Elastsed poorsed polümeermaterjalid. Väsimuse määramine konstantse koormusega tampimisel

Flexible cellular polymeric materials - Determination of fatigue by constant-load pounding

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN ISO 3385:2000 sisaldab Euroopa standardi EN ISO 3385:1995 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 3385:2000 consists of the English text of the European standard EN ISO 3385:1995. 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 standard määrab kindlaks meetodi mööbli polsterdamiseks ettenähtud elastsete poormaterjalide paksuse vähenemise ja tugevuse vähenemise määramiseks.	**Scope:**

ICS 83.100

Võtmesõnad: elastsed poormaterjalid, poormaterjalid, surveteim, testimine, väsimus

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 3385

May 1995

ICS 83.100

Descriptors: Polymer, cellular materials, fatigue, testing.

English version

Flexible cellular polymeric materials

Determination of fatigue by constant-load pounding
(ISO 3385:1989)

Matériaux polymères alvéolaires souples; détermination de la fatigue par indentation à charge constante (ISO 3385:1989)

Polymere Weichschaumstoffe; Bestimmung der Ermüdung durch konstante Stoßbelastung (ISO 3385:1989)

This European Standard was approved by CEN on 1995-05-11 and is identical to the ISO Standard as referred to.

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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and 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 3385:1989 Flexible cellular polymeric materials; determination of fatigue by constant-load pounding

which was prepared by ISO/TC 45 'Rubber and rubber products' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 249 'Plastics' 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 November 1995 at the latest.

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

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

Endorsement notice

The text of the International Standard ISO 3385:1989 was approved by CEN as a European Standard without any modification.

1 Scope

This International Standard specifies a method for the determination of loss in thickness and loss in hardness of flexible cellular materials intended for use in upholstery.

This test method provides a means of assessing the service performance of flexible cellular materials of the latex and polyether urethane types used in load-bearing upholstery.

The measured loss in thickness and loss in hardness are related to, but are not necessarily the same as, the losses likely to occur in service.

The method is applicable both to standard size test pieces cut from stock material and to shaped components.

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 2439 : 1980, *Polymeric materials, cellular flexible — Determination of hardness (indentation technique).*

3 Principle

Repeated indentation of a test piece by an indentor smaller in area than the test piece, the maximum load reached during each cycle being kept within specified limits.

4 Apparatus

Pounding test machine, having the following parts.

4.1 Plane platen, capable of fully supporting the test piece, and suitably vented with holes approximately 6 mm in diameter at approximately 20 mm pitch in order to allow air to escape from the test piece.

4.2 Indentor, having an overall diameter of 250 mm ± 1 mm with a 25 mm ± 1 mm radius at its lower edge, provided with a device for applying a maximum force of 750 N ± 20 N during one loading cycle. The indentor shall be rigidly fixed to its guide and its surface shall be smooth but not polished.

By means of a crank or other suitable mechanism, the machine shall be capable of oscillating either the platen (4.1) carrying the test piece, or the indentor support mounting (4.3), towards the other in a vertical direction at a rate of (70 ± 5) strokes per minute. The amplitude of the stroke shall be adjustable.

4.3 Indentor support mounting, such that the indentor force is carried by it except at that part of the stroke when the mounting and platen are closest together; at this point the full force of the indentor shall be supported by the test piece. The indentor shall be free to be lifted in its mounting to prevent overloading of the test piece. Means shall be provided whereby at any stroke the time can be controlled during which the full force is exerted by the indentor. This time shall be no more than 25 % of the total duration of each cycle.

4.4 Force measuring device, whereby the load applied to the test piece by the indentor can be measured. A suitable method consists in mounting the platen upon load cells.

NOTE — Where adjustment is manual, the indentor is attached to the lower end of a shaft which passes through a vertical guide above the platen carrying the test piece. Adjustment of the vertical position of the indentor relative to the platen controls the length of time at any stroke that the full force of the indentor is supported by the test piece. A suggested arrangement is shown diagrammatically in figure 1.

A suggested method of securing automatic adjustment is shown in figure 2, whereby the length of time during which the test piece supports the indentor is controlled directly by the time during which the valve is open.

5 Test pieces

5.1 Shape and dimensions

Test pieces shall be right parallelepipeds having sides of length 380 mm ± 20 mm and a thickness of 50 mm ± 2 mm. Tests may also be carried out on components that do not comply with these dimensions subject to agreement between the interested parties.