

SLOVENSKI STANDARD
SIST EN 1238:2011

01-julij-2011

Nadomešča:

SIST EN 1238:2000

Lepila - Določanje zmehčišča plastomernih lepil (obroček in kroglica)

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 1238:2011

ICS:

83.180 Lepila Adhesives

SIST EN 1238:2011

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EUROPEAN STANDARD

EN 1238

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2011

ICS 83.180

Supersedes EN 1238:1999

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 10 March 2011.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, 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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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 1238:2011) 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 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.

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

This document supersedes EN 1238:1999.

The main modifications regarding the previous version are in the Foreword, Normative References and Note in 5.8.

This European Standard includes Annex A (normative) "Thermometer specification".

SAFETY STATEMENT — Persons using this document should be familiar with the 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.

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According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, 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 the United Kingdom.

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

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 923:2005+A1:2008, *Adhesives — Terms and definitions*

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

EN ISO 15605, *Adhesives — Sampling (ISO 15605:2000)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 923:2005+A1:2008 and the following apply.

3.1 softening point

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

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4 Principle

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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 Apparatus

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

5.2 Ring, tapered brass ring to the dimensions of Figure 1.

NOTE As alternative the following can be used:

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

Dimensions in millimetres

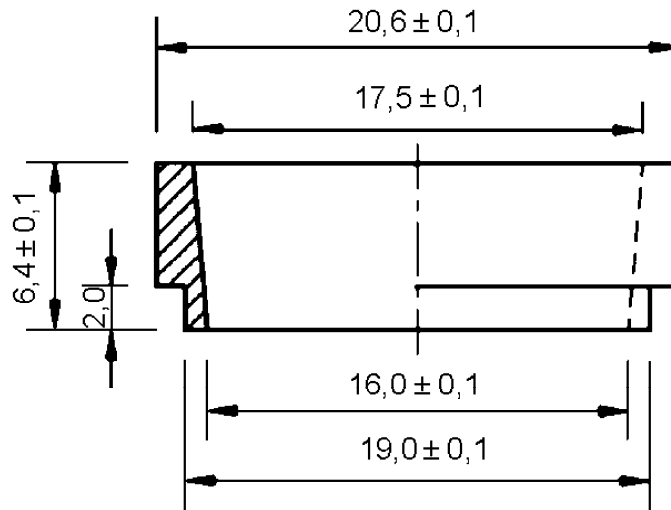


Figure 1 — Tapered brass ring

Dimensions in millimetres

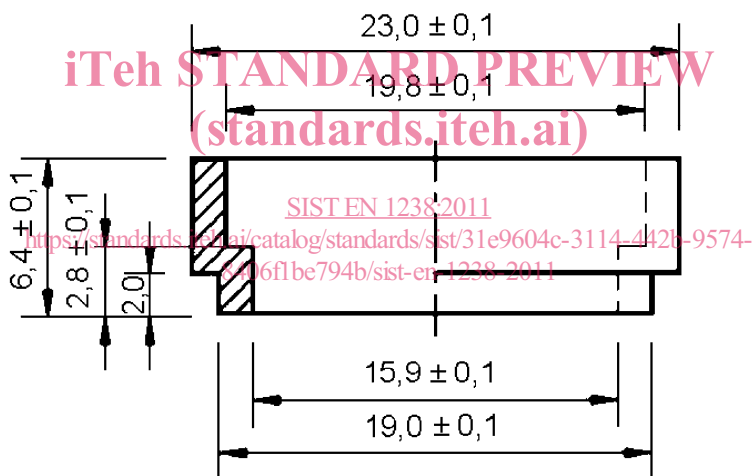


Figure 2 — Shouldered brass ring

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.

5.3 Guide, to center the ball, the arrangement in Figure 3 is recommended to be used.

Dimensions in millimetres

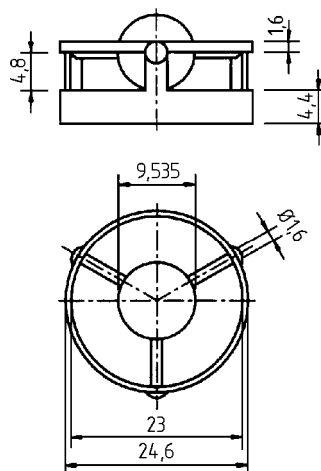


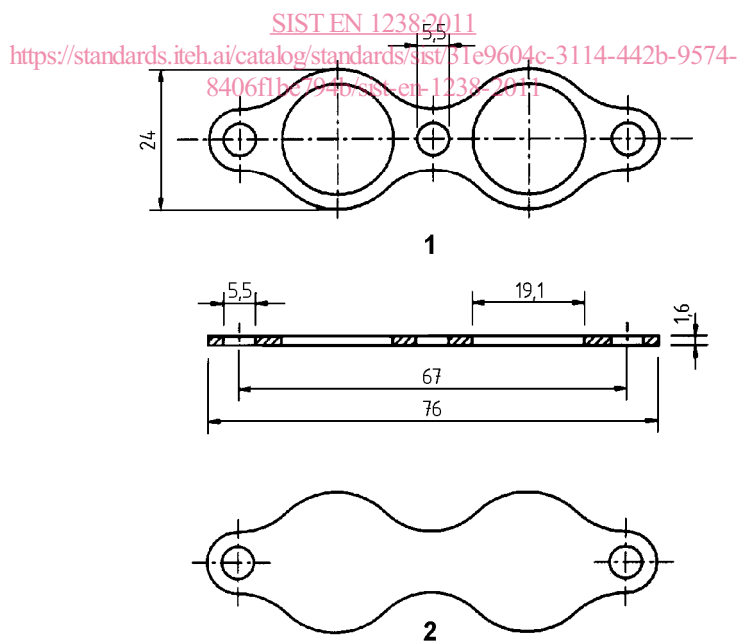
Figure 3 — Ball centering guide

5.4 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.

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Dimensions in millimetres



Key

1 Ring holder

2 Base

Figure 4 — Ring holder and base