

Adhesives for paper and board, packaging and disposable sanitary products - Determination of low temperature flexibility or cold crack temperature

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 12703:2016 sisaldab Euroopa standardi EN 12703:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 12703:2016 consists of the English text of the European standard EN 12703:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 03.08.2016.	Date of Availability of the European standard is 03.08.2016.
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English Version

**Adhesives for paper and board, packaging and disposable  
sanitary products - Determination of low temperature  
flexibility or cold crack temperature**

Adhésifs pour papier, carton, emballage et produits  
sanitaires jetables - Détermination de la flexibilité à  
basse température ou de la température de fissuration  
à froid

Klebstoffe für Papier, Verpackung und  
Hygieneprodukte - Bestimmung des  
Kaltbruchverhaltens oder der Kaltbruchtemperatur

This European Standard was approved by CEN on 6 May 2016.

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.

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

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## European foreword

This document (EN 12703:2016) 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 February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

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

This document supersedes EN 12703:2012.

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

## Introduction

**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.

**ENVIRONMENTAL STATEMENT** — It is understood that some of the material permitted in this standard may have negative environmental impact. As technological advantages lead to acceptable alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, the user of the standard should take care to carry out an appropriate disposal of the wastes, according to local regulation.

## 1 Scope

This European Standard specifies a method to determine whether a film of adhesive of given dimensions will craze, crack or fracture at a specified temperature.

Alternatively, the temperature at which the film will craze, crack or fracture can be determined.

The method described can be used as a quality control test, or to compare the flexibility of adhesives at low temperatures.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 923, *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 apply.

## 4 Principle

An unsupported film of the adhesive, after conditioning, is bent through 180° over specified diameter cylindrical mandrel.

The test piece is then examined for signs of fracture, crazing or cracking.

The test may be carried out either as a pass/fail test or at successively lower temperatures until a failure occurs.

## 5 Apparatus

Specimens shall be conditioned for 24 h at 23 °C and 50 % RH.

**5.1 Bend test apparatus**, as shown in Figure 1. The mandrel shall be made of rigid and suitably corrosion-resistant material, e.g. stainless steel.