# Determination of dimensional characteristics of sleeping bags - Part 3: Volume under load and easiness of packing

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# **EESTI STANDARDI EESSÕNA**

# **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 13538-3:2002 sisaldab Euroopa standardi EN 13538-3:2002 ingliskeelset teksti.

Käesolev dokument on jõustatud 13.12.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 13538-3:2002 consists of the English text of the European standard EN 13538-3:2002.

This document is endorsed on 13.12.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

#### Käsitlusala:

This European Standard specifies a method of measurement of the volume under load of sleeping bags as specified in prEN 13537 and a method of calculation of easiness of packing of sleeping bags filled with feather and/or down

#### Scope:

This European Standard specifies a method of measurement of the volume under load of sleeping bags as specified in prEN 13537 and a method of calculation of easiness of packing of sleeping bags filled with feather and/or down

**ICS** 97.200.30

**Võtmesõnad:** dimensional sta, measurement, packing, recr, sampling methods, sleeping bags, specification (approval), specifications, sports equipment, testing, tests, tolerances, tolerances (measurement), transport packing, volume, volume measurement, woven fabrics

# EUROPEAN STANDARD NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

EN 13538-3

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#### **English version**

# Determination of dimensional characteristics of sleeping bags -Part 3: Volume under load and easiness of packing

Détermination des caractéristiques dimensionnelles des sacs de couchage - Partie 3: Volume sous charge et facilité d'emppaquetage Bestimmung der Maßhaltigkeit von Schlafsäcken - Teil 3: Kompressionsvolumen und Verpackungsfreundlichkeit

This European Standard was approved by CEN on 29 May 2002.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

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# **Foreword**

This document EN 13538-3:2002 has been prepared by Technical Committee CEN/TC 136 "Sports, playground and other recreational equipment", the secretariat of which is held by DIN.

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 2003, and conflicting national standards shall be withdrawn at the latest by February 2003.

The text is based on an earlier draft prepared by CEN/TC 222 "Feather and down".

This European Standard consists of a number of parts as follows:

EN 13538-1, Internal dimensions;

EN 13538-2, Thickness and elastic recovery;

EN 13538-3, Volume under load and easiness of packing.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following coun-Ste.
y, Lux tries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

# 1 Scope

This European Standard specifies a method of measurement of the volume under load of sleeping bags as specified in prEN 13537 and a method of calculation of easiness of packing of sleeping bags filled with feather and/or down.

# 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 20139, Textiles — Standard atmospheres for conditioning and testing (ISO 139:1973).

#### 3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

#### 3.1

#### volume under load

volume occupied by a sleeping bag when compressed in a specific cylinder under a specific load

#### 3.2

#### easiness of packing

ratio between the volume under load and the volume inside the transport cover

# 4 Principle

# 4.1 Volume under load

A sleeping bag is positioned inside a large diameter tube. A high load is then applied to it and the residual volume occupied by the bag within the tube is measured.

#### 4.2 Easiness of packing

Calculation according to 8.2.

#### 5 Measuring device

The device consists of:

- a) a cylinder having an inside diameter of (400 ± 10) mm and a height of approximately 800 mm;
- a cylindrical load having an outside diameter corresponding to that of the cylinder with 10 mm to 20 mm of clearance. The mass of the load is (50 ± 1) kg;
- c) ruler graduated in millimetres;
- d) stopwatch with a resolution of at least 1 s.