



SLOVENSKI STANDARD
SIST EN ISO 9311-1:2006
01-januar-2006

Lepila za plastomerne cevne sisteme – 1. del: Določanje lastnosti filma (ISO 9311-1:2005)

Adhesives for thermoplastic piping systems - Part 1: Determination of film properties (ISO 9311-1:2005)

Klebstoffe für thermoplastische Rohrleitungssysteme - Teil 1: Bestimmung der Filmeigenschaften (ISO 9311-1:2005)

Adhésifs pour tuyauteries thermoplastiques - Partie 1 : Détermination des propriétés des films (ISO 9311-1:2005)

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Ta slovenski standard je istoveten z: EN ISO 9311-1:2005

ICS:

23.040.20	Cevi iz polimernih materialov	Plastics pipes
83.180	Lepila	Adhesives

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 9311-1

July 2005

ICS 83.180

English version

Adhesives for thermoplastic piping systems - Part 1: Determination of film properties (ISO 9311-1:2005)

Adhésifs pour tuyauteries thermoplastiques - Partie 1 :
Détermination des propriétés des films (ISO 9311-1:2005)

Klebstoffe für thermoplastische Rohrleitungssysteme - Teil
1: Bestimmung der Filmeigenschaften (ISO 9311-1:2005)

This European Standard was approved by CEN on 14 April 2005.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

	page
Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Safety	4
5 Principle.....	4
6 Apparatus	4
7 Procedure	6
8 Expression of results	9
9 Test report	9

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[SIST EN ISO 9311-1:2006](https://standards.iteh.ai/catalog/standards/sist/63f164ec-3631-4d59-9bb1-70b6b591ae90/sist-en-iso-9311-1-2006)

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Foreword

This European Standard (EN ISO 9311-1:2005) has been prepared by Technical Committee CEN/TC 193 "Adhesives" the secretariat of which is held by AENOR, in collaboration with Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids".

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 2006, and conflicting national standards shall be withdrawn at the latest by February 2006.

This European Standard is one of a series of standards as listed below:

EN ISO 9311-1: Adhesives for thermoplastics piping systems - Part 1: Determination of film properties (ISO 9311-1:2005)

EN ISO 9311-2: Adhesives for thermoplastic piping systems - Part 2: Determination of shear strength (ISO 9311-2:2002)

EN ISO 9311-3: Adhesives for thermoplastic piping systems - Part 3: Test method for the determination of resistance to internal pressure (ISO 9311-3:2005)

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

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EN ISO 9311-1:2005(E)

1 Scope

This part of EN ISO 9311 specifies three test procedures suitable for the determination of the spreadability and film properties of solvent containing adhesives for thermoplastic piping systems. These methods do not produce directly comparable results.

One method is applicable to non-thixotropic adhesives and the other two methods are applicable to thixotropic 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 923:1998, *Adhesives — Terms and definitions*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 923:1998 apply.

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4 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 the responsibility of the user to establish health and safety practices and to ensure compliance with any European and national regulatory conditions.

5 Principle

The adhesive under test is applied to a test plate using a specially designed applicator, at a predetermined speed and over a given length, and its spreadability is assessed by a system of scoring in comparison with a reference pattern.

The adhesive film is examined for continuity and lumps or foreign matter.

