

**Elastsed poorsed polümeerid.
Roomavuse määramine surve all**

Flexible cellular polymeric materials - Determination
of creep in compression

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 10066:2000 sisaldab Euroopa standardi EN ISO 10066:1997 ingliskeelset teksti.

Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 10066:2000 consists of the English text of the European standard EN ISO 10066:1997.

This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

Käsitlusala:

Käesolev rahvusvaheline standard kirjeldab meetodit elastse poorse polümeerse materjali roomavuse määramiseks staatilise survejõu all. Nimetatud meetod on mõeldud peamiselt kvaliteedi tagamiseks, kui plasti kasutatakse pakkematerjalina.

Scope:

ICS 83.100

Võtmesõnad: elastsed poorsed materjalid, kummi, plastid, polümeerid, roometeimid, testimine

ICS 83.100

Descriptors: Polymers, flexible cellular materials, creep, testing.

English version

Flexible cellular polymeric materials

Determination of creep in compression
(ISO 10066 : 1991)

Matériaux polymères alvéolaires
souples – Détermination du fluage en
compression (ISO 10066 : 1991)

Weich-elastische polymere Schaum-
stoffe – Bestimmung des Kriechens
bei Druckbeanspruchung
(ISO 10066 : 1991)

This European Standard was approved by CEN on 1997-10-16.

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.

The European Standards exist 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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard

ISO 10066 : 1991 Flexible cellular polymeric materials – Determination of creep in compression, which was prepared by ISO/TC 61 'Plastics' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 249 'Plastics', the Secretariat of which is held by IBN, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by May 1998 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 10066 : 1991 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative).

1 Scope

This International Standard describes the procedure for determining the creep of a flexible cellular polymeric material when compressed by a static force, intended primarily for quality assurance in packaging applications.

NOTE 1 The test may also be used to obtain design data. For example, a material that shows excessive creep is not likely to be selected for the manufacture of cushions to support packaged items because of the possibility of slippage during storage. The amount of creep and safe static stress that can be allowed depends on cushion thickness, package life and storage conditions.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1923:1981, *Cellular plastics and rubbers — Determination of linear dimensions*.

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 percentage creep strain: The change in compressive strain after 72 h exhibited by a test piece under the specified static stress as determined by measurements 15 min and 72 h after applying the stress.

3.2 compression stress: The static force per unit area of the original cross-section of the test piece.

3.3 percentage compression after recovery: The percentage loss in test piece thickness after 72 h under static stress followed by a 30 min recovery period.

4 Principle

The change in deformation under a static stress with time is measured.

5 Apparatus

The apparatus shall consist of two flat, smooth, but not polished, plates, at least one of which shall be self-aligning, so arranged that they compress the test piece evenly in the vertical direction. The plates shall be capable of being loaded so that during the period of test the static stress does not change by more than $\pm 1\%$, and the separation of the plates shall be capable of being measured to within 0,1 mm. The compression stress required varies with the material, but is usually less than 10 kPa. The apparatus shall be placed on a substantial support to minimize the effects of vibration.

6 Test piece

6.1 The test piece shall be a right parallelepiped with the following dimensions:

length: 50 mm \pm 1 mm

width: 50 mm \pm 1 mm

mean thickness: within the range 20 mm to 30 mm

The thickness of the test piece shall be subject to a tolerance of ± 1 mm about the selected mean value.

The dimensions shall be measured in accordance with ISO 1923.