interior diameter $(15,9 \pm 0,1)$ mm
 - depth $(6,4 \pm 0,1)$ mm

Dimensions in millimetres



$$A = 17,5 \pm 0,1$$

$$D = 19,0 \pm 0,1$$

$$B = 16,0 \pm 0,1$$

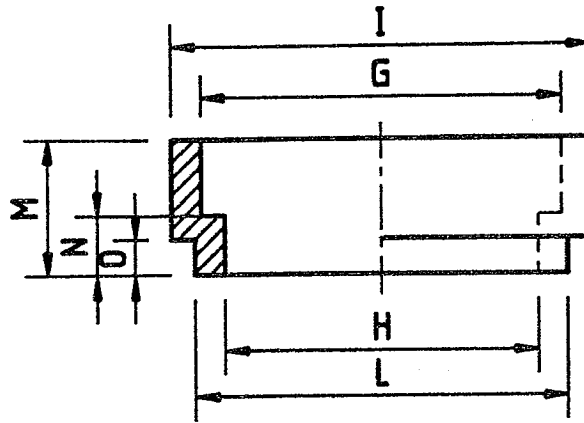
$$E = 6,4 \pm 0,1$$

$$C = 20,6 \pm 0,1$$

$$F = 2,0$$

Figure 1 — Tapered brass ring

Dimensions in millimetres



$$G = 19,8 \pm 0,1$$

$$M = 6,4 \pm 0,1$$

$$H = 15,9 \pm 0,1$$

$$N = 2,8 \pm 0,1$$

$$I = 23,0 \pm 0,1$$

$$O = 2,0$$

$$L = 19,0 \pm 0,1$$

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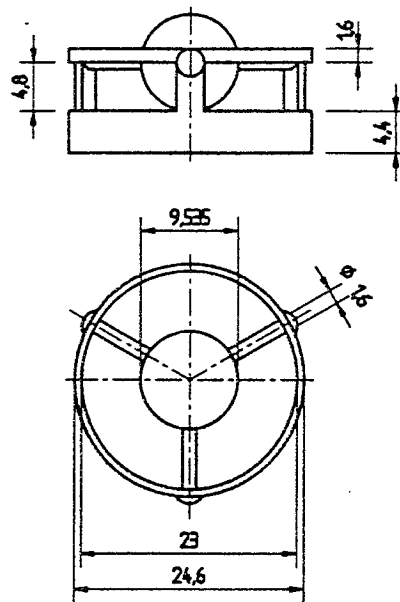
Figure 2 — Shouldered brass ring

To ensure the correct positions of the ring in its support, the exterior diameter shall be reduced at the lower part to $(19,0 \pm 0,1)$ mm for a depth of 2 mm.

If a shouldered or straight-sided ring is used, this shall be noted in the test report.

6.3 Guide: To center the ball, the arrangement in figure 3 shall be used.

Dimensions in millimetres



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Figure 3 — Ball centering guide

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6.4 Ring supports: The support described in figure 4 shall be used. The distance between the two supports plates is (25 ± 1) mm. The same distance separates the ring holder from the bottom plate.