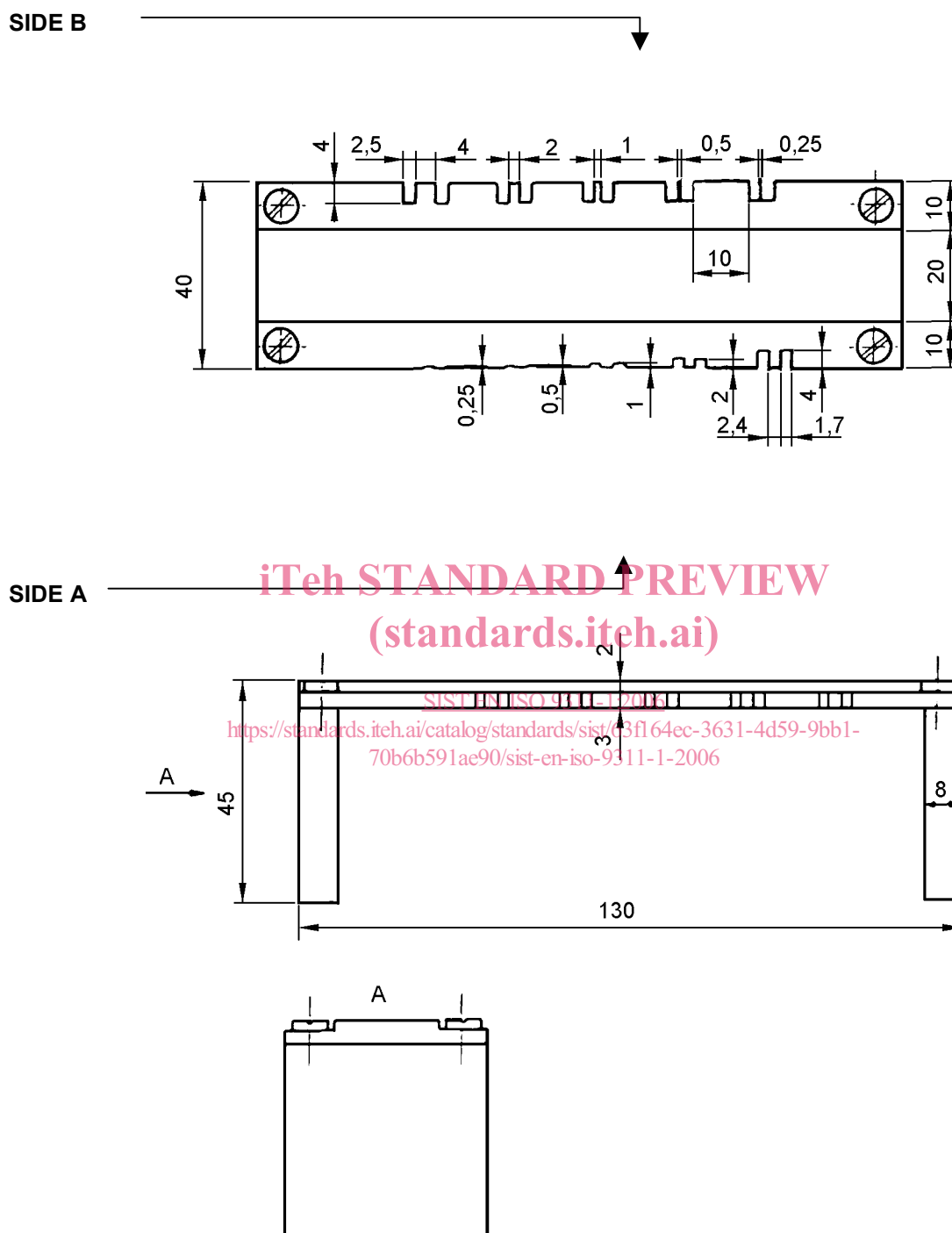
6 Apparatus

6.1 Adhesive applicator 1

(as shown in Figure 1)

This applicator has two different edges: one is used for non-thixotropic adhesives and the other for thixotropic adhesives.

Dimensions in millimetres



6.2 Adhesive applicator 2

(as shown in Figure 2, or a similar apparatus capable of applying a film of width 100 mm and thickness $(2 \pm 0,1)$ mm.)

This applicator is only used for thixotropic adhesives.

Dimensions in millimetres

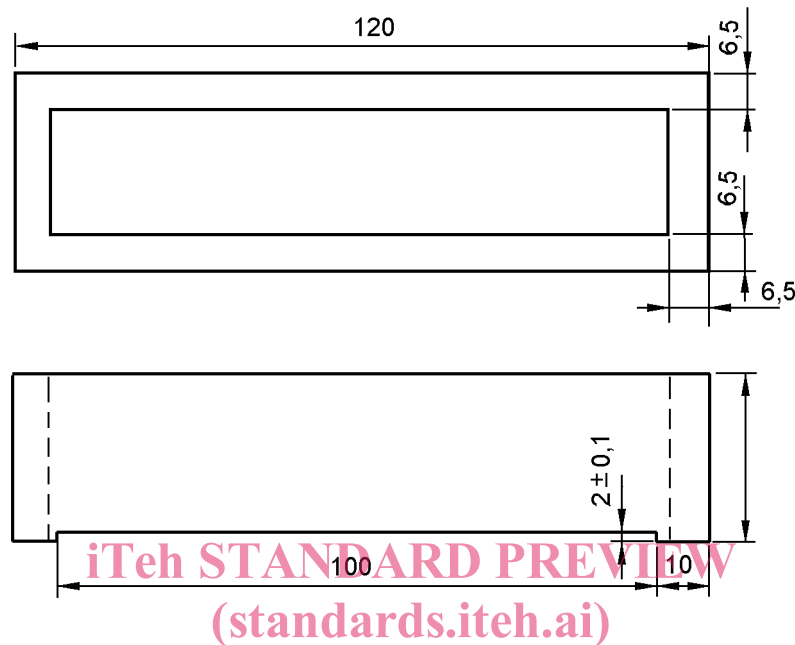


Figure 2 — Adhesive applicator 2

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6.3 Glass plate

The recommended dimensions of the glass plate are:

Width: 150 mm or greater.

Length: 250 mm or greater

6.4 Plastic plate

(relevant to the intended use of the adhesive, that is, a PVC-U plate for a PVC-U adhesive.)

The recommended dimensions of the plastic plate are:

Width: 150 mm or greater.

Length: 250 mm or greater.

The plastic plate shall be smooth and untreated.

7 Procedure

7.1 General

Condition the adhesive, the applicator and the test plate at $(23 \pm 2) ^\circ\text{C}$ and $(50 \pm 5) \%$ relative humidity for at least 6 h. The test plate and adhesive applicator shall be clean and free of grease.

For each procedure apply a coating to each of three test plates.

7.2 Method A, non-thixotropic adhesives

After conditioning, open the container and immediately apply the adhesive onto the glass plate and spread using adhesive applicator 1 (side A), at a speed of approximately 20 mm/s and over a minimum length of 200 mm.

Depending upon the depth of slots in the applicator and upon the spreadability of the adhesive examined, complete or partial films of specified nominal thickness will be obtained.

7.3 Method B, thixotropic adhesives

After conditioning, open the container and immediately apply the adhesive onto the glass plate and spread using adhesive applicator 1 (side B), at a speed of approximately 20 mm/s and over a minimum length of 200 mm.

Depending upon the depth of slots in the applicator and upon the spreadability of the adhesive examined, complete or partial films of specified nominal thickness will be obtained.

7.4 Method C, thixotropic adhesives

After conditioning, open the container and immediately apply the adhesive onto the plastic plate and spread using adhesive applicator 2, at a speed of approximately 20 mm/s and over a minimum length of 200 mm. Ensure that the position of the applicator is approximately 100 mm from the end of the plastic plate. An adhesive film of 2 mm nominal thickness shall be obtained.

Directly after forming the film hold the plastic plate in a vertical position. After 3 min return the plastic plate to a horizontal position. The adhesive will flow down the test plate by an amount which depends on the thixotropic character of the adhesive.

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