

**Metallmaterjalid. Vickersi kõvadusteim.  
Osa 3: Etalonsõlmede kalibreerimine**

Metallic materials - Vickers hardness test - Part 3:  
Calibration of reference blocks

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 6507-3:2006 sisaldab Euroopa standardi EN ISO 6507-3:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 27.02.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 6507-3:2006 consists of the English text of the European standard EN ISO 6507-3:2005.</p> <p>This document is endorsed on 27.02.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> See EN ISO 6507 standardi osa määrab kindlaks etalonsõlmede kalibreerimismeetodi, mida kasutatakse Vickersi kõvaduse teimimisseadmete kaudseks kontrollimiseks, nagu on kindlaks määratud standardis EN ISO 6507-2. Meetod on kasutatav ainult sissepressitud jälgede korral, mille diagonaalid on 0,020 mm või üle selle.</p>	<p><b>Scope:</b> This part of ISO 6507 specifies a method for the calibration of reference blocks to be used for the indirect verification of Vickers hardness testing machines, as specified in ISO 6507-2.</p>
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ICS 77.040.10

**Võtmesõnad:** kalibreerimine, katsed, kõvadusteim, metallurgiatooted, märgistamine, proovikeha sissesurumisele avaldatava vastupanu (i, teimiseade, vickersi kõvadus

English Version

**Metallic materials - Vickers hardness test - Part 3: Calibration of  
reference blocks (ISO 6507-3:2005)**

Matériaux métalliques - Essai de dureté Vickers - Partie 3:  
Etalonnage des blocs de référence (ISO 6507-3:2005)

Metallische Werkstoffe - Härteprüfung nach Vickers - Teil  
3: Kalibrierung von Härtevergleichsplatten (ISO 6507-  
3:2005)

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

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## Foreword

This document (EN ISO 6507-3:2005) has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" in collaboration with Technical Committee ECISS/TC 1 "Steel - Mechanical testing", the secretariat of which is held by AFNOR.

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

This document supersedes EN ISO 6507-3:1997.

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.

## Endorsement notice

The text of ISO 6507-3:2005 has been approved by CEN as EN ISO 6507-3:2005 without any modifications.

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**Metallic materials — Vickers hardness  
test —**

**Part 3:  
Calibration of reference blocks**

*Matériaux métalliques — Essai de dureté Vickers —*

*Partie 3: Étalonnage des blocs de référence*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 6507-3 was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 3, *Hardness testing*.

This third edition cancels and replaces the second edition (ISO 6507-3:1997), which has been technically revised.

ISO 6507 consists of the following parts, under the general title *Metallic materials — Vickers hardness test*:

- *Part 1: Test method*
- *Part 2: Verification and calibration of testing machines*
- *Part 3: Calibration of reference blocks*
- *Part 4: Tables of hardness values*



# Metallic materials — Vickers hardness test —

## Part 3: Calibration of reference blocks

### 1 Scope

This part of ISO 6507 specifies a method for the calibration of reference blocks to be used for the indirect verification of Vickers hardness testing machines, as specified in ISO 6507-2.

The method is applicable only for indentations with diagonals  $\geq 0,020$  mm.

### 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.

ISO 376:2004, *Metallic materials — Calibration of force-proving instruments used for the verification of uniaxial testing machines*

ISO 4287:1997, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

ISO 6507-1:2005, *Metallic materials — Vickers hardness test — Part 1: Test method*

ISO 6507-2:2005, *Metallic materials — Vickers hardness test — Part 2: Verification and calibration of testing machines*

### 3 Manufacture of reference blocks

**3.1** The block shall be specially manufactured for use as a hardness-reference block.

**NOTE** Attention is drawn to the need to use a manufacturing process which will give the necessary homogeneity, stability of structure and uniformity of surface hardness.

**3.2** Each metal block to be calibrated shall be of a thickness not less than 5 mm.

**3.3** The reference blocks shall be free of magnetism. It is recommended that the manufacturer shall ensure that the blocks, if made of steel, have been demagnetized at the end of the manufacturing process.

**3.4** The maximum deviation in flatness of the test and support surfaces shall not exceed 0,005 mm. The maximum error in parallelism shall not exceed 0,010 mm in 50 mm.

**3.5** The test surface shall be free from scratches which interfere with the measurement of the indentations. The surface roughness  $R_a$  shall not exceed 0,000 05 mm for the test surface and 0,000 8 mm for the bottom surface. The sampling length  $l$  shall be 0,80 mm (see ISO 4287:1997, 3.1.9).